DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

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HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS UNITED STATES SENATE

EIGHTY-NINTH CONGRESS

SECOND SESSION

ON

H.R. 14215

MAKING APPROPRIATIONS FOR THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING JUNE 30, 1967, AND FOR OTHER PURPOSES

PART 1

(PAGES 1 THROUGH 1099)

(THURSDAY, FEBRUARY 17, 1966, THROUGH MARCH 3, 1966)

Printed for the use of the Committee on Appropriations

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DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

THURSDAY, FEBRUARY 17, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to call, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senators Byrd, Bartlett, Proxmire, and Young.

DEPARTMENT OF THE INTERIOR

STATEMENTS OF HON. STEWART L. UDALL, SECRETARY; JOHN A. CARVER, JR., UNDER SECRETARY; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET

AGENCIES INCLUDED IN BILL

Chairman HAYDEN. The subcommittee will be in order.

The hearings on the 1967 budget estimates for the Department of the Interior and related agencies open this morning. Estimates will be examined for all the bureaus and agencies of the Department, except the Bureau of Reclamation and the power marketing agencies, which are included in the Public Works appropriations bill and will come before the committee for consideration at a later date.

Also included in the Department of the Interior bill are estimates for the Forest Service, the Federal Coal Mine Safety Board of Review, the Commission of Fine Arts, the Division of Indian Health in the Department of Health, Education, and Welfare, the Indian Claims Commission, the National Capital Planning Commission, the National Capital Transportation Agency, the National Foundation on the Arts and the Humanities, the Public Land Law Review Commission, the Smithsonian Institution, the National Gallery of Art, the Lewis and Clark Trial Commission, the Federal Development Planning Committees for Alaska, the Corregidor-Bataan Memorial Commission, and the Franklin Delano Roosevelt Memorial Commission.

1966 APPROPRIATIONS

For fiscal year 1966, $1,290,285,070 were appropriated for these agencies. This includes $16 million in borrowing authority and $146,525,000 in indefinite appropriations of receipts. The various bureaus and agencies will have $11,637,000 in supplemental appropriations requests for fiscal year 1966 to be considered at a later date.

1967 Budget Estimate

The fiscal year 1967 estimates amount to $1,355,960,500, an increase of $65,675,430 over fiscal year 1966. This sum includes $26 million in borrowing authority, and $125,466,000 in indefinite appropriations of receipts.

1966 Appropriations and 1967 Estimates Compared

There will be included in the record a comparative statement of the appropriations for fiscal year 1966, including proposed pay act supplemental appropriations, and the budget estimates for the coming fiscal year.

(The statement follows:)

Comparative statement of the appropriations for fiscal year 1966, and the estimates for fiscal year 1967

Item	Fiscal year 1966		Budget estimate, 1967	Budget estimate, 1967, compared with—	
	Appropriation, 1966	Total (including anticipated pay supplemental, 1966)		Appropriation, 1966	Total (including anticipated pay supplemental, 1966)
TITLE I—DEPARTMENT OF THE INTERIOR					
PUBLIC LAND MANAGEMENT					
BUREAU OF LAND MANAGEMENT					
Management of lands and resources	$49,080,000	$49,575,000	$48,755,000	−$325,000	−$820,000
Construction and maintenance	3,150,000	3,150,000	2,900,000	−250,000	−250,000
Public lands development roads and trails (liquidation of contract authorization)	2,000,000	2,000,000	2,000,000		
Oregon and California grant lands (indefinite appropriation of receipts)	[1] (16,945,000)	(16,945,000)	(9,750,000)	(−7,195,000)	(−7,195,000)
Range improvements (indefinite appropriation of receipts)	(1,346,000)	(1,346,000)	(1,448,000)	(+102,000)	(+102,000)
Total, Bureau of Land Management	54,230,000	54,725,000	53,655,000	−575,000	−1,070,000
BUREAU OF INDIAN AFFAIRS					
Education and welfare services	105,846,000	107,048,000	115,296,000	+9,450,000	+8,248,000
Resources management	42,796,000	43,365,000	44,611,000	+1,815,000	+1,246,000
Construction	[2] 35,151,000	35,151,000	57,164,000	+22,013,000	+22,013,000
Road construction (liquidation of contract authorization)	17,445,000	17,445,000	16,754,000	−691,000	−691,000
General administrative expenses	4,520,000	4,623,000	4,677,000	+157,000	+54,000
Menominee educational grants	44,000	44,000		−44,000	−44,000
Total, Bureau of Indian Affairs, exclusive of tribal funds	205,802,000	207,676,000	238,502,000	+32,700,000	+30,826,000
Tribal funds (not included in totals of this tabulation)	(3,000,000)	(3,000,000)	(3,000,000)		
NATIONAL PARK SERVICE					
Management and protection	32,366,000	33,149,000	36,177,000	+3,811,000	+3,028,000
Maintenance and rehabilitation of physical facilities	24,660,000	24,763,000	27,022,000	+2,362,000	+2,259,000
Construction	26,177,000	26,177,000	23,500,000	−2,677,000	−2,677,000
Parkway and road construction (liquidation of contract authorization)	33,000,000	33,000,000	30,000,000	−3,000,000	−3,000,000
General administrative expenses	2,465,000	2,522,000	2,562,100	+97,100	+40,100
Total, National Park Service	118,668,000	119,611,000	119,261,100	+593,100	−349,900
BUREAU OF OUTDOOR RECREATION					
Salaries and expenses	3,398,000	3,466,000	3,910,000	+512,000	+444,000
Land and water conservation (indefinite appropriation of receipts)	(125,000,000)	(125,000,000)	(110,000,000)	(−15,000,000)	(−15,000,000)
Total, Bureau of Outdoor Recreation	3,398,000	3,466,000	3,910,000	+512,000	+444,000

See footnotes at end of table.

Comparative statement of the appropriations for fiscal year 1966, and the estimates for fiscal year 1967—Continued

Item	Fiscal year 1966		Budget estimate, 1967	Budget estimate, 1967, compared with—	
	Appropriation, 1966	Total (including anticipated pay supplemental, 1966)		Appropriation, 1966	Total (including anticipated pay supplemental, 1966)
OFFICE OF TERRITORIES					
Administration of territories	$14,579,000	$14,579,000	$10,513,000	−$4,066,000	−$4,066,000
Trust Territory of the Pacific Islands	17,344,000	17,447,000	17,494,000	+150,000	+47,000
Limitation on administrative expenses, Virgin Islands Corporation	(100,000)	(100,000)		(−100,000)	(−100,000)
Total, Office of Territories	31,923,000	32,026,000	28,007,000	−3,916,000	−4,019,000
THE ALASKA RAILROAD					
Payment to the Alaska Railroad revolving fund	4,100,000	4,100,000		−4,100,000	−4,100,000
Total, public land management	418,121,000	421,604,000	443,335,100	+25,214,100	+21,731,100
MINERAL RESOURCES					
GEOLOGICAL SURVEY					
Surveys, investigations, and research	71,680,870	73,190,870	73,920,000	+2,239,130	+729,130
BUREAU OF MINES					
Conservation and development of mineral resources	31,891,000	32,391,000	31,466,000	−425,000	−925,000
Health and safety	9,507,000	9,599,000	9,390,000	−117,000	−209,000
Solid waste disposal	[3] 1,400,000	1,400,000	4,335,000	+2,935,000	+2,935,000
Appalachian region mining area restoration			10,566,000	+10,566,000	+10,566,000
General administrative expenses	1,529,000	1,551,000	1,556,000	+27,000	+5,000
Helium fund: Borrowing authorization	(16,000,000)	(16,000,000)	(26,000,000)	(+10,000,000)	(+10,000,000)
Total, Bureau of Mines	44,327,000	44,941,000	57,313,000	+12,986,000	+12,372,000
OFFICE OF COAL RESEARCH					
Salaries and expenses	7,220,000	7,220,000	8,237,000	+1,017,000	+1,017,000
OFFICE OF OIL AND GAS					
Salaries and expenses	704,000	720,000	722,000	+18,000	+2,000
Total, mineral resources	123,931,870	126,071,870	140,192,000	+16,260,130	+14,120,130

FISH AND WILDLIFE SERVICE					
OFFICE OF THE COMMISSIONER OF FISH AND WILDLIFE					
Salaries and expenses	444,000	452,000	(4)	−444,000	−452,000
BUREAU OF COMMERCIAL FISHERIES					
Management and investigations of resources	21,838,000	22,073,000	20,092,000	−1,746,000	−1,981,000
Management and investigations of resources (appropriation of receipts)			(1,000,000)	(+1,000,000)	(+1,000,000)
Management and investigations of resources (special foreign currency program)	300,000	300,000	200,000	−100,000	−100,000
Construction	1,980,000	1,980,000	495,000	−1,485,000	−1,485,000
Construction of fishing vessels	[5] 5,000,000	5,000,000	3,300,000	−1,700,000	−1,700,000
Federal aid for commercial fisheries research and development	4,800,000	4,713,000	3,210,000	−1,590,000	−1,503,000
Administration of Pribilof Islands (indefinite appropriation of receipts)	(2,454,000)	(2,464,000)	(2,468,000)	(+14,000)	(+4,000)
General administrative expenses	674,000	689,000	739,000	+65,000	+50,000
Limitation on administrative expenses, fisheries loan fund	(309,000)	(309,000)	(309,000)		
Total, Bureau of Commercial Fisheries	34,592,000	34,755,000	28,036,000	−6,556,000	−6,719,000
BUREAU OF SPORT FISHERIES AND WILDLIFE					
Management and investigations of resources	36,134,300	36,612,300	37,304,000	+1,169,700	+691,700
Construction	[6] 18,299,200	18,299,200	3,169,000	−15,130,200	−15,130,200
Migratory bird conservation account	7,500,000	7,500,000	6,000,000	−1,500,000	−1,500,000
Appalachian region fish and wildlife restoration projects			1,350,000	+1,350,000	+1,350,000
General administrative expenses	1,458,000	1,492,000	1,564,000	+106,000	+72,000
Total, Bureau of Sport Fisheries and Wildlife	63,391,500	63,903,500	49,387,000	−14,004,500	−14,516,500
Total, Fish and Wildlife Service	98,427,500	99,110,500	77,423,000	−21,004,500	−21,687,500
OFFICE OF SALINE WATER					
Salaries and expenses	20,000,000	20,000,000	28,595,000	+8,595,000	+8,595,000
Operation and maintenance	[7] 2,485,000	2,485,000	2,351,000	−134,000	−134,000
Total, Office of Saline Water	22,485,000	22,485,000	30,946,000	+8,461,000	+8,461,000
OFFICE OF WATER RESOURCES RESEARCH					
Salaries and expenses	[8] 6,390,000	6,396,000	6,894,000	+504,000	+498,000
OFFICE OF THE SOLICITOR					
Salaries and expenses	4,487,000	4,597,000	4,704,000	+217,000	+107,000
OFFICE OF THE SECRETARY					
Salaries and expenses	4,452,200	4,557,200	5,186,000	+733,800	+628,800
Total, direct appropriations	678,294,570	684,821,570	708,680,100	+30,385,530	+23,858,530
Total, appropriations of receipts	145,745,000	145,755,000	124,666,000	−21,079,000	−21,089,000
Total, borrowing authorization	16,000,000	16,000,000	26,000,000	+10,000,000	+10,000,000
Total, title I, Department of the Interior	840,039,570	846,576,570	859,346,100	+19,306,530	+12,769,530

See footnotes at end of table.

Comparative statement of the appropriations for fiscal year 1966, and the estimates for fiscal year 1967—Continued

Item	Fiscal year 1966		Budget estimate, 1967	Budget estimate, 1967, compared with—	
	Appropriation, 1966	Total (including anticipated pay supplemental, 1966)		Appropriation, 1966	Total (including anticipated pay supplemental, 1966)
TITLE II—RELATED AGENCIES					
DEPARTMENT OF AGRICULTURE					
FOREST SERVICE					
Forest protection and utilization:					
Forest land management	$162,318,000	$164,453,000	$172,856,000	+$10,538,000	+$8,403,000
Forest research	36,764,000	37,374,000	34,435,000	−2,329,000	−2,939,000
State and private forestry cooperation	17,513,000	17,558,000	17,897,000	+384,000	+339,000
Total, forest protection and utilization	216,595,000	219,385,000	225,188,000	+8,593,000	+5,803,000
Forest roads and trails (liquidation of contract authorization)	[9] 101,172,000	102,136,000	102,530,000	+1,358,000	+394,000
Timber development organization loans and technical assistance			500,000	+500,000	+500,000
Acquisition of lands for national forests:					
Uinta National Forest			300,000	+300,000	+300,000
Special acts (appropriation of receipts)	(80,000)	(80,000)	(80,000)		
Cooperative range improvements (appropriation of receipts)	(700,000)	(700,000)	(700,000)		
Assistance to States for tree planting	1,000,000	1,000,000	1,000,000		
Total, definite appropriations	318,767,000	322,521,000	329,518,000	+10,751,000	+6,997,000
Total, appropriation of receipts	780,000	780,000	780,000		
Total, Forest Service, Department of Agriculture	319,547,000	323,301,000	330,298,000	+10,751,000	+6,997,000
FEDERAL COAL MINE SAFETY BOARD OF REVIEW					
Salaries and expenses	71,500	72,500	61,400	−10,100	−11,100
COMMISSION OF FINE ARTS					
Salaries and expenses	123,000	123,000	115,000	−8,000	−8,000
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE					
PUBLIC HEALTH SERVICE					
Indian health facilities	66,193,000	67,191,000	73,448,000	+7,255,000	+6,257,000
Construction of Indian health activities	[10] 14,096,000	14,096,000	14,422,000	+326,000	+326,000
Total, Public Health Service	80,289,000	81,287,000	87,870,000	+7,581,000	+6,583,000

OFFICE OF EDUCATION					
Arts and humanities educational activities	1,000,000	1,000,000	1,000,000	----------	----------
Total, Health, Education, and Welfare	81,289,000	82,287,000	88,870,000	+7,581,000	+6,583,000
INDIAN CLAIMS COMMISSION					
Salaries and expenses	347,000	347,000	438,000	+91,000	+91,000
NATIONAL CAPITAL PLANNING COMMISSION					
Salaries and expenses	800,000	818,000	1,144,000	+344,000	+326,000
Land acquisition, National Capital park, parkway, and playground system	----------	----------	6,100,000	+6,100,000	+6,100,000
Total, National Capital Planning Commission	800,000	818,000	7,244,000	+6,444,000	+6,426,000
NATIONAL CAPITAL TRANSPORTATION AGENCY					
Salaries and expenses	[11] 425,000	425,000	1,575,000	+1,150,000	+1,150,000
Construction, rail rapid transit system	[3] [12] 3,679,000	[12] 3,679,000	17,055,000	+13,376,000	+13,376,000
Total, National Capital Transportation Agency	4,104,000	4,104,000	18,630,000	+14,526,000	+14,526,000
National Foundation on the Arts and Humanities:					
Salaries and expenses	[3] 5,700,000	5,700,000	13,930,000	+8,230,000	+8,230,000
Endowment for the arts	2,000,000	2,000,000	----------	−2,000,000	−2,000,000
Endowment for the humanities	3,000,000	3,000,000	----------	−3,000,000	−3,000,000
Total, National Foundation on the Arts and Humanities	10,700,000	10,700,000	13,930,000	+3,230,000	+3,230,000
NATIONAL COUNCIL ON THE ARTS					
Salaries and expenses	50,000	50,000	----------	−50,000	−50,000
PUBLIC LAND LAW REVIEW COMMISSION					
Salaries and expenses	[3] 750,000	750,000	907,000	+157,000	+157,000
SMITHSONIAN INSTITUTION					
Salaries and expenses	18,468,000	18,755,000	23,437,000	+4,969,000	+4,682,000
Archeological research and excavation (special foreign currency program)	1,300,000	1,300,000	5,700,000	+4,400,000	+4,400,000
Construction and improvements, National Zoological Park	1,539,000	1,539,000	1,589,000	+50,000	+50,000
Restoration and renovation of buildings	2,248,000	2,248,000	2,300,000	+52,000	+52,000
Salaries and expenses, National Gallery of Art	2,465,000	2,507,000	2,765,000	+300,000	+258,000
Total, Smithsonian Institution	26,020,000	26,349,000	35,791,000	+9,771,000	+9,442,000

See footnotes at end of table.

Comparative statement of the appropriations for fiscal year 1966, and the estimates for fiscal year 1967—Continued

Item	Fiscal year 1966		Budget estimate, 1967	Budget estimate, 1967, compared with—	
	Appropriation, 1966	Total (including anticipated pay supplemental, 1966)		Appropriation, 1966	Total (including anticipated pay supplemental, 1966)
CIVIL WAR CENTENNIAL COMMISSION					
Salaries and expenses	$100,000	$100,000		−$100,000	−$100,000
CORREGIDOR-BATAAN MEMORIAL COMMISSION					
Salaries and expenses	25,000	25,000	$35,000	+10,000	+10,000
VETERANS' ADMINISTRATION					
Construction, Corregidor-Bataan Memorial	1,400,000	1,400,000		−1,400,000	−1,400,000
Total, Corregidor-Bataan Memorial	1,425,000	1,425,000	35,000	−1,390,000	−1,390,000
LEWIS AND CLARK TRAIL COMMISSION					
Salaries and expenses	25,000	25,000	25,000		
TRANSITIONAL GRANTS TO ALASKA					
Grants	4,500,000	4,500,000		−4,500,000	−4,500,000
FEDERAL DEVELOPMENT PLANNING COMMITTEES FOR ALASKA					
Salaries and expenses	174,000	174,000	190,000	+16,000	+16,000
COMMISSION ON THE STATUS OF PUERTO RICO					
Salaries and expenses	[3] 200,000	200,000		−200,000	−200,000
HISTORICAL AND MEMORIAL COMMISSION					
Franklin Delano Roosevelt Memorial Commission	20,000	20,000	80,000	+60,000	+60,000
Total, direct appropriations	449,465,500	454,565,500	495,834,400	+46,368,900	+41,268,900
Total, appropriation of receipts	780,000	780,000	780,000		

Total, title II, related agencies	450,245,500	455,345,500	496,614,400	+46,368,900	+41,268,900
Grand total	1,290,285,070	1,301,922,070	1,355,960,500	+65,675,430	+54,038,430
Consisting of:					
Direct appropriations	1,127,760,070	1,139,387,070	1,204,514,500	+76,754,430	+65,127,430
Appropriation of receipts	146,525,000	146,535,000	125,446,000	−21,079,000	−21,089,000
Borrowing authorization	16,000,000	16,000,000	26,000,000	+10,000,000	+10,000,000

[1] Includes $6,320,000 in Supplemental Appropriation Act, 1966.
[2] Includes $638,000 in Supplemental Appropriation Act, 1966.
[3] Included in Supplemental Appropriation Act, 1966.
[4] Office terminated—functions transferred to Bureau of Commercial Fisheries and Bureau of Sport Fisheries and Wildlife, and the Office of the Secretary.
[5] In addition, $2,105,203 provided in 1965 Supplemental Appropriation Act.
[6] Includes $11,222,000 in Supplemental Appropriation Act, 1966.
[7] In addition $1,407,000 available under "Construction, operation, and maintenance" for replacement of demonstration plant, San Diego, Calif., heretofore granted previously.
[8] Includes $500,000 in Supplemental Appropriation Act, 1966.
[9] Includes $22,500,000 in Supplemental Appropriation Act, 1966.
[10] Includes $146,000 in Supplemental Appropriation Act, 1966.
[11] In addition, $490,000 provided by transfer.
[12] In addition, $320,551 available by transfer.

Comparison of Appropriations and Receipts, Fiscal Years 1966 and 1967

Chairman Hayden. Also, I shall place in the record a table which compares the appropriations and receipts for the Department of the Interior for fiscal year 1966 and the fiscal year 1967 as estimated.

(The table follows:)

Appropriations compared with receipts (exclusive of trust funds)—Department of the Interior, exclusive of the Bureau of Reclamation and power marketing agencies

APPROPRIATIONS

	1965 actual	1966 estimate	1967 estimate
Annual definite	$726,735,717	$806,065,773	$819,680,100
Annual indefinite	22,798,245	20,745,182	13,666,000
Authorizations to expend from debt receipts	14,000,000	16,000,000	26,000,000
Permanent	126,069,388	132,097,651	130,413,200
Revolving and management funds (programed expenditures)	81,661,135	88,043,852	73,551,000
Total	971,264,485	1,062,952,458	1,063,310,300

RECEIPTS

Admission fees and concessions	5,177,343	1,068,020	1,121,320
Hunting stamps and receipts from sale of refuge products	6,502,232	7,500,000	7,500,000
Grazing fees	4,522,581	4,588,800	4,588,800
Revenues, Oregon and California and Coos Bay Wagon Road lands	42,485,330	43,700,000	40,350,000
Sale of sealskins and other products	3,657,284	4,000,000	4,136,578
Oil, gas, and mining royalties and rents	118,753,602	131,347,000	137,253,000
Receipts, mineral leasing, Outer Continental Shelf	53,469,903	165,000,000	400,000,000
Interest on and repayment of principal to certain funds	565,740	300,200	100,200
Collections, reclamation fund—Bureau of Land Management:			
Receipts from mineral leasing, public lands	54,881,780	60,022,000	62,538,000
Other receipts	4,820,626	5,601,000	6,075,000
Total collections, reclamation fund	(59,702,406)	(65,623,000)	(68,613,000)
Miscellaneous rentals, fees, and permits	4,425,734	5,367,825	4,961,500
Collections and services to Indians	9,430,248	8,736,354	8,780,685
Recoveries and refunds	1,441,751	1,436,700	1,436,700
Sale of public lands, buildings, and other property	1,196,453	730,800	741,800
Receipts, land and water conservation fund	28,397,685	112,592,000	110,000,000
Unclassified receipts	510,040	446,925	463,025
Receipts, Federal aid in fish restoration and management	7,341,529	7,373,380	6,500,000
Receipts, Federal aid in wildlife restoration	17,454,941	20,200,720	17,170,000
Receipts, promote and develop fishery products and research pertaining to American fisheries	5,297,950	6,610,569	5,800,000
Internal revenue collections for Virgin Islands	8,313,413	10,405,984	8,000,000
Revolving and management funds (revenues)	63,635,799	66,977,260	68,406,000
Gross receipts	442,281,964	664,005,537	895,922,608
Less duplication [1]	54,881,780	60,022,000	62,538,000
Net receipts	387,400,184	603,983,537	833,384,608

NET DIFFERENCE

Amount by which appropriations exceed net receipts	583,864,301	458,968,921	229,925,692

[1] Receipts duplicated are as follows:

Item	1965 actual	1966 estimate	1967 estimate
Receipts from mineral leasing, public lands, collected by Bureau of Land Management included in "Oil, gas, and mining royalties and rents" and "Collections, Reclamation Fund"	$54,881,780	$60,022,000	$62,538,000

PERMANENT APPROPRIATIONS

Chairman HAYDEN. In addition, there will be placed in the record statements presented to the committee in justification of the permanent appropriations to the Department of the Interior.

(The statements follow:)

BUREAU OF LAND MANAGEMENT

Miscellaneous permanent appropriations

Appropriated, 1966 (estimate)	$73,705,064
Estimate, 1967	78,045,000
Increase	4,339,936

JUSTIFICATION

1. Expenses, sale of timber, etc., on reclamation lands, $2,000

The cost of making and administering timber sales by the Bureau of Land Management on reclamation withdrawn lands is refunded to the Bureau of Land Management from timber sale receipts (41 Stat. 202; 53 Stat. 1196).

2. Leasing of grazing lands, Bureau of Land Management (receipt limitation), $1,000

The act of June 23, 1938 (52 Stat. 1033), authorized the Secretary of the Interior to enter into leases for the rental of grazing lands with States, counties, or private parties when the leasing of such lands will promote the orderly use of grazing district lands and aid in conserving the forage resources of the public lands therein. Under the act, rentals paid the lessors may not exceed the grazing fees paid the United States for grazing privileges on the land.

3. Payments to Oklahoma (royalties), Bureau of Land Management (receipt limitation), $10,000

The joint resolution of Congress approved June 12, 1926, provides for payment to the State of Oklahoma of 37½ percent of oil and gas royalties received from the south half of the Red River, Okla. The payment is in lieu of all State and local taxes upon Kiowa, Comanche, and Apache tribal funds received from such lands under the act of March 4, 1923 (42 Stat. 1448), and is to be used by the State for the construction and maintenance of public roads, or for the support of public schools, or other institutions of learning.

This is an increase of $1,187 over fiscal year 1966.

4. Payments to Coos and Douglas Counties, Oreg., from receipts, Coos Bay Wagon Road grant lands, $1,012,000

Not to exceed 75 percent of the receipts in any one year from the Coos Bay Wagon road grant lands in Oregon are for payment annually, in lieu of taxes, to Coos and Douglas Counties, as provided in the act of February 26, 1919 (40 Stat. 1179), and the act of May 24, 1939 (53 Stat. 753–754).

The increase of $112,000 reflects an anticipated increase in receipts from these lands.

5. Payments to counties, Oregon and California grant lands, $21,250,000

In accordance with title II of the act of August 28, 1937 (50 Stat. 876), 75 percent of the moneys deposited in the Oregon and California land grant fund is paid to the counties in which the revested lands are situated.

However, the "Oregon and California grant lands" appropriation of the Bureau of Land Management provides that 25 percent of the receipts collected from sale of timber and other products on the O. & C. lands are available "for management, protection and development of resources, and for construction, operation, and maintenance of access roads, reforestation, and other improvements on the revested O. & C. lands and other Federal lands in the O. & C. land-grant counties of Oregon, and on adjacent rights-of-way and acquisition of rights-of-way and of existing connecting roads on or adjacent to such lands. The amount appropriated will be a reimbursable charge against the Oregon and California land grant fund and be reimbursed to the general fund of the

Treasury. The estimate of $21,250,000 to be paid to the counties in fiscal year 1967 is based on estimated total receipts collected from the sale of timber and other products on the O. & C. lands. This is an increase of $1,212,141 over fiscal year 1966.

6. Payments to States (grazing fees), Bureau of Land Management, $2,000

Section 11 of the act of June 28, 1934 (43 U.S.C. 315j) provides that 33⅓ percent of all grazing fees received from each grazing district on Indian lands ceded to the United States for disposition under the public land laws be paid to the State in which said lands are situated.

7. Payments to States (proceeds of sales), Bureau of Land Management (receipt limitation), $266,000

This appropriation is made to fulfill the Government's obligation to the States under various acts of Congress, which provide that 5 percent of the proceeds of sales of public lands and various materials therefrom, after deducting all the expenses incident to sale, shall be paid to the States for education or for making roads and improvements (31 U.S.C. 711). This is an increase of $45,608 over fiscal year 1966.

8. Payments to States from grazing receipts, etc., public lands outside grazing districts, Bureau of Land Management, $300,000

Payments are made to States of 50 percent of moneys received as grazing fees from public lands outside grazing districts, under the provisions of section 15 of the act of June 28, 1934, as amended (43 U.S.C. 315i, 315m).

9. Payments to States from grazing receipts, etc., public lands within grazing districts, Bureau of Land Management, $308,000

Under the provisions of section 3 of the act of June 28, 1934 (43 U.S.C. 315b), 12½ percent of reecipts from grazing fees from public lands within grazing districts is paid to States in which the lands are situated.

10. Payments to States from grazing receipts, etc., public lands within grazing districts, miscellaneous, Bureau of Land Management, $10,000

Under the provisions of the act of June 28, 1934, as amended, this appropriation is provided for payment to States of amounts received from grazing fees on miscellaneous lands within grazing districts which are not susceptible to a standardized and uniform distribution on a percentage basis (43 U.S.C. 315).

11. Payments to States from receipts under Mineral Leasing Act, $53,545,000

This is an appropriation for payment of 90 percent to Alaska and 37½ percent to Western States of receipts from bonuses, royalties, and rentals under the provision of the Mineral Leasing Act (30 U.S.C. 191), and 37½ percent of receipts from bonuses, royalties, and rentals from leases of potash deposits under the act of February 7, 1927 (30 U.S.C. 285).

The increase of $2,955,000 over 1966 is based on anticipated increase in the total receipts from these sources.

12. Payments to counties, national grasslands, $139,000

This account consists of amounts appropriated from revenues received during each calendar year from the use of submarginal lands transferred from the Department of Agriculture by Executive Order No. 10787, dated November 6, 1958. Twenty-five percent of the net revenues is used for school or road purposes or both (7 U.S.C. 1012). The increase of $8,000 reflects an anticipated increase in receipts.

13. Expenses, Public Land Administration Act, $1,200,000

Section 301 of Public Law 86-649, approved July 14, 1960, authorized the appropriation of moneys received as a result of forfeitures by timber sale contractors for failure to restore areas damaged by cutting operations and other amounts received in settlement of damage to timberlands. Section 302 of the act authorized the appropriation of moneys received from road users for road maintenance. The amounts appropriated are to remain available until expended. Any amounts in excess of the cost of doing the work authorized are required to be transferred to miscellaneous receipts (74 Stat. 507-508).

BUREAU OF INDIAN AFFAIRS

CLAIMS AND TREATY OBLIGATIONS

Statement relating 1965, 1966, and 1967 programs

1965 appropriation	$194,971
1966 appropriation, estimate	160,500
1967 appropriation, estimate	160,500

JUSTIFICATION

1. Fulfilling treaties with Senecas of New York, $6,000

This is a permanent annuity made pursuant to a provision in the act of February 19, 1831, which reads as follows:

"That the proceeds of the sum of $100,000 being the amount placed in the hand of the President of the United States in trust for the Seneca Tribe of Indians situated in the State of New York, be hereafter passed to the credit of the Indian appropriation fund, and that the Secretary of War be authorized to receive and pay over to the Seneca Tribe of Indians the sum of $6,000 annually in the way and manner as heretofore practiced, to be paid out of any money in the Treasury not otherwise appropriated."

This money is paid in equal share to about 5,031 members of the Seneca Nation, and any small balance is deposited to the credit of the tribe.

2. Fulfilling treaties with Six Nations of New York, $4,500

The Six Nations comprise the Senecas, Tonawanda Band of Senecas, Tuscarora, Onondago, Oneida, and Cayuga Tribes. This appropriation is made annually in fulfillment of treaty obligations for permanent annuity in accordance with the act of November 11, 1794, which reads in part as follows:

"In consideration of the peace and friendship hereby established * * * and with a view to promote the future welfare of the Six Nations and of their Indian friends aforesaid, the United States will add the sum of $3,000 to the $1,500 heretofore allowed them by an article ratified by the President on the 23d day of April, 1792, making in whole $4,500, which shall be expended yearly forever in purchasing clothing, domestic animals, implements of husbandry and other utensils suited to their circumstances, and in compensating useful artificers who shall reside with or near them and be employed for their benefit."

Approximately $2,700 is allocated annually to the New York Indians and is utilized for the purchase of dress goods; the remainder, approximately $1,800 is distributed per capita to the Oneida Indians under the jurisdiction of the Great Lakes Agency, Wisconsin.

3. Fulfilling treaties with Pawnees, Oklahoma, $30,000

This sum is to pay the permanent annuity to the Pawnees, as required by article 2 as amended, of the treaty of September 24, 1857. As amended, this article provides:

"The United States agrees to pay to the Pawnees the sum of $30,000 per annum, as a perpetual annuity to be distributed annually among them per capita, in coin unless the President of the United States shall from time to time otherwise direct. But it is further agreed that the President may, at any time in his discretion, discontinue said perpetuity by causing a value of a fair computation thereof to be paid to or expended for the benefit of said Indians in such manner as to him shall seem proper."

4. Payments to Indians of Sioux reservations, $120,000

This is an annual charge against the general fund of the Treasury, the amount being indefinite until applications are made and approved.

The act of March 2, 1889, provided for the issue of certain articles necessary to aid individual Sioux Indians in industrial pursuits, particularly on their own allotments. Later, by the act of June 10, 1896, authority was granted to compute the value of the articles named and to pay to these Indians cash in lieu thereof. Payments made under this appropriation are commonly referred to as "Sioux benefits" and can be made only upon application of the individuals entitled thereto. When cash payments are made, funds are used for purposes of direct benefit to the individual involved, including the purchase of farm equipment or livestock, and home improvement.

The legal authority for these payments is found in the act of March 2, 1889, section 17 (25 Stat. 894; act of June 10, 1896 (29 Stat. 334); and the act of June 21, 1906 (34 Stat. 326).

MISCELLANEOUS PERMANENT APPROPRIATIONS

Statement relating 1965, 1966, and 1967 programs

1965 appropriation	$6,885,686
1966 appropriation, estimate	6,630,200
1967 appropriation, estimate	6,630,200

JUSTIFICATION

1. Acquisition of lands and loans to Indians in Oklahoma, act of June 26, 1936, $10,000

It is estimated that $10,000 will be derived from mineral deposits underlying certain lands purchased in Oklahoma and will be used for the acquisition of lands and for loans to individual Indians, associations, or corporate groups of Indians residing in Oklahoma (25 U.S.C. 507).

2. Indian arts and crafts fund, $200

Fees charged for the use of Government trademarks attesting to genuineness and quality of Indian products and are used to stimulate sales of Indian arts and crafts (25 U.S.C. 305 a, c).

3. Operation and maintenance, Indian irrigation systems, $3,890,000

All funds requested under this appropriation are obtained from the collection of assessments against water users on the various projects and are deposited in the Treasury to the credit of the respective projects. By the expenditure of these funds, the various projects located on Indian reservations are maintained in good operating condition, thus permitting the facilities constructed by the Government to be utilized by the Indian and non-Indian landowners within the project who depend upon proper operation and maintenance of the projects for irrigation farming and subsistence.

The funds are used for operation of the irrigation systems to provide adequate water deliveries; for the annual cleaning of canals and laterals to remove silt, moss, and weed growth; for the repair and replacement of water control structures; for the operation and maintenance of reservoirs, dams, and pumping plants, including the purchase of electrical energy; for the purchase of materials and supplies and equipment used in operating and maintaining the irrigation system; for the maintenance, heating, and lighting of offices used for project administration and quarters occupied by project employees; for payment to the U.S. Geological Survey for stream gaging and water recording services; for payment to other Government agencies and irrigation districts for operation and maintenance of irrigation systems on Indian lands included and benefited; for the repair of flood damage and for all incidental and necessary expenses for the proper operation, maintenance, and administration of Indian irrigation projects. The policy in administration of Indian irrigation projects is to make the assessment rate for the various projects on a basis of actual costs.

4. Power systems, Indian irrigation projects, Bureau of Indian Affairs, $2,730,000

All funds under this permanent indefinite appropriation are from earned revenue deposited in the Treasury to the credit of the respective projects. This appropriation provides funds for the operation and maintenance of two hydrogenerating plants; a diesel power generating plant; transmission lines, distribution systems and pumping plants for the use of the project irrigation systems; the purchase of power for resale and for all necessary expenses for operation of power systems. The project power systems not only serve their primary purpose of furnishing electrical energy to the projects for irrigation and drainage pumping, but also furnish energy to mining and milling properties, public utilities and domestic consumers on the project proper, in nearby towns and villages, and in outlying farming areas. The energy supplied by these projects in many instances is the only source of electrical energy available to the customers. At present, there are approximately 9,600 domestic and commercial customers being served. A large number of potential customers have applied for electrical service.

The activities under the appropriation consist of operation, maintenance, and improvement of power systems built in connection with irrigation projects on the Gila River, Colorado River, and Flathead Indian Reservations. The facilities under these power projects consist in the aggregate of four generating plants of 17,620-kilowatt capacity; over 1,767 miles of transmission system; 113 project pumping plants; and approximately 116 buildings used as quarters, powerhouses, and warehouses for both power and irrigation activities. Funds are used for payment of the salaries of power superintendents; power and pumping plant operators; line repair and maintenance crews; meter reading and reporting and a clerical force for billing and accounting for revenues; for the purchase of energy; and for the purchase and repair of equipment used on the power systems. Approximately 115 million kilowatt-hours are transmitted over all project transmission and distributory systems annually.

Office of Territories

Internal revenue collections for Virgin Islands

Appropriated, 1965	$8,313,413
Appropriated, 1966	10,405,984
Estimate, 1967	8,000,000
Decrease, 1967, compared with 1966	−2,405,984

JUSTIFICATION

Under the provisions of section 28(b) of the Revised Organic Act of the Virgin Islands, Public Law 517, 83d Congress. approved July 22, 1954, the Treasury Department is authorized to transfer customs duties and certain taxes into the Treasury of the Virgin Islands, to be available for expenditure as prescribed therein.

The Internal Revenue collections available to the Virgin Islands for the fiscal year 1966 under the provisions of the Revised Organic Act are $10,405,984. It is estimated that $8 million will be available in the fiscal year 1967. Any balance of Internal Revenue collections remaining after the amount equal to the revenue collected in the Virgin Islands has been transferred will be deposited into the Treasury as miscellaneous receipts.

Geological Survey

Permanent appropriation

Appropriated, 1966	$1,000
Estimate, 1967	1,000

JUSTIFICATION

Payment from proceeds, sale of water, Mineral Leasing Act of 1920, section 40(d) Geological Survey

When lessees or operators drilling for oil and gas on public lands strike water, water wells may be developed by the Department from proceeds from the sale of water from existing wells (30 U.S.C. 221–229). During 1967 proceeds totaling $1,000 are anticipated. No obligations are anticipated in 1967.

Bureau of Commercial Fisheries

PROMOTE AND DEVELOP FISHERY PRODUCTS AND RESEARCH PERTAINING TO AMERICAN FISHERIES

Statement relating appropriation estimate to current appropriation

1965 appropriation (receipts for calendar year 1963)	$5,297,950
1966 appropriation (receipts for calendar year 1964)	6,610,569
1967 appropriation (estimated receipts for calendar year 1965)	5,800,000

Pursuant to the provisions of the act of July 1, 1954 (68 Stat. 376), as amended by the Fish and Wildlife Act of 1956 (70 Stat. 1119), an amount equal to 30 percent of the gross receipts from customs receipts on fishery products is main-

tained in a separate fund and used by the Secretary of the Interior (1) to promote the free flow of domestically produced fishery products in commerce; (2) to develop and increase markets for fishery products of domestic origin; and (3) to conduct any biological, technological, or other research pertaining to American fisheries. The work under this appropriation falls under four activities: (1) Marketing and technology—which includes commercial fishery economics, exploratory fishing and gear development, fishery market news service, commercial fishery statistics, fishery technological studies, foreign fisheries and trade, and fishery education and market development; (2) Research—which consists of coastal and offshore fishery research, inland fisheries, and commercial shellfishery research; (3) Research on fish migration over dams; and (4) General administrative services—which cover such expenses incident to this program, including expenses of the American Fisheries Advisory Committee.

PAYMENT TO ALASKA FROM PRIBILOF ISLAND RECEIPTS

Statement relating appropriation estimate to current appropriation

Appropriated, 1965	$963,635
Appropriated, 1966	
Estimate, 1967	200,000
Increase	200,000

Section 6(e) of the Alaska Statehood Act of January 7, 1958 (72 Stat. 339), provides that "Commencing with the year during which Alaska is admitted into the Union, the Secretary of the Treasury, at the close of each fiscal year, shall pay to the State of Alaska 70 per centum of the net proceeds, as determined by the Secretary of the Interior, derived during such fiscal year from all sales of sealskins or sea-otter skins made in accordance with the provisions of the Act of February 26, 1944 (58 Stat. 100; 16 U.S.C., secs. 631a–631q), as supplemented and amended * * *." Payment is to be made from the "Phibilof Islands Fund."

BUREAU OF SPORT FISHERIES AND WILDLIFE

Migratory bird conservation account

Estimate, 1966 (indefinite)	$5,000,000
Estimate, 1967 (indefinite)	5,000,000

JUSTIFICATION

Receipts from the sale of Federal migratory bird hunting stamps under the Migratory Bird Hunting Stamp Act of March 16, 1934 (16 U.S.C. 718) are available exclusively for payment of Post Office Department expenses of printing and selling the stamps, the location, ascertainment, and acquisition of suitable areas for migratory bird refuges under the provisions of the Migratory Bird Conservation Act, and the acquisition of waterfowl production areas under the Migratory Bird Hunting Stamp Act. The estimated receipts of the migratory bird conservation account in 1966 are $5 million, to be derived from sales of 1,666,666 migratory bird hunting stamps at $3. Estimated receipts from sales of these hunting stamps are $5 million for 1967.

Obligations for acquisition of waterfowl habitat in fiscal year 1965 from duck stamp receipts and the $8 million advance covered 83,535 acres in fee, 177,796 acres of wetlands in easements, and the lease of 21,215 acres.

The $12,500,000 available in 1966 ($5 million estimated stamp sales and a $7,500,000 advance) will provide for acquisition of an estimated 70,000 acres in fee and 149,000 acres of wetlands in easements.

The estimate for 1967 of $11 million ($5 million estimated stamp sales and a $6 million advance) will provide for acquisition of an estimated 67,000 acres in fee and 113,000 of wetlands in easements.

	Estimate, 1966	Increase or decrease (−)	Estimate, 1967	Transfer from advances to migratory bird conservation account	Total estimate, 1967
1. Printing and sale of hunting stamps: Payment to Post Office Department for cost of printing, sale, and accounting for migratory bird hunting stamps.	$115,000	----------	$115,000	----------	$115,000
2. Acquisition of refuges and other areas: Costs of location, ascertainment, and acquisition of migratory bird refuges and waterfowl production areas:					
(a) Realty costs, involving location, ascertainment and appraisal of areas and presentation of proposals to the Migratory Bird Conservation Commission: and, following approval of the Commission, negotiation, title verification, title clearance, and other expenses incident to vesting title in the United States	800,000	−100,000	700,000	800,000	1,500,000
(b) Engineering costs in connection with location and ascertainment of areas, drafting services and other costs incident to preparation of preliminary development plans, outline specifications, estimates, and topographic maps, engineering studies, water rights investigations, and other costs incident to preparing cases for presentation to the MBCC: and, following approval by the Commission, surveys incident to vesting title in the United States	575,000	−275,000	300,000	500,000	800,000
(c) Biological work costs in the location and ascertainment of refuge areas and the preparation of preliminary management plans and estimates, as well as costs incident to preparing cases for presentation to the Migratory Bird Conservation Commission	150,000	−50,000	100,000	----------	100,000
(d) Administrative costs including executive direction and general administrative services attributable to the program	69,300	----------	69,300	----------	69,300
(e) Land acquisition costs including rental of areas, water rights, rights-of-way, easements, relocation expenses of owners, and other direct costs of acquiring areas or rights and interests therein	3,290,700	+425,000	3,715,700	4,700,000	8,415,700
Total	5,000,000	----------	5,000,000	6,000,000	11,000,000

FEDERAL AID IN FISH RESTORATION AND MANAGEMENT

Statement relating appropriation estimate to current appropriation

Appropriated, 1966	$7,373,380
Estimate, 1967	6,500,000
Decrease	873,380

JUSTIFICATION

The act of August 9, 1950, commonly known as the Dingell-Johnson Act (16 U.S.C. 777a–k) authorizes the Secretary of the Interior to cooperate with the States through their respective fish and game departments in fish restoration and management projects. The act authorizes appropriation of an amount equal to collections of the 10 percent manufacturers' excise tax on fishing rods, creels, reels, artificial lures, etc. There is authorized to be deducted from amounts so appropriated not to exceed 8 percent for expenses of administration

of the act. The remainder is apportioned to the States on the basis of a formula which takes into account the land area and number of persons holding paid fishing licenses. The act provides for 1 percent minimum and 5 percent maximum apportionments to the States and fixed apportionments of $10,000 each to the Commonwealth of Puerto Rico, and the territories of Guam and the Virgin Islands. The States, the Commonwealth of Puerto Rico, and the territories of Guam and the Virgin Islands have 2 years in which to obligate the apportionments. Any funds not obligated revert to the Bureau and are used for the sport fish research program. The 1967 program is a decrease of $1,500,000 as follows:

	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase (+) or decrease (−)
1. Payments to States: States are reimbursed up to 75 percent of the cost of fish restoration and management projects, including research into fish culture; formulation of restocking plans; and acquisition and improvement of fish habitat. The Commonwealth of Puerto Rico and the territories of Guam and the Virgin Islands are reimbursed 100 percent of the cost of such projects. The decrease is due to a reduction in receipts for 1966 to be apportioned in 1967	$7,229,000	$5,826,000	−$1,403,000
2. Administration: Administration of the act includes apportionment of funds; examination and approval of fish restoration and management plans; processing of project agreement after approval of State plans; inspection of projects; making payments to States and auditing State expenditures; and coordinating research effort of the various States. The decrease of $83,000 is due to elimination of a nonrecurring item in fiscal year 1966, the national survey of hunting and fishing and discontinuance of most land appraisal services for the State game and fish departments. States will generally provide evidence that prices paid for project lands, or interests therein, are fair and reasonable	599,000	516,000	−83,000
3. Sport fish research: Reverted funds are available for the sport fishery research program of the Bureau. The decrease of $14,000 is due to a reduction in funds available to the Bureau	172,000	158,000	−14,000
Total program	8,000,000	6,500,000	−1,500,000

FEDERAL AID IN WILDLIFE RESTORATION

Statement relating appropriation estimate to current appropriations

Appropriated, 1966	$20,200,720
Estimate, 1967	17,170,000
Decrease	3,030,720

JUSTIFICATION

The act of September 2, 1937, commonly known as the Pittman-Robertson Act (16 U.S.C. 669–669j) authorizes the Secretary of the Interior to cooperate with the States through their respective fish and game departments in wildlife restoration projects. The act authorizes the setting aside in a special Federal aid to wildlife restoration fund an appropriation of amounts equal to revenues received from the 11 percent manufactures' excise tax on firearms, shells, and cartridges. An amount not to exceed 8 percent is authorized to be deducted for expenses of administration of the act. The remainder is apportioned to the States on the basis of a formula which takes equally into account the land area and the number of persons holding paid hunting licenses. The act provides for one-half of 1 percent minimum and 5 percent maximum apportionments to the States and fixed apportionments of $10,000 each to the Commonwealth of Puerto Rico and the territories of Guam and the Virgin Islands. The States and the Commonwealth of Puerto Rico and the territories of Guam and the Virgin Islands have 2 years in which to obligate the apportionments. Any funds not

obligated revert to the Bureau and are used for carrying out the purposes of the Migratory Bird Conservation Act. The 1967 program is a decrease of $3 million as follows:

	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (—)
1. *Payments to States.*—States are reimbursed up to 75 percent of the cost of approved wildlife restoration projects including the acquisition and development of land or water areas and for wildlife management research and for maintenance of completed projects not to exceed 25 percent of the total amount apportioned. The Commonwealth of Puerto Rico and the territories of Guam and the Virgin Islands are reimbursed 100 percent of the cost of such projects. The decrease is due to a reduction in receipts for 1966 to be apportioned in 1967	$18,478,000	$15,508,000	—$2,970,000
2. *Administration.*—Administration of the act includes apportioning funds; examining and approving State wildlife restoration projects plans, specifications and estimates; processing project agreements; inspecting projects; making payments to States and auditing State expenditures; and coordinating research efforts of the various States. The decrease of $216,000 is due to elimination of a nonrecurring item in fiscal year 1966, the national survey of hunting and fishing and discontinuance of most land appraisal services for the State game and fish departments. States will generally provide evidence that prices paid for project lands, or interests therein, are fair and reasonable	1,231,000	1,015,000	—216,000
3. *Carrying out Migratory Bird Conservation Act.*—Reverted funds are available to carry out the provisions of the Migratory Bird Conservation Act and supplements amounts available for wildlife research program of the Bureau. The Bureau program includes an estimate of $1,580,000 for construction of a general-purpose laboratory-office building at the Patuxent Wildlife Research Center at Laurel, Md. Of this amount, $40,000 was appropriated in fiscal year 1965 for development of plans and specifications and the fiscal year 1967 estimates include $1,100,000 for construction under the construction appropriation. The balance of $440,000 is to be financed from this appropriation. $40,000 is being requested in fiscal year 1966 for completion of the plans and specifications and $400,000 in fiscal year 1967 for completion of construction. The balance of the fiscal year 1967 estimate is for continuation of the foreign game introduction program. The above increases are offset by decreases from the 1966 program, giving a net increase of $186,000	291,000	477,000	186,000
Total program	20,000,000	17,000 000	—3,000,000

PAYMENTS TO COUNTIES, NATIONAL GRASSLANDS

Statement relating appropriation estimate to current appropriation

1966 estimate	$2,000
1967 estimate	2,000

JUSTIFICATION

Executive Order No. 10787 transferring certain submarginal lands to the Secretary of the Interior for administration by the Bureau of Sport Fisheries and Wildlife as refuges for migratory birds and other wildlife provides that the counties shall participate in the new revenues from the use of such lands in accordance with the Farm Tenant Act (7 U.S.C. 1011 and 1012). This act specifically provides that 25 percent of the net revenues received from the use of submarginal lands shall be paid after the close of the calendar year to the county in which such lands are situated for the benefit of schools and roads. When the land is situated in more than one county, the net receipts are prorated to each county in proportion to the area of the land in the particular county. Revenues from the use of these lands consist of receipts from grazing, rights-of-way, concession operations and from other privileges on refuges.

NATIONAL WILDLIFE REFUGE FUND

Statement relating appropriation estimate to current appropriation

Appropriated, 1966	$1,886,134
Estimate, 1967	2,780,000
Increase	893,866

JUSTIFICATION

The Migratory Bird Conservation Act (16 U.S.C. 715s) authorizes the expenditure of revenues from the national wildlife refuge system. Revenues consist of receipts from the sale or other disposition of animals, timber, hay, grass or other products of the soil, minerals, shells, sand or gravel, from other privileges, or from leases for public accommodations or facilities on refuges. The act authorizes deduction of necessary expenses incurred in connection with the revenue-producing measures and payment to participating counties of 25 percent of net revenues of each refuge or, in accordance with the August 30, 1964, amendment to the act, 0.75 percent of the value of lands acquired in fee effective with revenues collected in fiscal year 1966 and distributed in fiscal year 1967. The remainder of the receipts revenue is available for management of the national wildlife refuge system and for enforcement of the Migratory Bird Treaty Act.

Expenses for sales, $229,000.—The act provides for payment of expenses incurred in connection with revenue-producing measures prior to distribution of the revenues. Examples of such expenses are salaries of foresters to cruise and mark timber for sale, auctioneer's fees, transportation of furs to auction houses, and labor and supplies for butchering and shipping buffalo. The program for 1967 is an increase of $1,000 over 1966.

Payments to counties, $1,459,000.—The act provides for participation of counties in net revenues. The distribution is 25 percent of net revenues or 0.75 percent of the value of lands acquired in fee in case of each refuge to be expended by the county for the benefit of the public schools and roads. When a refuge consists of reserved public lands and is situated in more than one county the net receipts are prorated to each county in proportion to the area of the refuge in the particular county. The 1967 program is $1,420,000, an increase of $395,000 over 1966, because of the new provision for payments to counties of a percentage of the value of lands.

Development and maintenance of wildlife refuges, $2,464,000.—The receipts remaining after payments of expenses and distribution to counties are available to supplement funds provided for management of wildlife refuges in the appropriation management and investigations of resources. Because of the additional net revenues available after settlement of the Leiter Minerals lawsuit the fiscal year 1967 estimate for this activity has been increased by $1,420,000 with an offsetting decrease in the management and investigations of resources appropriation. This substitute financing will be possible in fiscal year 1967 only, since such funds will not be available thereafter.

Enforcement activities—$520,000.—Net receipts are also available to supplement funds provided in management and investigations of resources appropriation for enforcement of the Migratory Bird Treaty Act. The 1967 program totals $520,000 and is an increase of $12,000 over 1966.

NATIONAL PARK SERVICE

Miscellaneous permanent appropriations

Appropriated, 1966	$122,100
Estimate, 1967	124,500
Increase	2,400

JUSTIFICATION

1. Educational expenses, children of employees, Yellowstone National Park, $96,000

The act of June 4, 1948 (62 Stat. 338) authorizes the Secretary of the Interior to make payments in advance or otherwise from any revenues received from the collection of visitor fees to the park, for providing educational facilities to pupils who are dependents of persons engaged in the administration, operation, and maintenance of Yellowstone National Park.

The 1967 estimate is compared with the amount available for 1966 as follows:

	Available, 1966	Estimate, 1967	Increase
Personnel compensation and benefits	$7,200	$7,200	
Contractual services	82,000	83,000	$1,000
Other expenses	5,000	5,800	800
Total	94,200	96,000	1,800

Personnel compensation and benefits.—The estimate of $7,200, the same as 1966, will provide for the part-time services of janitorial, firemen, and maintenance employees.

Contractual services.—The estimate of $83,000, an increase of $1,000 over 1966, is needed to cover the pro rata costs to the Government for qualified pupils who attend various public schools. It includes an amount for estimated payments to the Yellowstone National Park school district for hire of teachers, substitute teachers' services, and for school supplies for the elementary school at park headquarters, and for reimbursing school districts in communities adjacent to the park for tuition, transportation, etc. It is estimated that there will be 94 elementary and 33 high school students in 1967, including 18 elementary school children expected to be enrolled, as compared to estimates of 97 and 40, respectively, in 1966. The increase of $1,000 will provide for increases in tuition rates.

Other expenses.—The estimate of $5,800, an increase of $800 over 1966, is the amount required for other expenses incident to the operation of the school at park headquarters, principally for supplies, fuel, etc. This increase is for replacement of textbooks and increased cost of supplies and maintenance equipment.

2. Payment for tax losses on land acquired for Grand Teton National Park, $24,500

Pursuant to the act of September 14, 1950 (64 Stat. 851), the Secretary of the Interior is authorized to use visitor fees collected at Grand Teton and Yellowstone National Parks to compensate the State of Wyoming for tax losses on lands acquired for Grand Teton National Park.

It is estimated that $24,500 will be required to compensate the State for 1965 calendar year tax losses.

3. Operation, management, maintenance and demolition of federally acquired properties, Independence National Historical Park, $4,000

Pursuant to the act approved June 28, 1948 (62 Stat. 1061), the Secretary of the Interior, following the consummation of an agreement with the city of Philadelphia and the Carpenter's Co. of Philadelphia, was authorized to acquire by donation, with donated funds or by purchase, real and personal properties for the establishment of Independence National Historical Park. Two amendments have been made to the basic legislation which enlarge and extend the authorization contained in the original act. The act approved October 26, 1951 (65 Stat. 644), authorized the use of all moneys collected from rental operations for the operation, management, maintenance, and demolition of federally acquired properties until such time as the buildings on them are demolished or until the properties and buildings are devoted to park purposes. The sum of $4,000 for the 1967 fiscal year is estimated to be required for the purposes stated above.

Statement of Secretary Udall

Chairman Hayden. The Secretary of the Interior will make the overall budget presentation for his Department.

Secretary Udall, I will be glad to have you present the staff members who accompany you this morning, and then you may make your statement to the committee.

Secretary Udall. Thank you very much, Mr. Chairman.

It is always a pleasure to present our budget to this committee. This for me, Mr. Chairman, is the sixth budget I have presented to this committee.

As Secretary of the Interior that is a lot of budgets to present. For someone like the Senator from Arizona it isn't very much, but from this side of the table it is something that we talk about because not very many Secretaries of the Interior have an opportunity to present such budgets.

Senator Young. I think that speaks very well for you—that you have been around for so long.

Turnover of Bureau Directors and Office Heads

Secretary Udall. It would interest the members of the committee, because of the keen and close interest you take in all of our bureaus and departments, to know that I was looking at the preceding 5 years a few weeks ago, looking back, and out of all the bureau directors and heads of offices and agencies in the Department, I have only two left that began with me 5 years ago.

Those two, incidentally, I think very obviously are two of the strongest and ablest bureau chiefs. One is the Commissioner of the Bureau of Reclamation, Mr. Dominy, and the other is the Director of the Bureau of Commercial Fisheries, Mr. Don McKernan, both of whom you are familiar with, but we have had new blood.

Dr. W. T. Pecora, Director of Geological Survey

There are two new men that I think that you will be very much impressed with that are bureau directors that will be coming before you this time. One is the new Director of the Geological Survey, Dr. W. T. Pecora, who was formerly the chief hydrologist. In selecting him we counseled and advised with the National Academy of Sciences, as has been the custom.

Dr. Walter Hibbard, Director of Bureau of Mines

And we also have a Dr. Walter Hibbard, an outstanding scientist, who is the Director of the Bureau of Mines. These are two men that you will get acquainted with and you will find are very able people.

Hold-the-Line Budget Request

Mr. Chairman, in a general way I would say that I think this is a lean budget but a good budget in the sense that in a lean year, and this is, as the members of this committee know, in terms of the heavy obligations and the crisis we have in southeast Asia, essentially our budget for the first time in the six budgets I have presented is a hold-the-line budget.

This meant that we had to go through some very strenuous and wise exercises in deciding just where the money should be put this year and deciding what economies could be achieved by better management.

I have here with me this morning my Under Secretary, John Carver. He has throughout last year, throughout the year of 1965, headed a special type of budget and planning operation. He has spent many, many hours on this.

I have to be in Arizona this evening, Senator. I have to catch a plane, and I am afraid I am going to have to leave about 11 o'clock. I hope you would indulge me that, but I brought my right-hand man, who is on my left here, with me today and I am sure you will find him as knowledgeable or more knowledgeable than I.

Improved Education and Living Conditions of Indians

Mr. Chairman, members of the committee; as I said, I am privileged to come before this committee for the sixth time to present the budget for the Department of the Interior. With your vital interest in the Department over a span of almost four decades in the Senate and with the strong support of the members of this committee, great progress has been made toward improving the education and living conditions of our Indian people and those living in the territories. We have been able also to advance the management of our natural resources and, at the same time, improve our out-of-doors environment by preserving natural open spaces.

Action Program

The provisions in the budget for the Department of the Interior, in common with the provisions for the entire executive branch, are a culmination of an intensive effort mounted within the Department to produce an action program—

To meet the stewardship requirement for the management of the public's resources.

To push forward a program of development of parks and seashores in the areas where such programs have been authorized.

To integrate this Department's capabilities into the larger objectives of the executive branch, including those on the international front and such programs on the domestic front as improving the quality of our environment, pushing forward the war on poverty, and assisting in the Appalachian and other regional development programs.

To give special attention to the human needs, including education, welfare, and other services for the Indian people and the people of the territories.

Indian, Territories, Appalachian Program, and Grazing Lands

This budget provides for substantial increases in Indian education—these things are very vital and are necessary—funding to the full level of authority for the territories, and the wisdom of this committee in supporting these appropriations has certainly been justified many times over in recent years; vital participation in our part of the Appalachian program with particular emphasis on minerals and related research for the economic development of the resources of the affected regions; and continuance of the project-type programs for grazing lands in the West.

New National Park Developments

Our resource management programs, including management of Indian resources, will be of the highest order. We will continue to acquire and develop the authorized new park areas, and the budget contains affirmative reference to needed new national park developments.

Added Water Supplies

Emphasis is being placed on the development of added water supplies including saline water conversion. Basic data on water resources are yielded by several research programs including the Office of Water Resources Research.

Mineral Extraction and Conversion of Waste Solids

Work will continue in the minerals field to improve methods of extraction and use as well as developing data to provide for our future needs. Efforts are also expanding to find means for converting waste material to beneficial use, particularly solid wastes, and at the same time remove them from the scene to enhance the national program for beautification.

Budget Message of the President

The President, in his budget message to the Congress stated in part:

> We are a rich nation and can afford to make progress at home while meeting obligations abroad—in fact, we can afford no other course if we are to remain strong. For this reason, I have not halted progress in the new and vital Great Society programs in order to finance the costs of our efforts in southeast Asia.
>
> But even a prosperous nation cannot meet all its goals all at once. For this reason, the rate of advance in the new programs has been held below what might have been proposed in less troubled times, many older and lower priority activities have been reduced or eliminated, and economies have been sought in every operation of the Government.

1967 Budget Request

I would say this is a pretty good description of the mental process that we followed during last year.

In developing our fiscal year 1967 budget, I established a committee of top officials headed by the Under Secretary of the Department, John Carver, to review all programs for effectiveness in meeting our responsibility toward the goals set by the President.

The Under Secretary under our new method of operating is what one might call operating as general manager of the Department.

The budget estimates before you today amount to $844,680,000, an increase of $16.3 million over the amount available in 1966. There are selected increases and decreases in the various appropriations which reflect the decisions to meet the objectives within the fiscal policy.

Avoidable costs have been identified and eliminated to provide for needed expansion in the higher priority programs.

Personnel Increases

Increases in the number of permanent positions amounted to 1,299 for a total of 49,452 in fiscal year 1967. The Job Corps programs of the Department account for 110 of this increase. The major increases in personnel occur in the Bureau of Indian Affairs for the education and resources management programs; in the Geological Survey to provide for increased emphasis in the field of water resources; and in the National Park Service to operate newly authorized areas for public use.

The budget also provides for centralizing, at the Department level, the audit of grant programs with a projected annual savings of $152,000.

Reorganization of Office of Fish and Wildlife Commissioner

The Office of the Commissioner for Fish and Wildlife was reorganized to eliminate an administrative layer between the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries and Wildlife and the Assistant Secretary. The Commissioner and a small staff have been transferred to the Office of the Assistant Secretary for Fish and Wildlife and Parks which in effect strengthens his position, the remainder of the staff having been transferred to the Bureau of Sport Fisheries and Wildlife and the Bureau of Commercial Fisheries to perform the functions that can be handled at the Bureau level.

Equal Opportunity Office Established

We have also strengthened the Department's position on equal opportunity by establishing a separate office to develop procedures and provide staff guidance to assure compliance with the administration's objectives.

Review of Programs for Effectiveness and Economy

We have established, also, a staff to further strengthen the departmental review of all programs for effectiveness and economy.

We are, I might add, Mr. Chairman, studying several different internal reorganization plans that could be achieved within the Department itself in an effort to get more effective planning and policymaking.

As previously mentioned, this procedure was initiated during the review of the 1967 budget. The creation of this staff will enable us to achieve the objectives of the President in developing and putting into effect an integrated planning, programing, and budgeting system. This is the vital new element that was introduced into the new budget process.

This, incidentally, also under our method of operation, will be conducted under the direct guidance and supervision of the Under Secretary.

Approval of Personnel Increases Urged

The additional staffing has been held to a minimum by utilizing the existing talent that exists in the Office of the Secretary and in the bureaus. We urge you to approve this proposal since we believe it will result in better programs and even more economical operations. It will give us a broader view to look over the horizon.

Program Increases

Major increases in the budget consist of $8.3 million for Indian education and welfare services; $23.5 million for Indian construction, practically all of which is for education facilities; $10.5 million for Appalachian mining area restoration; $1.4 million for fish and wildlife restoration projects in the Appalachian region; $2.9 million for the solid waste disposal program; $10 million borrowing authority for helium conservation; $5.4 million for management, protection, and maintenance of new Park Service areas, and $8.6 million for expanded research in saline water conversion.

Bureau of Land Management

While the budget for the Bureau of Land Management is less than the amount available for 1966, through savings resulting from better use of manpower and adjustments in lower priority programs, it nevertheless provides for continued improvements in the management of forest and range lands, and for the construction of sanitation and protection facilities for public health and safety in areas of intensive use of public lands.

Bureau of Indian Affairs

The budget provides for continuing the expansion of educational opportunities for Indian children through construction and improvement of Federal school buildings to meet the rapid growth of the school-age population and provide for the replacement of obsolete facilities, and the addition of teaching and counseling staff to meet increased enrollment of Indian children.

Indians To Be Included in National Quality of Education Program

Incidentally, one thing I should like to inform the committee, Mr. Chairman, although this item, if it works out the way it appears it will work out, will be handled by another subcommittee, is that last year in the big new national program that Congress passed, President Johnson's quality of education program, designed to give funds to school districts and to States to put in extra money to emphasize quality education in areas where there are impoverished schoolchildren who are below a certain threshold, the Indian children were left out of that program.

We have been working for the last 60 days with the Bureau of the Budget and with the Department of Health, Education, and Welfare, and we have concluded that not only should the Indian children be included in this program, but that this money should come out of the general fund, the new money that has been appropriated for the program.

We are trying to work out a formula and it is likely that we will look to that fund and to the Education Committee rather than this committee for this portion of the quality education money for Indian children that is going to schools all over the country.

JOB CORPS PROGRAM

Senator YOUNG. May I ask a question at this point, Mr. Chairman?

Chairman HAYDEN. Senator Young.

Senator YOUNG. You supply a certain number of instructors, don't you, for the Job Corps program?

Secretary UDALL. Part of the Job Corps program includes these conservation centers and we have as part of the conservation centers about 50 percent of the time spent on work projects, 50 percent of the time spent on education, and we do have teachers, yes, for the educational side of this program.

Senator YOUNG. Do they remain on your payroll, or are they on some other payroll?

Secretary UDALL. It is funded from OEO, from the Office of Economic Opportunity. We actually run the centers and carry out the work programs, but the funding comes from OEO. Our people carry out the program at these centers.

Senator YOUNG. In the Job Corps centers?

Secretary UDALL. Yes.

JOINT PROGRAM BY DEPARTMENT AND OFFICE OF ECONOMIC OPPORTUNITY

Senator YOUNG. Are you responsible for the whole operation, or do you just furnish part of the instructors?

Secretary UDALL. Well, it is a unique arrangement. Under the joint guidance and supervision of the Department and of the Office of Economic Opportunity, they play probably the major role in providing guidance and supervision, but we select and recruit the directors.

They put the staffs together and it is what you might call a joint program with the Office of Economic Opportunity and the Department.

Senator YOUNG. But not financed through the Interior Department?

DEVELOPMENT AND MANAGEMENT OF INDIAN RESERVATION RESOURCES

Secretary UDALL. That is correct.

Additional funds are requested also for development and management of the Indians' reservation resources and for assisting in developing industrial and commercial enterprises on the reservations; these programs having as their primary objectives a means of providing increased income for the Indians and enabling them to become self-sufficient.

BUREAU OF OUTDOOR RECREATION

The request of the Bureau of Outdoor Recreation provides for further preparation and development of a nationwide outdoor recreation plan. While the land and water conservation fund is at a somewhat reduced level on the basis of a more realistic return of revenues, the land acquisition programs financed from this fund are moving ahead with increasing speed as the States participate more and more on a fund-matching basis. The fund will also be used to enable the National Park Service, Forest Service, and the Bureau of Sport Fisheries and Wildlife to acquire areas for recreation and preservation of endangered wildlife species.

Full Funding of Conservation Fund

Members of the committee will recall last year that I urged the committee to adopt the policy, and persuaded the Bureau of the Budget to adopt the policy, of full funding of the conservation fund. In other words, whatever money comes into the fund, such as earmarked revenues, would be appropriated.

Of course, a year ago we were proceeding on an estimate. Our estimate proved to be high. Consequently, our estimate for the new year is lower than last year, but since we committed ourselves to the concept of full funding this committee each year will supervise this fund and will appropriate those amounts which appear to represent the full funding principle.

Funds for Redwoods National Park

There is one thing that I would call to your attention because it is somewhat unusual. You will find $10 million in the conservation fund for the proposed Redwoods National Park, which has not yet been authorized. It is expected that this new park proposal will be sent forward by the President within the very near future.

The reason we took this unusual step is that, in our judgment, there is such a great urgency in this matter. By the end of this year, but no later than the end of next Congress, if this legislation has not been authorized—the cutting is continuing—we probably will have lost the opportunity to have a national park in the northern California redwoods country. It is for this reason that we have taken the unusual step of putting such a large amount of money in this budget, at least $10 million, for this purpose.

This will be the most costly park acquisition project that we have ever proposed by far.

Estimated Total Cost of Park

Chairman Hayden. What will be the probable total cost?

Secretary Udall. The total cost, Mr. Chairman, will be in the order of $50 to $60 million. The most that Congress has authorized up to now, I think, for a new national park or a new national seashore, is in the neighborhood of $16 million.

Government Participation in Conservation Fund

Also, I want to call the committee's attention to the fact that Congress, in writing the Land and Water Conservation Fund Act, provided for flexibility each year, flexibility for us and flexibility for you, and last year it was felt that at the beginning it was wise to be on the high side in terms of the matching grants for the States.

Increase in Federal Funding

This year we feel, because of the Redwoods National Park proposal, as well as other high-priority Federal acquisitions, that there should be full 40-percent funding on the Federal side. This will naturally reduce the amount that is available to the States, but Congress left room policywise for moving it up and down and it is our job along with you to make the decision on this each year. I know you

will want to scrutinize all of these different proposals because each year we are going to have to sit down and say, "Well, what is most urgent and where are the priorities in terms of this program this year?"

Program Popularity

We think the fund is working very well. We think it is going to have to be augmented. This has been a very popular program. Many of the States are just beginning and I am sure that we are going to do a tremendous job of conservation work in all parts of the country, both at the State level and Federal level, as a result of this new program.

We had $125 million of new money in the program a year ago and the committee went along with full funding, and now we are in the second year, so we come back and review the program.

Territories

We are continuing our program to promote the economic, social, and political development of the Trust Territory of the Pacific Islands, American Samoa, and Guam.

Advisibility of legislation to increase ceiling

Incidentally, we have under intensive review now whether legislation should not be proposed to further raise the ceiling on the Trust Territories of the Pacific. It may be that we will want to come up in this session of Congress with legislation to raise the ceiling and later come to the committee perhaps for a supplemental, for increased appropriations, because this is a very heavy and increasingly important responsibility which we must perform in that part of the world.

Here, too, emphasis is on programs designed to improve educational services and health standards, as well as to provide for public works construction.

American Samoa

Samoan projects carried out in recent years have resulted in a modernized educational system involving the use of television, substantial improvements in other public services, and a sharp growth in the economy of the islands.

They had the most severe hurricane in history 2 or 3 weeks ago and Governor Lee is here now and probably has talked to the staff with regard to the steps he hopes to take to restore the damage.

Geological Survey

The Geological Survey budget provides increases for matching State offerings for cooperative water investigations of the Nation's water resources—a most important program in the light of the critical water supply situation and one which is designed to provide the basis for a solution of this problem; and mapping and mineral and water resource studies in the Appalachian region are also moving forward.

Analysis of the earth's crust and the upper mantle, which is so important in the prediction of earthquakes, will continue to receive attention. These and other programs of the Geological Survey are fundamental to the development and full utilization of our land, water, and mineral resources.

Bureau of Mines

The budget for the Bureau of Mines will continue research to help improve the natural environment and contribute to the expansion of the Nation's mineral base. It includes increases for carrying out the Bureau's responsibilities under the Appalachian regional development program, and for accelerating a national research and development program for new and improved methods for utilizing and otherwise economically disposing of solid mineral wastes, including the conversion of junk automobiles into products usable by the steel industry. A $26 million borrowing authority is being requested to enable the Bureau to meet its financial commitments under the helium conservation program.

Office of Coal Research

Continued research will be carried on in fiscal year 1967 by the Office of Coal Research at a somewhat increased rate. Significant results from the contract research work already are finding economical application and the potential benefits from the various research projects augur well for the future of the Nation's coal economy. I think overall this has certainly been a highly successful and wise program.

Bureau of Commercial Fisheries

The budget for the Bureau of Commercial Fisheries provides some increases for fishery and fishery products research and studies, including research on effects of pesticides on commercial fisheries and their products, all of which are designed to aid the fishing industry. Provision is made also for increased costs of operating and maintaining existing and new ship and shore research facilities.

Bureau of Sport Fisheries and Wildlife

Funds are requested for carrying on the Appalachian region fish and wildlife restoration projects program of the Bureau of Sport Fisheries and Wildlife; for pesticide research; for operation of new facilities at various hatcheries and for carrying on its investigations programs in these areas.

National Park Service

The National Park Service budget includes increases for the operation and maintenance of 13 new park areas which have recently been authorized and for new facilities in the older parks which will be completed under construction programs and placed in operation in 1967.

Our national parks continue to attract large numbers of people. We expect a total of 137.1 million visitors in 1967 as compared to an estimated 120.5 million in 1965 and 128.9 million in 1966.

While the Service's construction program is less than in 1966, the amount requested will provide for the most essential facilities throughout the various parks and other areas under its jurisdiction, including visitor facilities in several of the recently authorized national seashores, such as Cape Cod, Mass.; Fire Island, N.Y.;

Padre Island, Tex.; and Point Reyes, Calif. Land acquisition funds of $28.3 million are budgeted for the Park Service from the land and water conservation fund, as I mentioned a moment ago.

Office of Saline Water

The budget includes increases for the Office of Saline Water to intensify its research efforts devoted to finding economically feasible means of producing fresh water from sea and brackish sources. The importance of this work is pointed up by the worldwide attention being given to studies to develop improved methods of desalination.

Funds are included for the completion of an advanced distillation unit at the west coast test center which will accelerate the development of large-scale economical processes for converting sea water.

Constructing Agency for Saudi Arabian Project

I should like to say to the members of the committee and call your attention specifically to what are the two big projects that we are hoping to move forward on this year.

The first is a plant which the Department hopes to break ground on sometime this year. We already have signed the agreement and we will act as the constructing agency for the Saudi Arabian Government at Jidda on the Red Sea.

We will make a small investment in terms of research and design of the plant, but practically the full cost of this plant is being borne by the Saudi Arabian Government.

Because of our expertise we will build the plant, and this is a relatively large dual-purpose plant to produce water and power.

Southern California Nuclear-Powered Plant

Even more exciting is the study that we have completed within recent months and we are in the final process of seeing if we can put together a water desalination project on the west coast in southern California. This would be a plant that will produce 150 million gallons a day, which, of course, would make it far larger than any plant under construction today.

This would also be, as contemplated, a dual-purpose plant with a nuclear powerplant that would feed off steam to a very large desalination plant.

Chairman Hayden. How many years will it take to complete that?

Secretary Udall. About 4 or 5 years, Senator. The reason I thought I should call this to the attention of the committee is that we are attempting to negotiate now with the metropolitan water district in southern California, and the Atomic Energy Commission is in this, and the city of Los Angeles, and the southern California private utilities companies. We have been carrying on negotiations for several weeks and we hope to complete them within the next month. In any event, the thing I wanted to advise the committee is that because of the nature of the initial investment it is not likely that there will be any impact on the 1967 budget.

AUTHORIZING LEGISLATION REQUISITE

The Congress probably this year, if we can put it together, will have to pass a special bill authorizing participation in this large project. That is the approach we have taken. There will be a budgetary impact, but it will not be in the 1967 budget.

However, I know the committee is interested in this program. It is your support of the program over the last 15 years that has made it possible for it to move up from $200,000 to $30 million in terms of research and development, and we hope that this is the year of the big takeover toward these big plants.

COST OF WATER AT CALIFORNIA PLANT

Senator YOUNG. What will the cost of water be in this California plant?

Secretary UDALL. The cost of water as revealed, Senator, by the study prepared by the Bechtel Co., and I would be glad to provide you a summary of this study if you are interested in it, is 27 cents per thousand gallons delivered to the metropolitan water district system. This compares to the $1 to $1.25 which has been the cost of these smaller plants.

Chairman HAYDEN. Translate that into cost per acre-foot.

Secretary UDALL. This is one thing I have never learned to do, Senator.

Chairman HAYDEN. Well, you can place it in the record.

Chairman HAYDEN. All right.

(The information follows:)

The cost of water to be delivered to the metropolitan water district system is $87.98 per acre-foot.

Secretary UDALL. But what we are attempting to do, Senator—I can put it in terms that you will understand—is that we think we can work out a plan whereby this water will cost the water consumers, the people in southern California, about the same amount that they are going to pay for this water they are bringing 800 miles from northern California.

In other words, this is what we are hoping to prove and to accomplish through this project. This, incidentally, also because it is essentially pure water, has considerable value for blending with other water.

RESEARCH AND DEVELOPMENT PROJECTS

We are having more and more water quality problems. Our water quality is deteriorating everywhere in the country because of minerals, silt, and so on, and this is part of the thing that is developing. I would like to say, too, though, that we are not just putting our focus on these large plants. This committee has wanted, and we have tried

to develop, a very versatile program and we have several research and development projects involving all kinds of smaller plants for inland brackish waters, small plants along the seacoasts, and plants for small communities. One of the processes that we weren't even talking about 3 years ago, this reverse osmosis that there has been a lot of publicity about, appears now to be very promising and we are putting a lot of research money and development money into this project.

President's Mandate for Management and Service Improvement

There is one further point, I wish to stress, Mr. Chairman, and I should like to quote again from the President's budget message, wherein he stated:

> I believe we are making good progress in reducing costs and improving efficiency, but I will never be satisfied that we have done all we should. I expect the top officials of every department and agency to press hard in the coming year to do still better * * * I intend to stress particularly this year the urgency of management improvement and better public service in the field establishment of the Federal Government.

The budget reflects our efforts to carry out program responsibilities with the most economical use of funds and manpower. This involves the elimination of avoidable costs so that we may compensate in part for the costs of new programs by making economies in going work. You may be sure that we shall continue our efforts in this respect.

Estimated Increased Revenue Receipts

The Department has traditionally generated substantial revenues into the U.S. Treasury from public land mineral royalties; sale of hydroelectric power; public land grazing fees; sales of timber from public lands; and now sales of recreation stickers, and a number of others.

Total receipts including accruals to the Land and Water Conservation Fund are estimated at $1,155 million for 1967, an increase of $249 million over fiscal year 1966.

Program Statements and Summary Tables

I have more detailed statements regarding the programs of the Department which, in the interest of saving time, I would like to file for the record at this time (withdrawn for committee files).

I would also like to file for the record, summary tables on the analysis of permanent positions, fiscal years 1966 and 1967, appropriations compared to receipts (see p. 10), and comparison of fiscal year 1966 appropriations with fiscal year 1967 estimates (see p. 3).

Chairman Hayden. They will be included in the record.

Secretary Udall. That completes my statement.

(The statements and tables follow:)

Analysis of permanent positions, fiscal years 1966 and 1967

Bureau or office and appropriation title	Permanent positions in 1967 budget		
	1966	1967	Increase (+) or decrease (−)
PUBLIC LAND MANAGEMENT			
Bureau of Land Management:			
Management of lands and resources	3,142	3,078	−64
Construction and maintenance	77	75	−2
Public lands development roads and trails (liquidation of contract authorization)	66	66	
Other funds	631	653	+22
Total, Bureau of Land Management	3,916	3,872	−44
Bureau of Indian Affairs:			
Education and welfare services	8,195	8,731	+536
Resources management	3,580	3,782	+202
Construction	690	684	−6
Road construction (liquidation of contract authorization)	479	509	+30
General administrative expenses	442	443	+1
Other funds	1,463	1,521	+58
Total, Bureau of Indian Affairs	14,849	15,670	+821
Bureau of Outdoor Recreation:			
Salaries and expenses	240	280	+40
Land and water conservation	317	408	+91
Allocations to other bureaus and agencies	−217	−254	−37
Other funds	106	30	−76
Total, Bureau of Outdoor Recreation	446	464	+18
Office of Territories:			
Administration of territories	86	76	−10
Trust Territory of the Pacific Islands	438	438	
Total, Office of Territories	524	514	−10
The Alaska Railroad: Other funds	950	950	
Total, Public Land Management	20,685	21,470	+785
MINERAL RESOURCES			
Geological Survey:			
Surveys, investigations, and research	8,195	8,491	+296
Lead and zinc stabilization program	2	2	
Total, Geological Survey	8,197	8,493	+296
Bureau of Mines:			
Conservation and development of mineral resources	2,726	2,571	−155
Health and safety	805	790	−15
General administrative expenses	162	159	−3
Appalachian region mining area restoration	64	42	−22
Solid waste disposal	60	81	+21
Helium fund	623	613	−10
Other funds	467	467	
Total, Bureau of Mines	4,907	4,723	−184
Office of Coal Research: Salaries and expenses	23	23	
Office of Oil and Gas: Salaries and expenses	65	67	+2
Mineral offices: Other funds	87	90	+3
Total, mineral resources	13,279	13,396	+117
FISH AND WILDLIFE AND PARKS			
Office of the Commissioner: Other funds	2		−2
Bureau of Commerical Fisheries:			
Management and investigations of resources	1,181	1,189	+8
Construction	7	2	−5
Construction of fishing vessels	8	8	
Federal aid for commercial fisheries research and development	18	18	
General administrative expenses	58	59	+1
Other funds	* 736	767	+31
Total, Bureau of Commercial Fisheries	2,008	2,043	+35

Analysis of permanent positions, fiscal years 1966 and 1967—Continued

Bureau or office and appropriation title	Permanent positions in 1967 budget		
	1966	1967	Increase (+) or decrease (−)
FISH AND WILDLIFE PARKS—continued			
Bureau of Sport Fisheries and Wildlife:			
Management and investigations of resources	2,836	2,930	+94
Construction	138	73	−65
General administrative expenses	153	154	+1
Migratory bird conservation account	240	225	−15
Appalachian region fish and wildlife restoration projects	6	6	
Other funds	983	974	−9
Total, Bureau of Sport Fisheries and Wildlife	4,356	4,362	+6
National Park Service:			
Management and protection	2,619	2,771	+152
Maintenance and rehabilitation of physical facilities	1,942	1,988	+46
Construction	348	283	−65
Construction (liquidation of contract authorization)	642	718	+76
General administrative expenses	194	195	+1
Other funds	924	1,016	+92
Total, National Park Service	6,669	6,971	+302
Total, Fish and Wildlife and Parks	13,035	13,376	+341
WATER AND POWER DEVELOPMENT			
Office of Saline Water:			
Salaries and expenses	97	122	+25
Operation and maintenance	19	16	−3
Total, Office of Saline Water	116	138	+22
SECRETARIAL OFFICES			
Office of the Solicitor: Salaries and expenses	416	419	+3
Office of the Secretary:			
Salaries and expenses	349	397	+48
Other funds	238	235	−3
Total, Office of the Secretary	587	632	+45
Office of Water Resources Research: Salaries and expenses	20	21	+1
VIRGIN ISLANDS CORPORATION			
Virgin Island Corporation: Other funds	15		−15
Total, other than Reclamation and power marketing agencies	48,153	49,452	+1,299

NOTE.—"Other funds" includes annual indefinite and permanent appropriations, trust funds, advances and reimbursements, revolving and management funds, allocations from other agencies, and excludes allocations to other agencies.

SAVINGS THROUGH MODERN TECHNIQUES

Chairman HAYDEN. In your statement you indicate that certain avoidable costs have been identified and will be eliminated during the coming year. Would you please name some of the activities which will be eliminated and the dollars you expect to save by their elimination?

Secretary UDALL. I would like to furnish the committee a detailed analysis, but just to hit the highlights which I know you are interested in, Mr. Chairman, there are such things as new mapping techniques.

Senator Bartlett, I know, is familiar with the new hover site technique that has been developed by the Geological Survey for mapping and that really has revolutionized the whole mapping business. There has been a reduction in cost of $300,000 in the Alaska operations of the Bureau of Land Management by use of this technique alone.

Of course, this enables us to do our work faster, to achieve it much cheaper. This technique utilizes radio contact between helicopters, field parties, and a computer headquarters office. Here is an example where better management can achieve tremendous savings.

The development of a program and utilization of ADP equipment by the Alaska Railroad, heretofore produced by EAM, and the joint use of the facilities by BLM, who previously contracted to private concerns, resulted in savings of over $100,000.

The National Park Service, again through ADP and centralization of field finance offices, has achieved savings we estimated at $215,000, and there are other examples of this where use of modern techniques are producing substantial savings.

(The analysis follows:)

Analysis by bureau (exclusive of Bureau of Reclamation and power marketing agencies) of avoidable costs identified for elimination during fiscal year 1967

Bureau	Increased productivity and efficiency	Elimination of low priority activities, substitution of less costly alternatives	Increased management and program effectiveness	Travel reduction
National Park Service	$835,000			
Bureau of Land Management	224,000	$460,000		
Bureau of Indian Affairs	246,000	3,592,000	$1,157,000	
Bureau of Mines	71,000	2,051,000		
Geological Survey	840,000	691,000		
Bureau of Commercial Fisheries	149,000	3,828,000		
Bureau of Sport Fisheries and Wildlife	182,000	1,618,000	30,000	
Office of the Secretary	2,143,000	15,000		$1,300,000
Office of Saline Water	55,000	615,000		
Office of Oil and Gas	15,000			
Office of the Solicitor	21,000	25,000		
Alaska Railroad		3,000,000		
Bureau of Outdoor Recreation		172,000		
Office of Territories		1,720,000		
Total	4,781,000	17,787,000	1,187,000	1,300,000

JOB CORPS PERSONNEL

Chairman HAYDEN. Also in your statement you indicate that the number of permanent positions in the Department will increase by 1,299 during the coming fiscal year. You further indicate that 110 of these positions are for the Job Corps programs. It was my understanding that the Job Corps positions are not chargeable to the Department of the Interior but, instead, are part of the activity of the Office of Economic Opportunity. That is right, is it not?

Secretary UDALL. Actually there has been a shift, Senator. In the past the Job Corps positions were included in OEO. This year for the first time these positions are included in our manpower tabulation and that is the reason for the change.

VACANCIES IN PERMANENT POSITIONS

Chairman HAYDEN. How many authorized positions are there in the Department which are vacant as of now and which you expect to fill before the end of this fiscal year?

Secretary UDALL. As of December 31, 1965, there were 4,749 vacancies in permanent positions for bureaus and offices in this bill. This is larger than usual, I am sure, because, as you know, under the special retirement act Congress passed there were a large number of retirements at the end of the year.

TRANSFER OF COMMISSIONER OF FISH AND WILDLIFE

Chairman HAYDEN. With respect to the transfer of the Commissioner of Fish and Wildlife to the office of the Assistant Secretary for Fish and Wildlife and Parks, will any dollar savings be effected?

Secretary UDALL. Senator, there were no dollar savings. I think in terms of better use of manpower and better organization that this has achieved a great deal for the Department. What we did was to reassign the people to the two Bureaus, Bureau of Sport Fisheries and Wildlife and Bureau of Commercial Fisheries, and we feel that overall we have a much more efficient management team operating now.

Chairman HAYDEN. Will the transfer of the Commissioner result in any increase in costs?

Secretary UDALL. No; no increase in cost.

EQUAL OPPORTUNITY OFFICE ESTABLISHMENT

Chairman HAYDEN. Where did you establish the separate office to oversee your equal opportunity program?

Secretary UDALL. It was felt by the Department that, to do the most effective job of overseeing the equal opportunity program departmentwide, it was better to do this in the Office of the Secretary and to have special people who would work under the guidance of the Secretary and Under Secretary, and we can give you the figures on this.

We have in this budget $76,000, which is we think a rather modest amount for a Director, two Assistant Directors, and their secretaries.

Chairman HAYDEN. How many personnel are in that office and what is its annual cost?

Secretary UDALL. There would be five individuals, a total cost of $76,000.

PLANNING, PROGRAMING, AND BUDGETING SYSTEM

Chairman HAYDEN. Would you please discuss for the committee the staff which you have established to carry into effect the planning, programing, and budgeting system?

Secretary UDALL. I would like the Under Secretary, Mr. Chairman, to answer that question because he is working day in and day out with this new program and I think that he can give you a much clearer picture of this than I.

Mr. CARVER. I have it in my statement if you want to defer it until I proceed.

Secretary UDALL. The Secretary is going to specifically cover that later.

Chairman HAYDEN. We can postpone that until later.

GEOLOGICAL SURVEY BUILDING

Last year when the Director of the Geological Survey was before this committee, I asked about construction of a Washington headquarters building for the Geological Survey in which I have been interested for some time.

Dr. Nolan explained to me that an architectural contract had been let with funds provided by this committee and that there had been appropriated to the General Services Administration about $2 million for site procurement and preparation of plans. In response to further questioning, Dr. Nolan placed a statement in the hearing record from which the following is quoted:

A preliminary review of their [the architects] analysis was presented by the architects in November at a meeting attended by representatives of General Services Administration, National Capital Planning Commission, National Capital Regional Planning Council, National Park Service, Budget Bureau, and the Geological Survey. A similar presentation was subsequently made before Secretary Udall. It has now been concluded, after careful study, that the most suitable site is a tract of land near Great Falls, Md., where the purchase of the entire tract would permit rounding out the George Washington Memorial Parkway in that area and at the same time include ample land for the Survey Building. The tract so selected is known as the Goldmine property. The architects' recommendation is that the area be developed as a "geologic park," with the Survey facility consisting of low-rise buildings in a parklike setting.

Funds were appropriated last year to purchase the Goldmine tract, and I am advised that, while a final settlement has not yet been reached as to the value of this tract, condemnation proceedings with a declaration of taking have been filed and a proposed sum has been deposited with the court to pay for the land. The former owners have withdrawn the entire amount deposited.

Decision Not To Build on Goldmine Tract

Now that the Goldmine tract belongs to the U.S. Government and in view of all the approvals given to construction of the Geological Survey headquarters building with the architect, can you tell me now when you will seek construction funds, through the General Services Administration, for this building?

Secretary Udall. Senator, as you know, the building of a special building for the Geological Survey has been authorized by the Congress. This is the oldest scientific organization in the Government and they need—and it will tremendously enhance their work if they can have it—a campus-type building arrangement.

Chairman Hayden. I have been convinced of that for a long time.

Secretary Udall. Yes; I know you supported it. We had hoped, and I think I told the committee a year ago, that on this Goldmine tract up near Great Falls on the Maryland side we could acquire this and convert part of it into a park and that we would put on part of it a campus type building arrangement for the Geological Survey.

I found out, however, when you are Caesar's wife that you sometimes get into trouble and some of the Maryland people at home with whom I have complained with regard to land use planning indicated that this would be a breach of their zoning regulations and we subsequently decided that it would be unwise in terms of our model planning program, conservation program for the Potomac, to build the survey complex there.

We have spent considerable time in looking at other sites and we are very near, I should like to say to you, Mr. Chairman, to having a site and I hope we can give you information on this very shortly. We haven't completed the details on it at this time.

Chairman HAYDEN. I appreciate your assurance in that regard. Any questions?

ALLEGHENY PARKWAY

Senator BYRD. Thank you, Mr. Chairman.

Mr. Secretary, I feel that you have made a very fine statement and I want to congratulate you and your Bureau heads, and the people in the Department, for doing a very fine job.

I would like to ask just a very few brief questions about a matter which you and I have discussed over the years. These questions pertain to the proposed Allegheny Parkway. You and I have had a good bit of correspondence and we have talked personally about this proposal which would embrace a parkway in parts of Maryland, West Virginia, Virginia, and Kentucky, I believe.

BUREAU OF PUBLIC ROADS STUDY COMPLETED

I understand that an analysis of the parkway has been included in a long-range study just completed for the President's recreation advisory council. As a member of that council, and I know you are pressed for time, could you either at this moment or for the record brief the subcommittee on the plans for that study? When will it be considered? Do you expect it to be sent to the White House soon for study?

And, finally, do you think it will be sent to Congress this year for authorization?

Secretary UDALL. Senator, I am somewhat disappointed that we have moved as slowly as we have on that study. It was initiated over a year ago. It was carried out primarily by the Bureau of Public Roads people and the study has been completed.

CONTEMPLATED RECOMMENDATION FOR SYSTEM OF NATIONAL SCENIC PARKWAYS

The study itself, however, raises several policy problems. There will be a meeting of the recreation advisory council soon to consider this. There are also budgetary problems. I think I have persuaded most of the members of the council and others that we should make this into a new national program and that what emerges from the study should be something which lays down the guidelines and the foundation for recommendation to Congress for a program of national scenic parkways.

There are only two or three up to this point that have been studied in detail. The Allegheny Parkway is one, as a result of legislation and appropriations through your leadership. We think this is a very excellent plan. It could be one of the first ones to move forward, but I think the position of the administration necessarily at this time is that until we have our overall guidelines laid down, until we come in with a larger program, there is a feeling that we should not go forward with initial projects until we can recommend legislation to set up a national system.

This would become much like our system of national parks, our wilderness system, and so on, and this, we believe, is the best way to approach it.

I have been one in the past who has advocated moving forward on individual projects, but I haven't won that argument as yet and my guess is that it is going to take us several months to work out the remaining details which were surfaced by the Bureau of Public Roads study which they carried out both within the Federal Government and with the States.

Senator BYRD. I believe you have by implication certainly answered at least one of the remaining two questions I have, but I would like to ask them, in any event, so that I can get your response.

FEASIBILITY OF PROGRAM INITIATION IN FISCAL YEAR 1967

From what knowledge I have of the study conducted, I understand that it was a highly detailed analysis of each proposal in respect to population density, the need for the parkways, and, finally, the cost per vehicle-mile.

With a study thus detailed perhaps it would not be difficult to justify a construction program. I realize the problem of finding enough money for everything this year which you described as a lean year, and I realize the problem, but do you believe that we should begin this program even on a limited basis this year? Do you think it is possible that we might be able to get to that point?

Secretary UDALL. Senator, all I would say is as far as this budget is concerned, and this is the first hold-the-line budget essentially that I presented to this committee, there is not money in this budget for such program.

I can tell you generally I think that there is a disposition within the administration to regard this as a very fine new program that should move forward, and I think, if we can get around the corner on the Vietnam situation, that there should be money for a program of this type and that this should be one of the significant new programs in terms of national development and development of our resources.

CONTEMPLATED AUTHORIZATION BY PROJECT GROUPS

Senator BYRD. I take it that the Allegheny Parkway proposal, in your judgment and in the judgment of those who have considered it at some length, stands pretty high on the priority list of such proposals.

Secretary UDALL. I think it would inevitably, Senator, because there are only two or three that we have actually carried out a detailed study on. If the general legislation were ready I think this would very obviously go into the category of projects which should be authorized for construction and action immediately rather than for study, but I think we would come in initially, as we have done with our wild rivers bill, as we have done with our other legislation, for one group of projects that would be authorized and for another group that would be studied for subsequent authorization.

EXPEDITION VALUES

Senator BYRD. I am told that 36 percent of the roadways for the program may be lost if some action is not taken within the next 2 to 5 years to protect the corridors. Does this concern you, Mr. Secretary?

Secretary UDALL. It concerns me very much and I think that, like all of our conservation problems, the sooner you act, the better because you either find that it is very costly if you act too late or that you simply lose values that you would otherwise have.

I think the whole history of conservation in this country is that where we have acted early and we made farsighted decisions it has paid back in terms of an investment hundreds of times over in many instances.

Senator BYRD. I know of your enthusiasm and support for this proposal, Mr. Secretary, and I am confident that you are doing everything within your power and you will continue to do so to see this come to fruition.

I am concerned about the escalating costs if we continue to be delayed and also I am concerned that we not protect the corridors which will be needed for the parkways if we do not move expeditiously. I certainly thank you, Mr. Secretary.

Secretary UDALL. Senator, just to strike a note of optimism—I am usually an optimist—I hope that the two of us are sitting here at the table in the not far distant future when we are presenting the request for funds to begin this very fine project for your region of the country.

Senator BYRD. I hope so, and thank you, Mr. Secretary.

Chairman HAYDEN. The Senator from Alaska.

ALASKAN OPERATION BY BUREAU OF MINES

Senator BARTLETT. Mr. Secretary, does the budget for the Bureau of Mines to which you referred continue to carry money for the continuation of the operation in Alaska?

Secretary UDALL. My aids don't have that detail, Senator. We will certainly get it for you later in the morning.

(The information follows:)

The 1967 budget request for the Bureau of Mines contains the following amounts for continuation of operations in Alaska:

Conservation and development of mineral resources

Resouce development:	
Statistics	$32,000
Bituminous coal	24,000
Petroleum	16,000
Minerals	390,000
Total	462,000

BUREAU OF COMMERCIAL FISHERIES COOPERATIVE RESEARCH AND DEVELOPMENT PROGRAM

Senator BARTLETT. All right. Another question that is similarly based. You may not be able to answer this either. You were speaking about some increases for research on the part of the Bureau of Commercial Fisheries.

Two or three years ago the Congress passed a bill providing for a cooperative research and development program between the Federal Government and the States relating to the fisheries. We have had a lot of trouble getting that adequately funded in the amount authorized of $5 million a year.

Do you know whether it is so funded now?

Secretary UDALL. It is not fully funded. The request this year is $3,210,000 compared with an appropriation last year of $4.8 million.

NUCLEAR-POWERED DESALINATION PLANT, CALIFORNIA

Senator BARTLETT. How much is this plant down in Los Angeles going to cost?

Secretary UDALL. I don't think the final figures are in, Senator. As far as the waterplant itself—there is the big nuclear powerplant—as far as the waterplant itself is concerned, I think the capital investment is something between $90 and $100 million.

SAUDI ARABIAN DESALINATION PLANT

Senator BARTLETT. What would you estimate the physical involvement of the Federal Government to be in this Saudi Arabian plant to which you referred?

Secretary UDALL. The involvement there is a very minor one. It is probably less than 5 percent. In fact, our investment, as I recall it, is in research and design where we are, in effect, buying technology through an investment.

GOVERNMENT CONTRACTING OF STUDIES

Senator BARTLETT. One final question, Mr. Chairman, of a general nature. It certainly doesn't relate only to the Department of the Interior, but I am becoming increasingly puzzled. You said that we are going over there because of the Department's expertise in this field, which is acknowledged, but then when referring to the Los Angeles plant you spoke of a study relating to cost being made by a private firm.

Why do we contract out to private firms all these studies when the real experts are within the Government?

Secretary UDALL. Senator, in this particular instance, of course, to make an economic study and to make an engineering design, which is what the Bechtel study was, for this southern California plant, we do not have that engineering capacity.

We have the experts in terms of knowing through our five demonstration plants how a plant is operated, but we are not plant designers and the Bechtel study which was financed three ways—it was financed a third by our Department, a third by the Atomic Energy Commission, and a third by the Metropolitan Water District of Southern California—was an engineering design of the plant. Our expertise is in operation rather than design.

Senator BARTLETT. I will accept that answer, but not in a general way. Thank you.

Chairman HAYDEN. Senator Proxmire?

GREAT LAKES FISHING INDUSTRY REVITALIZATION

Senator PROXMIRE. I have just a couple of brief questions.

Mr. Secretary, last year Congress appropriated $200,000 that was not included in the budget request for the revitalization of the fishing industry in the Great Lakes area. Can you tell me if this effort is going to be continued by the Department of the Interior in the com-

ing years? It is very vital to us and, as you know, we suffered a tremendous weakening and diminution in our fishing catch and so forth in the Great Lakes.

Secretary UDALL. Senator, the decrease in the commercial fishing industry in the Great Lakes has, as you said, been very dramatic and very tragic, in part as a result of such things as the sea lamprey, in part as a result of pollution, and now that we are beginning to conquer some of these problems what is needed is restoration of the fisheries. I think that the money that we were given for this program is and can be wisely spent and that the fishing resources of the Great Lakes ought to be restored to the best degree that we can.

PROJECT 1967 BUDGET REQUEST

Senator PROXMIRE. Will there be money in the budget to do this?

Mr. LARSON. I believe it is the same level; namely, $200,000.

Senator PROXMIRE. Same level as last year?

Secretary UDALL. Yes, sir.

Senator PROXMIRE. I hope we can increase it. As you know, this is a terrific problem for us and a little bit of money can help immensely in this area.

That is the only question I have, Mr. Chairman.

Chairman HAYDEN. Any further questions?

Secretary UDALL. Senator, it is always a pleasure to appear before you.

THURSDAY, FEBRUARY 17, 1966.

OFFICE OF THE SECRETARY

STATEMENTS OF JOHN A. CARVER, JR., UNDER SECRETARY; THOMAS F. BATES, SCIENCE ADVISER; SIDNEY D. LARSON, DIRECTOR OF BUDGET; CHARLES K. BOATNER, DIRECTOR OF INFORMATION; BARTON R. CLAUSEN, DIRECTOR OF OFFICE OF EQUAL OPPORTUNITY; W. DARLINGTON DENIT, DIRECTOR OF SURVEY AND REVIEW; AND HOWARD H. ECKLES, ASSISTANT TO SCIENCE ADVISER

1967 BUDGET ESTIMATE

Chairman HAYDEN. For fiscal year 1967, the expenses of the Office of the Secretary are estimated to be $5,186,000, an increase of $482,500 over the amount expected to be available for fiscal year 1966. Of this increase, $441,300 is for program. The justification for this estimate will be placed in the record.

(The justification follows:)

SALARIES AND EXPENSES

The estimate for the fiscal year 1967 for the Office of the Secretary is $5,186,000, an increase of $482,500 over the amount available for the fiscal year 1966.

The increases consist of—

(1) An increase of $41,200 for increased pay costs.

(2) An increase of $20,700 for one additional position with expenses in the Office of the Science Adviser.

(3) An increase of $52,800 for the Office of the Under Secretary.

(4) An increase of $175,500 for the new Office of Program Analysis.

(5) An increase of $15,500 for one additional position with expenses in the Office of Information.

(6) An increase of $79,200 for the new Office for Equal Opportunity.

(7) An increase of eight positions and $92,600 in the administrative management services area. Six of the positions are for centralizing the audit of grants in the Office of Survey and Review.

(8) An increase of $5,000 for the general services activity.

The estimate also includes several transfers or adjustments:

(1) Transfer of the Commissioner of Fish and Wildlife with six positions to the Office of the Secretary.

(2) Transfer of five positions from the Resources Program Staff to the Assistant Secretaries to assist in the planning-programing-budgeting system.

The appropriation for the Office of the Secretary finances the salaries and expenses of the Secretary, the Under Secretary, and the Assistant Secretaries with their supporting staffs. Included also are the Office of the Science Adviser, the Office of Information, the Resources Program Staff, the Office of the Commissioner of Fish and Wildlife, the new Office of Program Analysis and the new Office for Equal Opportunity. The Secretary and the supporting staffs provide general direction, guidance, and coordination of all activities of the Department and certain staff services to the bureaus and offices of the Department.

No program of the Department is ever completely static. New problems arise and new responsibilities are continually being placed on the Department. Old programs need continual review and reevaluation. New methods and procedures need to be studied and adopted. This requires a strong central staff to give positive direction and guidance, and to coordinate or eliminate duplication with other programs. The new Office of Program Analysis has been established to provide positive action on these problems and to carry out the directive of the President for an integrated planning-programing-budgeting system.

Specialized personnel is required for the various scientific and technical programs. Of increasingly major importance in the Department is the problem of water conservation and utilization. Another program which is receiving greatly increased emphasis is that of retaining, developing, and providing recreational opportunities and facilities for the use and benefit of all, including the problem of enhancing the natural beauty and the beautification of the National Capital environs.

In addition, the positive action must be taken in administering and implementing the provisions of civil rights legislation, and the Office for Equal Opportunity has been established for this purpose.

59-370—66—pt. 1——4

Analysis of increases

	Estimate 1966		New positions		Other personnel compensation	Personnel benefits	Pay costs current positions	Other objects	Total increases	Subactivity: Adjustments		Estimate 1967	
	Positions	Funds	Number	Salaries						Positions	Funds	Positions	Funds
1. Departmental direction:													
Office of the Secretary	35	$497,500	1	$17,100		$1,300	$4,100	$2,300	$24,800			36	$522,300
Office of the Under Secretary	10	115,300			$46,000	3,800	1,200	3,000	54,000			10	169,300
Office of Program Analysis			10	144,600		10,800		20,100	175,500			10	175,500
Office of Information	14	156,700	1	14,500		1,000	1,700		17,200			15	173,900
Office for Equal Opportunity			5	70,600		5,000		3,600	79,200			5	79,200
Total	59	769,500	17	246,800	46,000	21,900	7,000	29,000	350,700			76	1,120,200
2. Program direction and coordination:													
Assistant Secretary—Water and Power	20	318,300					2,600		2,600	1	$19,200	21	340,100
Assistant Secretary—Mineral Resources	18	241,175					2,100		2,100	1	19,200	19	262,475
Assistant Secretary—Public Land Management	15	233,700					1,700		1,700	1	19,200	16	254,600
Assistant Secretary—Fish and Wildlife and Parks	10	146,700					1,200		1,200	1	19,200	11	167,100
Resources program staff	37	577,125					5,200		5,200	−5	−96,000	32	486,325
Total	100	1,517,000					12,800		12,800	−1	−19,200	99	1,510,600
3. Administrative management services:													
Assistant Secretary—Administration	5	84,100					500		500			5	84,600
Office of Survey and Review	32	473,200	6	52,100		3,900	4,400	16,200	76,600			38	549,800
Office of Management Operations	76	679,900					6,700		6,700			76	686,600
Office of Budget	14	209,000	1	7,460	5,300	940	2,100	1,100	16,900	1	19,200	16	245,100
Office of Management Research	18	228,100					2,100		2,100			18	230,200
Office of Personnel Management	32	381,200					3,800		3,800			32	385,000
Correspondence Control Office	3	34,700	1	5,180		420	300		5,900			4	40,600
Total	180	2,090,200	8	64,740	5,300	5,260	19,900	17,300	112,500	1	19,200	189	2,221,900
4. Commissioner of Fish and Wildlife	7	148,000					900		900			7	148,900
5. General services		178,800					600	5,000	5,600				184,400
Grand total	346	4,703,500	25	311,540	51,300	27,160	41,200	51,300	482,500			371	5,186,000

SALARIES AND EXPENSES

Statement of new positions requested in 1967

Office of the Secretary:	
1 GS–15 senior scientist	$17,055
Rounded	45
Total	17,100
Office of Program Analysis:	
1 Special Position Planning Director	25,382
1 GS–18 Director	25,382
4 GS–15 resource planning assistants	68,770
1 GS–9 statistical assistant	7,479
1 GS–7 secretary	6,269
2 GS–6 clerk-stenographers	11,404
Subtotal (10)	144,686
Lapse	−86
Total	144,600
Office of Information:	
1 GS–14 conservation information specialist	14,680
Lapse	−180
Total	14,500
Office for Equal Opportunity:	
1 GS–17 Director	22,217
2 GS–15 Chiefs of Division	35,290
1 GS–9 administration assistant	7,733
1 GS–6 secretary	5,894
Subtotal (5)	71,134
Lapse	−534
Total	70,600
Office of Survey and Review:	
1 GS–13 auditor	12,510
2 GS–12 auditors	21,238
3 GS–7 Secretaries	18,807
Subtotal (6)	52,555
Lapse	−455
Total	52,100
Office of Budget:	
1 GS–9 budget analyst	7,479
Lapse	−19
Total	7,460
Correspondence Control Office:	
1 GS–5 clerk	5,181
Lapse	−1
Total	5,180
Grand total (25)	311,540

Statement of new positions requested in 1967—Continued

Appropriation, 1965	$4,110,500
Supplemental appropriation, 1965	254,500
Total appropriation, 1965	4,365,000
Appropriation, 1966	4,452,200
Pay cost supplemental	105,000
Total appropriation, 1966	4,557,200
Transferred to "Operating Expenses, Public Buildings Service," General Service Administration	−1,700
Comparative transfer from "Commissioner of Fish and Wildlife"	148,000
Total available, 1966	4,703,500

SUMMARY OF INCREASES AND DECREASES, 1967

To provide for increased pay costs for fiscal year 1966 positions	41,200
Increase of 1 position in Office of the Secretary for Office of Science Adviser	20,700
Increase in the Office of the Under Secretary to fill authorized positions on a full-year basis	52,800
Increase of 1 position and related costs in the Office of Information	15,500
Establishment of Office of Program Analysis	175,500
Establishment of Office for Equal Opportunity	79,200
Increase of 6 positions and other expenses in Office of Survey and Review for grant-audit program	72,200
Increase in Administrative Management Services of 2 positions, filling of authorized positions on a full-year basis and other expenses	20,400
Increase in "General services" for other expenses	5,000
Net increases, 1967	482,500
Budget estimate, 1967	5,186,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Transfers [1]	Amount available
1. Departmental direction	$724,688	$751,100	$18,400		$769,500
2. Program direction and coordination	1,404,035	1,485,500	33,200	−$1,700	1,517,000
3. Administrative management services	1,991,525	2,038,000	52,200		2,090,200
4. Commissioner of Fish and Wildlife				148,000	148,000
5. General services	170,600	177,600	1,200		178,800
Unobligated balance lapsing	74,152				
Total	4,365,000	4,452,200	105,000	[1] 146,300	4,703,500

[1] Represents a transfer of $1,700 to General Services Administration and a comparative transfer of $148,000 from "Commissioner of Fish and Wildlife."

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
1. Departmental direction	$724,688	$769,500	$1,120,200	+$350,700	+$7,000	+$343,700
2. Program direction and coordination	1,404,035	1,517,000	1,510,600	−6,400	+12,800	−19,200
3. Administrative management services	1,991,525	2,090,200	2,221,900	+131,700	+19,900	+111,800
4. Commissioner of fish and wildlife		148,000	148,900	+900	+900	
5. General services	170,600	178,800	184,400	+5,600	+600	+5,000
Unobligated balance lapsing	74,152					
Total	4,365,000	4,703,500	5,186,000	+482,500	+41,200	+441,300

1. Department direction—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
(a) Office of the Secretary	$479,376	$497,500	$522,300	+$24,800	+$4,100	+$20,700
(b) Office of the Under Secretary	89,353	115,300	169,300	+54,000	+1,200	+52,800
(c) Office of Program Analysis			175,500	+175,500		+175,500
(d) Office of Information	155,959	156,700	173,900	+17,200	+1,700	+15,500
(e) Office for Equal Opportunity			79,200	+79,200		+79,200
Total	724,688	769,500	1,120,200	+350,700	+7,000	+343,700

(a) *Office of the Secretary, $522,300*

The estimate for the immediate Office of the Secretary is an increase of $24,800 over the amount available for the current year. This increase consists of $4,100 for pay costs on current positions and $20,700 for one new position and operating expenses for the Office of the Science Adviser which is included in this estimate.

The estimate for the budget year includes 36 positions for the Secretary and his immediate office. The total positions consist of special assistants, personal aids, and confidential advisers together with secretaries and clerical staff. The assistants and advisers assist and advise the Secretary in particular areas; they may act on behalf of the Secretary on specific matters referred to them for disposition; or they may represent the Secretary in various Executive Office and interagency groups.

Additional details regarding the responsibilities and needs of the Office of the Science Adviser follow:

Research and development programs within the Department of the Interior have continued to grow in size and significance in relation to the natural resources and conservation responsibilities of the Department's total program. The Science Adviser is continuing to study the complex interrelationships between programs. He is now responsible for a major part of research coordination with agencies outside the Department, and he is furnishing a growing amount of staff consultation and advice to the Secretariat. Leadership is being given in the Department's program on scientific and technical information in cooperation with the Federal Council for Science and Technology.

There is needed now additional help to allow the Science Adviser to concentrate his attention on reviews and evaluations to determine the adequacy of research, the soundness of its design and to assure the Secretariat that research is being conducted on the most pertinent problems for accomplishing Departmental objectives. The increases in staff which were allowed for fiscal year 1966 and that requested here are to provide for the ongoing functions of the Science Adviser and to extend his capability.

The increase for fiscal year 1967 is for one position, a senior scientist who will work as a natural resources analyst and a small amount for operating expenses. This will provide a focal point for bringing together talent from within and outside the Department to carry out analysis of the interrelatedness and interdependency of natural resources systems. The primary objective is to point out weaknesses and gaps in data and knowledge about research and to specify where such gaps are handicapping resources development. The function of this position will be carried out in close collaboration with the program planning and budgeting system being initiated for the Department's total program. It is expected that the scientist in this position will provide advanced thinking and leadership in the multidisciplinary analysis of natural resources problems.

(*b*) *Office of the Under Secretary, $169,300*

The estimate for the Office of the Under Secretary provides for the salaries of the Under Secretary and a staff of nine employees, together with travel and other expenses. This is an increase of three employees and $54,000 over the estimate for the current year. Of the increase, $1,200 is needed to meet the pay costs on current positions.

The Under Secretary assists the Secretary in the discharge of his duties and in the absence of the Secretary, acts for him. During the past year increased emphasis has been placed on a continual review and evaluation of the programs, staffing and budgets of the Department for the purpose of eliminating any activities which may be of lesser importance in favor of other or new programs which must be given priority under the program of the President and present-day needs. The Under Secretary has been given the responsibility for directing the evaluation and obtaining action and decisions. This is requiring a great deal of his time and an additional staff of one professional and two secretarial has been added over that previously carried. For the current year the funds will have to be obtained by lapsing other positions throughout the Office of the Secretary, but an increase of $54,000 is requested for the fiscal year 1967 in order that the work in the other offices will not continue to suffer. This amount provides not only for the three positions and pay cost, but also for a previous shortage of funds for authorized positions, and a small amount for personnel benefits and other expenses. No increase in total positions is estimated as the increase here is offset by a decrease in the Office of the Assistant Secretary for Public Land Management.

(*c*) *Office of Program Analysis, $175,500*

The entire amount of this estimate is an increase requested for the new Office of Program Analysis. The President has directed the introduction of an integrated planning-programing-budgeting system in the executive branch. The system will be designed to provide more effective information and analysis to assist line managers, the agency head, and the President in judging needs and in deciding on the use of resources and their allocation among competing claims.

The new planning-programing-budgeting system is based on three concepts:

(1) The existence in each agency of an analytic capability which carries out continuing indepth analyses by permanent specialized staffs of the agency's objectives and its various programs to meet these objectives.

(2) The existence of a multiyear planning and programing process which incorporates and uses an information system to present data in meaningful categories essential to the making of major decisions by agency heads and by the President.

(3) The existence of a budgeting process which can take broad program decisions, translate them into more refined decisions in a budget context, and present the appropriate program and financial data for Presidential and congressional action.

This increase of $175,500 and 10 permanent positions is needed to provide for the central analytical staff required to install and operate this system. A total of 15 positions are involved, of which 5 will be financed by adjustments from the resources program staff.

The Under Secretary has been designated as the official responsible for the development and operation of the planning-programing-budgeting system for the Department of the Interior. The Office of Program Analysis has been established in the Office of the Under Secretary to provide him with the staff assistance required for his accomplishment of this assigned responsibility. Staffing will include a Director, an Assistant Director, four program analysts,

and four secretarial and clerical positions. The staff will develop and direct the operation of the departmental system with primary responsibility for program analysis.

Each Assistant Secretary will be provided with an analytical assistant to provide him with the necessary staffing for fulfilling his responsibilities in operation of the system and for program analysis.

(d) Office of Information, $173,900

The estimate of $173,900 for the Office of Information includes an increase of $17,200 for one additional position with personnel benefits and pay costs of $1,700 for current positions.

The staff of the Office of Information is responsible for technical and general functional supervision over all information activities of the Department. This includes providing basic information services for the Secretariat and other officers; directing the coordination, review, and distribution of special information developed for all types of media; initiating improved information programs of a departmentwide nature involving more than a score of bureaus and offices; and guiding and assisting the many bureaus and offices of the Department in their intensified informational activities. The additional position is urgently needed for handling a greatly expanded workload generated by broadened conservation programs approved by the legislative and executive branches. These programs have inspired a tremendous upsurge in public interest and awareness concerning the need for safeguarding, rebuilding, and using properly our dwindling national resources.

At no time in the Department's history has the public demand for fresh informational material been so widespread. New conservation groups have been established on local, county, State, and National levels and their requests for facts, photographs, booklets, exhibits, displays, and related materials far exceed the ability of the limited staff of the Office of Information to serve their needs in a manner suitably reflecting the Office's basic responsibilities. There are strong indications that the demand for information materials of all sorts will continue to surge upward.

The addition of one person to the staff of the Office of Information will aid significantly in meeting this demand efficiently and economically. An experienced, highly qualified person would be employed to coordinate the various information services of the Department designed to respond to public inquiries and requests for informational material. It is expected that coordination of these services will provide for better service to the press, public, and the Congress at a much lower cost than duplication of such activities in each of the bureaus.

(e) Office for Equal Opportunity, $79,200

The Office for Equal Opportunity was established by order of the Secretary dated September 28, 1965. The Office is headed by an assistant to the Secretary, who serves as Director, Office for Equal Opportunity, and who is assigned the responsibility and granted the authority to discharge the duties of the Secretary with respect to all phases of equal opportunity.

The Office for Equal Opportunity shall—

(*a*) Develop policy statements, regulations, orders, instructions and procedures designed to emphasize and implement positive programs of action to achieve the objectives of equal opportunity in all activities and functions of the Department of the Interior.

(*b*) Provide guidance, advice, assistance, and direction to bureaus and offices in establishing and maintaining effective equal opportunity programs.

(*c*) Review and appraise policies, procedures, and practices throughout the Department relating to equal opportunity, develop and recommend adoption of new or revised programs and policies to obtain compliance with the spirit and requirements of law, Executive orders and regulations.

(*d*) Exercise functional supervision of bureaus and offices in carrying out title VI of the Civil Rights Act of 1964, and contract compliance requirements, especially as relates to the development of surveillance schedules and to the conduct of compliance reviews, preaward conferences, compliance investigations and hearings, and obtaining voluntary compliance.

(*e*) Review and authorize the form and content of nondiscrimination clauses, instructions, directives, procedures, interpretations and other materials of general applicability proposed for use or issuance by the head of a bureau or office to implement the laws, Executive orders and regulations.

(*f*) In collaboration with the Office of Personnel Management, (a) monitor hiring practices and the conduct by bureaus and offices of complaint

investigations and hearings on equal opportunity in employment, and (b) maintain the statistical system required by the Civil Service Commission.

(*g*) Develop and implement affirmative plans and programs for achieving effective participation by the Department in the Federal Government's efforts to bring about equal opportunity for all American citizens.

(*h*) Assign to officials of other departments or agencies, with their consent, duties in connection with accomplishing the Department's responsibilities under any statute, Executive order, and regulatory provision relating to equal opportunity.

(*i*) Represent the Department in meetings and conferences with other governmental agencies and private groups with respect to equal opportunity matters.

(*j*) Gather and synthesize materials for reports on the achievement of equal opportunity within the Department, bureaus, and offices; review and make recommendations for consideration within the Department, on proposed legislation pertaining to equal opportunity; and undertake specific studies or other assignments on equal opportunity matters as the Secretary may direct.

Organization of the Office for Equal Opportunity provides for the Office of the Director and two functional Divisions, the Division of Employment Policy and the Division of Contracts and Federal Assistance, each headed by a Division Chief who reports and is responsible to the Director.

The estimate for the fiscal year 1967 in the Office of the Secretary appropriation includes $79,200 for five positions with supporting expenses. These positions are—

GS–17: Director.
GS–15: Chief, Division of Employment Policy.
GS–15: Chief, Division of Contracts and Federal Assistance.
GS–9: Administrative assistant.
GS–6: Secretary.

Initial staff and operational costs reflect the urgency and importance of intensified effort and new programs to achieve equal opportunity throughout the Department. Leadership from the Office for Equal Opportunity in the formative stages is essential to the development of positive programs. Additional support will be derived from the bureaus.

2. Program direction and coordination—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
(*a*) Assistant Secretary for Water and Power	$319,503	$318,300	$340,100	+$21,800	+$2,600	+$19,200
(*b*) Assistant Secretary for Mineral Resources	203,400	241,175	262,475	+21,300	+2,100	+19,200
(*c*) Assistant Secretary for Public Land Management	229,073	233,700	254,600	+20,900	+1,700	+19,200
(*d*) Assistant Secretary for Fish and Wildlife and Parks	109,085	146,700	167,100	+20,400	+1,200	+19,200
(*e*) Resources program staff	542,974	577,125	486,325	−90,800	+5,200	−96,000
Total	1,404,035	1,517,000	1,510,600	−6,400	+12,800	−19,200

(*a*) *Assistant Secretary for Water and Power, $340,100*

This estimate reflects an increase of $21,800, of which $2,600 is for increased pay costs and $19,200 is derived by transfer from the Resources Program Staff and is for one staff position to provide full-time assistance on the planning-programing-budgeting system being installed in the Department.

The estimate provides for the salaries and expenses of the Assistant Secretary and a staff of 20 employees in his office. The Assistant Secretary discharges the duties of the Secretary with respect to the development of water and power. He exercises secretarial direction and supervision over the Bureau of Reclamation, Bonneville Power Administration, Office of Saline Water, and the Defense Electric Power Administration.

(*b*) *Assistant Secretary for Mineral Resources, $262,475*

The estimate for the Office of the Assistant Secretary for Mineral Resources shows an increase of $21,300. Of this, $2,100 is requested to meet pay costs and the balance of $19,200 is derived by transfer from the Resources Program Staff. The latter amount is for one staff position to provide full-time assistance to the Assistant Secretary in carrying out his responsibilities on the planning-programing-budgeting system.

The total estimate provides for the salaries and expenses of the Assistant Secretary and a staff of 18 employees. The Assistant Secretary for Mineral Resources discharges the duties of the Secretary with respect to the development and utilization of minerals and fuels, including defense minerals activities. He exercises secretarial direction and supervision over the Bureau of Mines, Geological Survey, Office of Oil and Gas, Office of Coal Research, Oil Import Administration, and the Office of Geography.

(*c*) *Assistant Secretary for Public Land Management, $254,600*

The estimate reflects an increase of $20,900 over the amount available for 1966. Of this amount, $1,700 is for pay costs and $19,200 is derived by transfer from the Resources Program Staff. The latter amount is for one staff position to assist in the planning-programing-budgeting system responsibilities.

A decrease of three positions and $27,000 was made in the estimate for the current year, as a result of the transfer of jurisdiction over the National Park Service to the Assistant Secretary for Fish and Wildlife and Parks.

The Assistant Secretary for Public Land Management discharges the duties of the Secretary with respect to land utilization and management, Territorial affairs, and Indian affairs. The estimate provides for his salary and expenses and a staff of 15 employees.

The Assistance Secretary exercises secretarial direction and supervision over the Bureau of Land Management, Bureau of Indian Affairs, Bureau of Outdoor Recreation, Office of Territories, and the Alaska Railroad.

(*d*) *Assistant Secretary for Fish and Wildlife and Parks, $167,100*

The estimate for the Assistant Secretary for Fish and Wildlife and Parks includes an increase of $20,400 of which $1,200 is to meet pay costs. The remainder of $19,200 is derived by transfer from the Resources Program Staff to provide for one staff position to assist in the planning-programing-budgeting system responsibilities.

As a result of the transfer of the National Park Service from the jurisdiction of the Assistant Secretary for Public Land Management to the Assistant Secretary for Fish and Wildlife and Parks on June 3, 1965, an adjustment of $27,000 was made in the current estimates of the two offices. The estimate of $167,100 for 1967 provides for the salary and expenses of the Assistant Secretary and a staff of 10 employees.

The Assistant Secretary for Fish and Wildlife and Parks discharges the duties of the Secretary with respect to the development, conservation, and utilization of the fish, wildlife, and the national park resources of the Nation. He exercises secretarial direction and supervision over the Fish and Wildlife Service and its Bureaus of Commercial Fisheries and Sport Fisheries and Wildlife, and over the National Park Service. During recent months, the President has given increased emphasis to the importance of retaining, developing, and providing recreational opportunities and facilities for use and benefit of all, to the problem of enhancing natural beauty, and to beautification of the National Capital environs. It is important that the Secretary give these efforts positive direction and that he have an adequate and competent staff for this purpose.

As a result, the staff of the Assistant Secretary for Fish and Wildlife and Parks has been reorganized, and while the total number of positions has not been increased, there has been an increase in the professional staff to four in addition to the Assistant Secretary. This is offset by a slight decrease in the clerical staff.

(*e*) *Resources Program Staff, $486,325*

The estimate for the Resources Program Staff is a net decrease of $90,800 under the amount available for fiscal year 1966. This results from an increase of $5,200 for pay costs on current positions and a decrease of five positions and $96,000 in funds transferred to the Assistant Secretaries incident to the integrated planning-programing-budgeting system.

The Resources Program Staff provides a coordinating function unique to Interior: (1) Specialized advisory staff service on new problems and technical advice to the secretariat, (2) central staff service to the Secretary and Under

Secretary in program development, and (3) coordination of five principal activities of the various Department bureaus in the field and in Washington and activities of the Department with those of other departments and agencies.

The staff consists of highly qualified professional employees with varied backgrounds of training and experience in economics, engineering, political science, international affairs, forestry, soil conservation, fish and wildlife, water, power, and public lands who have a broad familiarity with field programs, policies, and procedures of the Department in addition to specialized knowledge of one or more particular fields.

In addition to serving as a central staff in the Office of the Secretary, the staff performs a coordinating role in five departmentwide and interdepartmental areas—international affairs, resource economics, field coordination and area redevelopment, and Job Corp Conservation centers. In the central staff function, the staff provides specialized advisory and consultative services to the secretariat upon the request and provides central staff service to the Secretary and Under Secretary in program planning. Also, the staff services which the Resources Program Staff provides, involving assembly of data, preparation of necessary reports and briefing.

Field coordination—river basin planning.—Operating through regional field committees made up of representatives of all bureaus, regional coordinators act as departmental coordinators on program and policy matters affecting more than one bureau. The regional coordinators chair the field committees and also serve as the Department representatives on interagency river basin committees comprised of Federal and State members.

International activities.—Coordinates Department's position on foreign trade in natural resource commodities; develops procedures for systematically providing technical assistance personnel to AID missions in underdeveloped countries. Prepares position papers for secretariat.

Resource economics.—Conducts special studies in natural resources economics, public works, investment and returns; maintains liaison with Council of Economic Advisers, serves on Consumer Council and coordinates Interior's economic research functions.

Area redevelopment.—Coordinates Interior's responsibilities under this new program through the bureaus on requests for project feasibility analysis and gives leadership to area and regional studies used as a basis for economic development.

Job Corps conservation centers.—Coordinates Interior's responsibilities for the planning and operation of Job Corps conservation centers established under the Economic Opportunity Act of 1964 which is carried out by five bureaus—the Bureau of Indian Affairs, Bureau of Reclamation, National Park Service, Bureau of Land Management, and the Bureau of Sport Fisheries and Wildlife.

In addition to serving as subject matter specialists to each of the above, resources program staff gives leadership in program development and special studies on new and unsolved problems facing the Secretary and the Department. Close liaison is maintained with the science adviser and the Interior Committee on Research and Development.

3. Administrative management services—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
(a) Assistant Secretary for Administration.	$81,666	$84,100	$84,600	+$500	+$500	----------
(b) Office of Survey and Review	460,217	473,200	549,800	+76,600	+4,400	+$72,200
(c) Office of Management Operations	668,708	679,900	686,600	+6,700	+6,700	----------
(d) Office of Budget	188,441	209,000	245,100	+36,100	+2,100	+34,000
(e) Office of Management Research	190,780	228,100	230,200	+2,100	+2,100	----------
(f) Office of Personnel Management	368,038	381,200	385,000	+3,800	+3,800	----------
(g) Correspondence management control	33,675	34,700	40,600	+5,900	+300	+5,600
Total	1,991,525	2,090,200	2,221,900	+131,700	+19,900	+111,800

(a) Assistant Secretary for Administration, $84,600

Provision is made in this estimate for the salary and expenses of the Assistant Secretary for Administration and a small staff of four employees in his office. An increase of $500 is requested to cover pay costs on current positions. The Assistant Secretary for Administration discharges the duties of the Secretary with respect to administrative management functions in the Department, and directs and supervises the offices and divisions listed above.

(b) Office of Survey and Review, $549,800

The estimate for the Office of Survey and Review reflects no increase over fiscal year 1966 for the performance of like responsibilities except $4,400 to cover increased pay costs on current positions. A net additional amount of $72,200 is requested, however, for the transfer to the Office of the responsibility for the audit of all departmental grant programs.

As the result of recent legislation, the Department of the Interior's responsibilities for the administration of grant programs will greatly increase in fiscal year 1967. To enable the Department to comply effectively with the principles enunciated in Bureau of the Budget Circular A–73, it was concluded that it is desirable, even essential, that all of the Department's grant auditing be performed by a consolidated organization instead of by separate staffs of the seven Bureaus and Offices administering grant programs.

The amount estimated to be required by the individual Bureaus and Offices for fiscal year 1967 was $513,000. On a consolidated basis $361,000 is requested, $288,800 of which is financed by reimbursements and $72,200 represents the increase requested.

This Office has continued to exert an expanding influence in audit policies and procedures, contract administration, automatic data processing, and compliance activity. During fiscal year 1966, the Office originated policies for the phasing of disbursement of grant proceeds for grants under $120,000. The Treasury Department has issued special procedures for grants above that amount. Most of the grants under Department programs are in lesser amounts and have not been affected by the Treasury procedure. Under the policies originated by Survey and Review, grants regardless of amount are disbursed only when grantees present a provable need for the funds. Heretofore, the full amount of the grant was disbursed at the time of original approval. Significant savings in Treasury interest will be realized and grant administration is tightened. Department audit policies were completely redefined to promote more effective use of audit staffs in relation to programs of cost reduction and manpower utilization. Emphasis has been placed upon operational or functional auditing. More progress has been made in the Department's policy of required joint use or sharing at computer centers. In January 1966 four major bureaus of the Department will be utilizing computer equipment available in Denver for payrolling and other purposes. With Department assistance, the National Park Service is beginning to utilize small-scale computers for administrative purposes. Budgetary savings in the automatic data-processing area alone greatly exceed the total budget of the Office of Survey and Review. This Office is also spearheading the "value engineering" approach to construction contracting. This program, now being used experimentally by the Bureau of Reclamation, will be extended to all bureaus with substantial contract activity. This means of involving Government contractors in cost reduction has been utilized effectively by the Defense Department. The Office has also assumed overall responsibility for a critical review of all user charges in accordance with administration policy. This effort has already stimulated changes in existing user charge policies which will enhance revenues to the Government.

In connection with substantial participation of the Department in the Job Corps program, Survey and Review has assumed responsibility for a comprehensive program of auditing of all Job Corps camps under Interior management. This function is being absorbed without addition of overhead staff.

(c) Office of Management Operations, $686,600

The estimate for the Office of Management Operations provides for the salaries and expenses of 76 employees and reflects an increase of $6,700 to meet pay costs on current positions.

The Office of Management Operations has primary staff responsibility for all administrative services, property management, records management (except directives and reports), radio communications, and emergency preparedness

actiivties of the Department. It also provides centralized administrative services for bureaus and office headquarters and other offices located in the Washington, D.C., metropolitan area. This includes space, printing, duplicating, library, health, communications, and storage and shipping of office supplies and forms. The Office also provides administrative services, such as fiscal, personnel, mail, file, messenger and procurement for the Office of the Secretary, Office of the Solicitor, Office of Oil and Gas, Oil Import Administration, Oil Import Appeals Board, Office of Minerals and Solid Fuels, Office of Saline Water, Office of Geography, and Office of Coal Research, and Office of Water Resources Research.

Other activities include authentication of official records and fixing of charges for copies; maintenance of records of arms and accouterments made available by the Department of the Army; review and processing of requests to excavate and explore ruins or archeological sites and the gathering of artifacts and objects of antiquity on all lands, other than Indian lands, under the jurisdiction of the Department; receipt and dissemination of procurement policy statements, regulations, directives, and related informational material originating from the General Services Administration, other agencies or within the Department, and development of policy, procedures, and regulations for the security of classified documents and materials, and the physical security of all types of facilities and equipment for which the Department has responsibility.

(d) Office of Budget, $245,100

The estimate for this Office provides for a staff of 16 employees and includes an increase of $36,100 over the estimate for the current year. The increase will provide for pay costs of $2,100, one GS–15 resources assistant and one GS–9 budget analyst position with personnel benefits, reallocations, within-grade promotions and a small amount for increased operating costs. However, only $16,900 is being requested as the balance of the increase ($19,200) is derived by transfer from the resources program staff to finance the resources assistant position.

The Office has primary staff responsibility for the budget activities of the Department. It performs a liaison function with the Bureau of the Budget and the Appropriations Committees of the Congress on all appropriation matters for the Department. It also has general direction of the development, preparation and execution of the Department's budget and participates in determinations relating to Department programs and evaluation of the programs in terms of budget requirements.

The Office operates with a staff of five budget examiners. The budget analyst position requested is urgently needed to assist in budget examinations and to provide the training opportunity necessary to develop experienced budget analysts. Budget estimates for the entire Department are submitted to this Office for review and processing. Current emphasis on more intensified planning, cost reduction and personnel limitations are further increasing the workload of Office. The increase is also needed to cover additional costs of supplies and materials, and the rental of a Xerox photocopy duplicating machine.

(e) Office of Management Research, $230,200

The estimate for the Office of Management Research provides for the salaries and expenses of a staff of 18 employees. No increase is requested for the fiscal year 1967 except $2,100 to cover pay cost increases on current positions. The Office is responsible for providing leadership and staff assistance to programs for the improvement of management and organization throughout the Department. Specific assignments include: The conduct of organization and management surveys, incentive awards programs; committee management, work improvement programs, directives management, including coordination of the departmental manual, Secretary's orders, proposed Executive orders, Federal Register documents, Code of Federal Regulations, and other written instructional materials; and a management consulting service to the bureaus and offices on the above subjects as well as other problems of organization and management of operations, efficient utilization of manpower, and application of new techniques and equipment in carrying out Interior's programs.

(f) Office of Personnel Management, $385,000

The estimate provides for a staff of 32 positions together with other expenses and includes an increase of $3,800 to cover increased pay costs on current positions.

The Office of Personnel Management is responsible for providing departmental leadership and staff guidance in all matters pertaining to personnel management and administration. It develops policies, standards, objectives and programs designed to establish and maintain an adequate, highly qualified, and efficient working force for the accomplishment of the Department's programs. It gives direction and overall review to the constituent bureaus in the Department with reference to their personnel activities through a comprehensive and all-inclusive personnel management program which includes position classification, labor relations, wage and pay administration, employment, employee training and development, employee relations, employee safety and health, standards, procedures and records. It coordinates bureau personnel programs and provides for their evaluation and strengthening. It plans and stimulates studies of personnel management improvement including executive development and training.

(g) Correspondence management, $40,600

The estimate provides for a staff of four employees with other expenses and includes an increase of $5,900 over the estimate for the current year. This unit was established for the purpose of improving the handling of important correspondence in the Department and to avoid delays in replying. It provides a means for facilitating the handling of correspondence directed to the Secretary and for review of correspondence and other documents prepared for the signature of the Secretary. The departmental correspondence control officer is a staff assistant to the Assistant Secretary for Administration, and is responsible for compliance with deadlines on controlled correspondence at all levels. The increase of $5,900 is requested to provide for an additional GS–5 stenographic position with personnel benefits and pay costs of $300 on current positions. This position is urgently needed due to the increased workload created by a change in the operations of this office. All congressional letters addressed to the Secretary are now acknowledged by this office and requirements from the White House made it necessary to enlarge the control activities of mail addressed to the President and sent to the Department for reply.

4. Commissioner of Fish and Wildlife, analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
Commissioner of Fish and Wildlife	----------	$148,000	$148,900	+$900	+$900	----------

Office of the Commissioner of Fish and Wildlife, $148,900

This is a new activity in the budget of the Office of the Secretary which reflects the Reorganization of the Office of the Commissioner of Fish and Wildlife as approved by the Secretary on October 8, 1965. This action preserves the identity and authorities of the Commissioner of Fish and Wildlife pursuant to the Fish and Wildlife Act of 1956 and at the same time recognizes his dual role as Deputy Assistant Secretary in carrying out the functions of principal line assistant and alter ego to the Assistant Secretary for Fish and Wildlife and Parks pursuant to 30 F.R. 8281. The line operations formerly in the Commissioner's Office have been transferred to the Bureaus of Commercial Fisheries and Sport Fisheries and Wildlife and are reflected in their respective budgets.

The Commissioner of Fish and Wildlife provides supervision of the activities of the Bureaus of Commercial Fisheries and Sport Fisheries and Wildlife through coordination and review of programs from the standpoint of policy direction and management improvement. He serves as the U.S. Government representative on the International North Pacific Fisheries Commission (United States, Japan, Canada) and the International Pacific Salmon Fisheries Commission (United States-Canada), and participates in other international, national, and local conferences of fishery and wildlife interest.

Under his designation as Deputy Assistant Secretary for Fish and Wildlife and Parks, the Commissioner exercises the authority of the Assistant Secretary

with respect to the development, conservation, and utilization of the fish, wildlife, and national park resources of the Nation.

The estimate for the Office of the Commissioner of Fish and Wildlife provides for the salary and expenses of the Commissioner together with that of a staff of six employees and includes an increase of $900 to cover increased pay costs.

5. General Services—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
General service	$170,600	$178,800	$184,400	+$5,600	+$600	+$5,000

General services, $184,400

The estimate includes an increase of $5,600.

This activty covers general expenses of the Office of the Secretary where it is not practicable to distribute costs to the various activities under this appropriation. Included printing and binding, telephone, library, dispensary services, postage, travel of Members of Congress in connection with examination of field activities of the Department, and certain other general expenses.

Of the increase requested, $600 is to cover increased pay costs and $5,000 is related to the service cost that accompanies each additional employee, and to the General Service Administration increase in telephone service costs.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$4,469,585	$4,760,500	$5,549,000	+$788,500
Reimbursements for emergency preparedness functions	−47,179	−57,000	−74,000	−17,000
Comparative transfers from other accounts	−131,558	−148,000	−289,000	−141,000
Unobligated balance lapsing	74,152			
New obligational authority	4,365,000	4,555,500	5,186,000	+630,500
New obligational authority:				
Appropriation	4,365,000	4,452,200	5,186,000	+733,800
Transferred to "Operating expenses, Public Building Service," General Services Administration		−1,700		+1,700
Proposed supplemental for civilian pay increases		105,000		−105,000
Object classification:				
11 Personnel compensation	3,660,984	3,943,370	4,566,310	+622,940
12 Personnel benefits	273,627	292,850	338,510	+45,660
21 Travel and transportation of persons	176,175	208,400	287,400	+79,000
22 Transportation of things	2,696	2,000	2,000	
23 Rent, communications, and utilities	85,271	75,225	88,125	+12,900
24 Printing and reproduction	53,463	53,600	58,200	+4,600
25.1 Other services	58,570	32,000	33,000	+1,000
25.2 Services of other agencies	82,486	79,955	91,755	+11,800
26 Supplies and materials	29,782	41,100	45,000	+3,900
31 Equipment	44,635	32,000	38,700	+6,700
42 Insurance claims and indemnities	1,896			
Total obligations	4,469,585	4,760,500	5,549,000	+788,500

OFFICE OF THE SECRETARY

Obligations by activities and objects, fiscal years 1966 and 1967

	Fiscal year	Personnel compensation	Personnel benefits	Travel and transportation of persons	Transportation of things	Rent, communications, and utilities	Printing and reproduction	Other services	Supplies and materials	Equipment	Total, other services	Total obligations
1. Departmental direction:												
(a) Office of the Secretary	1966	$418,100	$26,300	$36,900			$5,000	$6,000	$3,000	$2,200	$79,400	$497,500
	1967	439,100	27,800	37,900			5,500	6,000	3,300	2,700	83,200	522,300
(b) Office of the Under Secretary	1966	97,400	6,800	7,000			1,700	1,300	600	500	17,900	115,300
	1967	144,500	10,700	10,000			1,700	1,300	600	500	24,800	169,300
(c) Office of Program Analysis	1966											
	1967	144,600	10,800	4,000		$3,500	2,600	6,000	2,000	2,000	30,900	175,500
(d) Office of Information	1966	139,500	9,500	500			700	3,000	3,000	500	17,200	156,700
	1967	155,600	10,600	500			700	3,000	3,000	500	18,300	173,900
(e) Office for Equal Opportunity	1966											
	1967	70,600	5,000	1,500		600	500	900	500		8,600	79,200
Total, departmental direction	1966	655,000	42,600	44,400			7,400	10,300	6,600	3,200	114,500	769,500
	1967	954,400	64,900	53,900		4,100	11,000	16,800	9,400	5,700	165,800	1,120,200
2. Program direction and coordination:												
(a) Assistant Secretary, Water and Power	1966	274,800	19,700	17,000			3,000	1,500	1,300	1,000	43,500	318,300
	1967	294,420	21,080	17,500			3,000	1,600	1,400	1,100	45,680	340,100
(b) Assistant Secretary, Mineral Resources	1966	209,500	14,800	12,000			800	2,175	1,500	400	31,675	241,175
	1967	228,520	16,280	12,500			800	2,275	1,600	500	33,955	262,475
(c) Assistant Secretary, Public Land Man-	1966	202,900	13,200	12,000			600	3,700	900	400	30,800	233,700
	1967	221,620	14,580	12,500			600	3,800	1,000	500	32,980	254,600
(d) Assistant Secretary, Fish and Wildlife and Parks	1966	123,900	8,200	10,500			2,200	700	700	500	22,800	146,700
	1967	142,120	9,580	11,000			2,200	800	800	600	24,980	167,100
(e) Resources program staff	1966	487,800	32,700	32,000		3,825	6,000	6,800	4,000	4,000	89,325	577,125
	1967	407,100	26,600	29,500		3,825	6,000	6,300	3,500	3,500	79,225	486,325
Total, program direction and coordination	1966	1,298,900	88,600	83,500		3,825	12,600	14,875	8,400	8,300	218,100	1,517,000
	1967	1,293,780	88,120	83,000		3,825	12,600	14,775	8,300	6,200	216,820	1,510,600

3. Administrative management Services:												
(a) Assistant Secretary for Administration	1966	71,600	5,000	5,500			400	700	400	500	12,500	84,100
	1967	72,100	5,000	5,500			400	700	400	500	12,500	84,600
(b) Office of Survey and Review	1966	399,100	27,900	32,500		3,000	1,000	5,000	2,500	2,200	74,100	473,200
	1967	455,400	32,000	45,700	$400	3,600	1,200	5,600	2,700	3,200	94,400	549,800
(c) Office of Management Operations	1966	612,200	47,400	2,000			6,300	4,000	7,000	1,000	67,700	679,900
	1967	618,400	47,900	2,000			6,300	4,000	7,000	1,000	68,200	686,600
(d) Office of Budget	1966	187,600	13,100	2,000			2,500	1,200	600	2,000	21,400	209,000
	1967	219,380	15,520	3,000		1,500	2,500	1,300	800	1,100	25,720	245,100
(e) Office of Management Research	1966	204,200	14,200	3,500			900	4,500	500	300	23,900	228,100
	1967	206,200	14,300	3,500			900	4,500	500	300	24,000	230,200
(f) Office of Personnel Management	1966	343,400	23,300	5,000			3,500	3,500	2,200	300	37,800	381,200
	1967	346,900	23,600	5,000			3,500	3,500	2,200	300	38,100	385,000
(g) Correspondence Management Control Office	1966	31,400	2,200						1,100		3,300	34,700
	1967	36,880	2,620						1,100		3,720	40,600
Total administrative management services	1966	1,849,500	133,100	50,500		3,000	14,600	18,900	14,300	6,300	240,700	2,090,200
	1967	1,955,260	140,940	64,700	400	5,100	14,800	19,600	14,700	6,400	266,640	2,221,900
4. Commissioner of Fish and Wildlife	1966	98,470	7,450	9,000		7,400	2,000	20,480	2,600	600	49,530	148,000
	1967	99,370	7,450	9,000		7,400	2,000	20,480	2,600	600	49,530	148,900
5. General services	1966		18,000	13,000	2,000	60,800	16,000	45,300	8,700	15,000	178,800	178,800
	1967		18,000	13,000		65,100	16,000	48,600	8,700	15,000	184,400	184,400
Total direct obligations	1966	3,901,870	289,750	200,400	2,000	75,025	52,600	109,855	40,600	31,400	801,630	4,703,500
	1967	4,302,810	319,410	223,600	400	85,525	56,400	120,255	43,700	33,900	883,190	5,186,000
Reimbursements:												
Emergency preparedness functions	1966	41,500	3,100	8,000		200	1,000	2,100	500	600	15,500	57,000
	1967	55,200	3,600	11,000		200	1,000	2,100	500	600	19,000	74,200
Central grant, audit functions	1966											
	1967	208,300	15,500	52,800	1,600	2,400	800	2,400	800	4,200	80,500	288,800
Total reimbursements	1966	41,500	3,100	8,000		200	1,000	2,100	500	600	15,500	57,000
	1967	263,500	19,100	63,800	1,600	2,600	1,800	4,500	1,300	4,800	99,500	363,000
Total obligations	1966	3,943,370	292,850	208,400	2,000	75,225	53,600	111,955	41,100	32,000	817,130	4,760,500
	1967	4,566,310	338,510	287,400	2,000	88,125	58,200	124,755	45,000	38,700	982,690	5,549,000

GENERAL DIRECTION, SUPERVISION, AND COORDINATION OF DEPARTMENT PROGRAMS AND ACTIVITIES

Chairman HAYDEN. Secretary Carver, would you please highlight your budget estimate for the committee?

Mr. CARVER. Thank you, Mr. Chairman.

I have two great difficulties with my statement today. One, I am following the Secretary in terms of the general position on the witness list, and, second, I am following D. Otis Beasley, the longtime Administrative Assistant Secretary—the Assistant Secretary for Administration—who over the many years has presented this particular part of our budget, the Office of the Secretary.

In preparing my statement I have relied heavily on the fine staff he assembled and I look forward to them helping me here today.

The appropriations for the Office of the Secretary finances the general direction, supervision, and coordination of all the programs and activities of the Department. This includes the Secretary, the Under Secretary, and the Assistant Secretaries, with their immediate staffs, as well as the Office of Program Analysis and the Office of Equal Opportunity, both recently established, Office of Information, Resources Program Staff, Office of the Commissioner of Fish and Wildlife, and the various staff offices under the Assistant Secretary for Administration.

1967 BUDGET REQUEST INCREASE

The request before you is for $5,186,000 for carrying on these functions in 1967, which represents an increase of $482,500 over 1966. When the adjustment is made for pay increase costs of $41,200 resulting from the Federal Employees Salary Act of 1965, the program increase is $441,300. This increase is primarily devoted to programs which will—

Strengthen departmental direction.

Improve our efforts in carrying out the provisions of the Civil Rights Act of 1964 relating to contracts and the other responsibilities which we have in this regard.

Provide for the implementation of analysis procedures to control the Department's programs and budgets.

Strengthen the position of Commissioner of Fish and Wildlife.

Provide for the central audit of all grant programs.

Improve management to achieve more efficient and effective programs.

We propose to accomplish these objectives, in some cases through the transfer of functions; in others, by strengthening existing ones. Responsibilities and activities of the Department have increased greatly in recent years. New problems arise; old programs need continual review and evaluation. New methods and procedures need to be studied and adopted. Positive direction and guidance, coordination, and avoidance of duplication of programs are secretarial duties which require effective staff assistance.

PLANNING-PROGRAMING-BUDGETING SYSTEM

A planning-programing-budgeting system is directed by the Bureau of the Budget Circular 66–3. It is designed to assist the Secretary in the planning and analysis of our program. The President stated the aim:

> This program is aimed at finding new ways to do new jobs faster, better, less expensively; to insure sounder judgment through more accurate information; to pinpoint those things we ought to do more, and to spotlight those things we ought do less; to make our decisionmaking process as up to date as our space-exploring equipment * * *.

OFFICE OF PROGRAM ANALYSIS

We are pleased with the results of our experience with this effort. An Office of Program Analysis was established under my direction, and $175,500 of the increase requested is to provide for a staff of 10 employees. But I would like strongly to emphasize that this is an analysis staff, not a command staff.

In other words, its work will be submitted to the Secretary's Advisory Committee for Planning-Programing-Budgeting, a body created by the Secretary which consists of his top political appointees, the Assistant Secretaries, the Solicitor, the Science Adviser, the Director of the Resources Program Staff; in other words, the Board of Directors for the Department.

ASSIGNMENT OF AIDS TO ASSISTANT SECRETARIES FROM RESOURCES PROGRAM STAFF

I act for the Secretary as chairman of that group. An additional provision under this program is to give to each Assistant Secretary an assistant to aid him in carrying out his responsibilities in the new system, but no additional funds are being requested for these five positions since they will be transferred from the Resources Program Staff.

RESOURCE ANALYST FOR OFFICE OF SCIENCE ADVISER

Many of the Department's programs are of a scientific or technical nature. These are continually increasing in scope and importance. To aid the Secretary in giving direction to these programs, the Office of the Science Adviser was established several years ago. Since the professional staff is small, consisting of the Science Adviser and three others, one additional position, a natural resources analyst is being requested in 1967.

OFFICE OF EQUAL OPPORTUNITY STAFF

We are, as the Secretary has already told you, requesting $79,200 to provide five positions for the Office of Equal Opportunity, which was established by the Secretary on September 28, 1965, to enable him to adequately discharge his responsibilities under the Civil Rights Act of 1964 with respect to nondiscrimination in contracts and other federally assisted programs.

INCREASE FOR OFFICE OF UNDER SECRETARY

As to my own Office, the Office of the Under Secretary, that as an office varies in role and responsibility—it is come and go—and the responsibilities which have been assigned to me, which, as the Secretary said earlier, involve considerable coordination, are the basis for the increase of $52,800 for that Office.

ADDITIONAL PERSONNEL INCREASES

One additional position is requested for the Office of Information, and an increase of $92,600 is being requested in the administrative management services area. Included in this figure is one additional position for the Office of Budget and one for the Office of Correspondence Management to meet a steadily increasing workload in each Office.

Also included are six positions which will be used in centralizing the audit of grants in the Office of Survey and Review. This is another matter which the Secretary mentioned in his statement. The individual bureaus and offices estimated needs of $513,000 for the fiscal year 1967 for auditing all the Department's grant programs. By consolidating this work at the departmental level in the Office of Survey and Review, $361,000 only will be required, $288,800 of which is financed by reimbursements and $72,200 represents the increase requested, so that the net saving is $152,000.

REORGANIZATION OF OFFICE OF FISH AND WILDLIFE COMMISSIONER

Included in the estimate for the Office of the Secretary for the first time is the Commissioner of Fish and Wildlife, together with six positions in his office. This reflects the action of the Secretary on October 8, last year. They reorganized the Office of Commissioner of Fish and Wildlife so that the Commissioner now occupies a dual role as Deputy Assistant Secretary for Fish and Wildlife as well as Commissioner. The identity and authorities of the Commissioner of Fish and Wildlife pursuant to the Fish and Wildlife Act of 1956 are preserved. Line operations formerly in the Commissioner's Office have been transferred to the Bureau of Commercial Fisheries and Sport Fisheries and Wildlife. No increase in funds is required as a result of this action.

PRESENT STAFF OF OFFICE OF SCIENCE ADVISER

Chairman HAYDEN. One of the increases which you propose in personnel is a senior scientist for the Office of Science Adviser. What staff does this official have at the present time?

Mr. CARVER. I would like to introduce to the committee, if I may, Mr. Eckles, who is the Deputy in the Science Adviser's Office to explain that point to the committee.

Mr. ECKLES. Mr. Chairman, our total staff at the present time is seven people, of which four are in the professional category and three are secretaries. It consists of the science adviser, Dr. Bates, myself as his principal assistant, one scientist who specializes in the handling of technical scientific information, and one who specializes in geology.

This additional position would be a scientist for what we call resource analysis. It is a coordination of work that would follow the

research area between programs, like between geology and minerals or between geology and fisheries.

Office of Program Analysis Created by Presidential Direction

Chairman Hayden. There is being established in the Office of the Secretary an Office of Program Analysis. Would you describe the need for and the organization of this Office?

Mr. Carver. The immediate need for it, Mr. Chairman, was the direction by the President through the Bureau of the Budget that we should have this function set up in the Office of the Secretary. The President when he outlined the program for the entire executive branch emphasized that he wanted a better analysis of the ongoing programs and a better selection of alternatives on a Government-wide basis. I have emphasized in my statement that the President wants to improve the decisionmaking process within the Department.

The President said that—

> Once in operation, this system would enable us to identify our national goals with precision and on a continuing basis to choose among those goals the ones that are most urgent and to search for alternative means of reaching those goals most effectively at the least cost; to inform ourselves not merely on next year's cost, but on the second, third, and subsequent years' cost of our programs; and to measure the performance of our programs.

He also emphasized that it does not replace the responsibility which is in the executive branch, the President and the Secretary, to make the decision and direct the programs.

Office of Equal Opportunity Programs

Chairman Hayden. Another new office is the Office for Equal Opportunity. I would like for you also to tell the purpose of this Office and describe its organization.

Mr. Carver. This Office, Mr. Chairman, was created after the passage of the Civil Rights Act of 1964 to take care of two basic functions provided in that act. One is the equal opportunity program within the Department; another part is the enforcement of the actual requirements for compliance among the contractors with the Department.

A relatively modest program for departmental direction will be augmented by increased efforts in this respect at the bureau level.

Bureau Support of Office for Equal Opportunity

Chairman Hayden. I note that additional support for the Office for Equal Opportunity will be derived from the various bureaus. Would you please place in the record a statement indicating the type of support and the amounts of money contributed by each of the bureaus, as well as the personnel made available by them?

Mr. Carver. This Office is already in operation with an authorized staff of 20, and the bureaus are not being called upon to furnish additional personnel on a detail basis. We have however, determined to assess the Department as a whole for the operating costs of the Office for Equal Opportunity in fiscal year 1966 as its operations will affect the entire Department and I will be happy to furnish for the record a statement which will indicate these costs by bureau which total $213,279.

(The statement follows:)

Distribution of 1966 cost of Office of Equal Opportunity

Bureau or office	*Total*
Bureau of Land Management	$9,642
Bureau of Indian Affairs	36,901
Bureau of Outdoor Recreation	804
Office of Territories	579
The Alaska Railroad	3,391
Geological Survey	14,643
Bureau of Mines	14,612
Office of Coal Research	1,372
Office of Oil and Gas	86
Bureau of Commercial Fisheries	5,525
Bureau of Sport Fisheries and Wildlife	10,166
National Park Service	25,071
Bureau of Reclamation	61,217
Bonneville Power Administration	20,980
Southeastern Power Administration	665
Southwestern Power Administration	2,059
Office of Saline Water	3,897
Office of Water Resources Research	1,166
Office of the Solicitor	503
Total	213,279

INTERDEPARTMENTAL TRANSFERS OF PERSONNEL AND FUNDS

Chairman HAYDEN. Your justification statement indicates that three positions and $27,000 were taken from the Assistant Secretary for Public Land Management during fiscal year 1966. The justification further states that the Assistant Secretary for Fish and Wildlife and Parks had its 1966 fund availability increased by $27,000 when the National Park Service was transferred to the jurisdiction of Assistant Secretary for Fish and Wildlife and Parks.

Were the three positions needed by the Assistant Secretary for Public Land Management not transferred to the Assistant Secretary for Fish and Wildlife and Parks? And, if they were not, what arrangement was made to accomplish the work after the transfer which these three personnel did before?

Mr. CARVER. I would have to get the detail on that, Mr. Chairman.

Chairman HAYDEN. You may furnish it for the record.

Mr. CARVER. We will furnish it for the record; yes, sir.

(The information follows:)

In connection with the transfer of the National Park Service from the jurisdiction of the Assistant Secretary for Public Land Management to that of the Assistant Secretary for Fish and Wildlife and Parks, a decrease of three positions was made in the authorized organization of the Assistant Secretary for Public Land Manuagement, and $27,000 was transferred in the budget to the Assistant Secretary for Fish and Wildlife and Parks.

At the same time, the Office of the Assistant Secretary for Fish and Wildlife and Parks was reorganized to add two professional positions with a corresponding decrease of two clerical positions, resulting in a new increased cost of approximately $27,000.

The work formerly performed in the Office of the Assistant Secretary for Public Land Management regarding the National Park Service is now handled by the increased professional staff in the office of the Assistant Secretary for Fish and Wildlife and Parks.

Participation in Job Corps Conservation Centers

Chairman Hayden. Would you describe briefly for the committee your activities insofar as the Job Corps Conservation Centers are concerned?

Mr. Carver. This is a matter pretty much as the Secretary discussed it. We operate under an agreement with the Office of Economic Opportunity, which specifies that in these camps the primary responsibility for the work program falls under our direct policy supervision.

The fixing of the policies for the education and the general management of the corpsmen would be in the Office of Economic Opportunity. We have 33 of these Job Corps Centers and 8 are being set up for a total of 41.

Department Employees Allocated to Job Corps Program

Chairman Hayden. How many employees in the Department are assigned to Job Corps functions? I would like to have this figure broken down to reflect those in the headquarters as well as those in the various centers.

Mr. Carver. We will supply the detail on that.

(The information follows:)

Interior Job Corps positions fiscal year 1966 and 1967

Organization	Fiscal year 1966			Fiscal year 1967		
	Washington office	Field	Total	Washington office	Field	Total
Office of the Secretary	30	----	30	30	----	30
Sports Fisheries and Wildlife	4	292	296	4	298	302
Bureau of Land Management	4	310	314	4	336	340
National Park Service	4	370	374	4	423	427
Bureau of Indian Affairs	3	508	511	3	508	511
Bureau of Reclamation	5	415	420	5	440	445
Total	50	1,895	1,945	50	2,005	2,055

Increased Department Program Personnel Ceilings

Chairman Hayden. Are these employees required to be carried under your overall personnel ceilings?

Mr. Carver. Yes, sir.

Chairman HAYDEN. Were your requested ceilings reduced because of the necessity of carrying these Job Corps employees who, I understand, are paid by you with funds transferred from the Office for Equal Opportunity?

Mr. LARSON. No, Mr. Chairman. When the ceilings were allowed for the regular programs we later received an amount that was added on to our figures for this purpose, so the answer would be "No."

Chairman HAYDEN. What effect has it had on your ability to carry on your planned programs?

Mr. LARSON. It has not had any effect.

AUDITING OF ALL DEPARTMENT GRANT PROGRAMS BY OFFICE OF SURVEY AND REVIEW

Chairman HAYDEN. The Office of Survey and Review is seeking an increase in its appropriation to provide for the transfer to that office of the responsibility for the audit of all departmental grant programs. From which agencies is this responsibility to be taken, and are decreases being made in those agencies' budgets to account for the increase in this office?

Mr. CARVER. I would like Mr. Denit, the Director of that Office, to respond to the question, if I may, Mr. Chairman.

Mr. DENIT. Mr. Chairman, the money is being transferred with the positions from the other bureaus, some by reimbursement, some by direct fund adjustment. In view of our increasing grant responsibilities the Department was confronted with a choice of either having separate audit staffs in each bureau or consolidating.

By virtue of eliminating the supervision and overhead requirements on a bureau-by-bureau basis we were able to demonstrate significant economy, as the justification shows. Additionally, the executive policies have shown increasing concern for the multiplicity of audit contact made with grantees. It is necessary to carry out a policy desired to simplify those contacts, reduce them as far as possible, and standardize the audit approach. This consolidated operation will enable us to do this.

We can by one visitation to a single State cover the audit responsibilities of several programs.

TRANSFER OF OFFICE OF FISH AND WILDLIFE COMMISSIONER

Chairman HAYDEN. When the Office of Commissioner of Fish and Wildlife was transferred to the Office of the Assistant Secretary for Fish and Wildlife and Parks, was any personnel increase required besides the personnel which were operating in the former Office of the Commissioner?

Mr. CARVER. No, sir.

Chairman HAYDEN. I note that part of the operations of the Office of Commissioner were transferred to the Bureaus of Commercial Fisheries and Sport Fisheries and Wildlife, and that increases in the budget for those two Bureaus reflect this transfer. Inasmuch as a part of the duties formerly performed in the Office of the Commissioner are now performed elsewhere, has a reduction been made in the

cost of operation of the Commissioner of Fish and Wildlife in the Assistant Secretary's Office?

Mr. LARSON. The funds were transferred, but there was no reduction in the total funds in the three organizations involved, namely, the Secretary's Office, the Bureau of Sport Fisheries and Wildlife, and the Bureau of Commercial Fisheries. The people and the funds to finance them were transferred to the two Bureaus.

Chairman HAYDEN. Any questions?

Senator BYRD. No; thank you.

Senator BARTLETT. I don't think I have either, which means it must have been a pretty good statement.

Mr. CARVER. Thank you.

SUBCOMMITTEE RECESS

Chairman HAYDEN. We shall recess until 10 a.m. Friday, February 18, to take up the Office of Territories and the Alaska Railroad.

(Whereupon, at 11:20 a.m., Thursday, February 17, 1966, the hearing was recessed until 10 a.m., Friday, February 19, 1966.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

FRIDAY, FEBRUARY 18, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.
Present: Chairman Hayden and Senators Bartlett and Young.

DEPARTMENT OF THE INTERIOR

THE ALASKA RAILROAD

STATEMENTS OF JOHN E. MANLEY, GENERAL MANAGER; EDWIN M. FITCH, ASSISTANT TO THE MANAGER; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

PROPOSED 1967 FINANCING PROGRAM

Chairman HAYDEN. The subcommittee will be in order.

We will hear from Mr. Manley of The Alaska Railroad. I will place in the record the narrative justification supplied by the Alaska Railroad to explain its proposed program of financing for fiscal year 1967.

(The justification follows:)

With the virtual completion of the earthquake recovery program contemplated for the end of fiscal year 1966, the rebuilding of former traffic patterns and the development of new traffic will be the major objective of the budget year in order to attempt to regain the former favorable working capital position.

The earthquake repair program of The Alaska Railroad is now estimated at $27,195,000. The original estimates of the cost of repairs to the Alaska Railroad totaled $26,995,000. Of this amount $7,800,000 was allocated to the Corps of Engineers to rebuild the Seward Terminal facilities, and $19,195,000 was to cover the cost of the work to be performed by the Railroad. A total of $25,400,000 has been appropriated by Congress since the time of those estimates, of which the sum of $10,895,000 has been allocated to the Corps of Engineers for the Seward Terminal project, leaving a balance of $14,500,000 of appropriated funds to complete the Railroad repair work originally estimated to cost $19,195,000. However, the Railroad can now report that, through the medium of absorbing costs from free working capital, the redesign of certain construction items, the reduction in scope or elimination of items which can be programed in future years from reserves, and the transfer of items from the original estimate to the fiscal year 1966 capital improvements program to be funded from revenues, the railroad will complete that portion of the reconstruction assigned to the railroad without further appropriated moneys.

For fiscal year 1967 the railroad plans to return to a normal operation and rail-line program, and the continuation of a related capital improvements program to be funded from revenues. No appropriation is being requested for fiscal 1967.

However, authority is being sought for a capital improvements program totaling $1,229,000 to be funded from revenues. Exhibit A follows with detail of operating revenues and expenses as summarized on the revenue, expense, and retained earnings statement; total expenses on this exhibit are reduced to funded costs shown on the program and financing schedule. Exhibit B sets forth the actual outlay for capital improvements in fiscal year 1965; the estimates for 1966, including carryover authorizations, and new authorizations sought for fiscal year 1967, together with the balance of carryover authorizations.

The authorization being sought may be broken down into four general categories; namely, buildings, structures and facilities, equipment, and a nonprogramed reserve. The general category of buildings totals $94,000 and is comprised of a modernization program for the section facility at Sunshine, the replacement of a portion of the floor of the Anchorage freight depot with a concrete slab, improvements to the Anchorage shop buildings, and lastly, improvements to the depot at Wasilla. The general category of structures and facilities totals $656,000 and is comprised of a track improvement program which will install 50,000 treated ties in replacement of untreated ties rapidly deteriorating. When this program for fiscal year 1967 is completed, the Railroad will have remaining 75,000 untreated ties in the entire main line, or a total of 135,000 untreated ties in all, including side tracks, yards, and branch lines. Other items comprising this general category are the installation of additional industry spurs, improvements to tunnels on the Whittier branch, the replacement of trestle decks with treated material, and the application of epoxy coating to concrete bridge seats to protect the concrete from the elements. The general category of equipment totals $179,250 and is comprised of the following items: The upgrading of three diesel locomotives from a "B" engine to a "BC" engine to bring up to current practices, the conversion of work train equipment, the purchase of four new track patrolmen cars for replacement purposes, the acquisition of two large forklifts for replacement purposes, the acquisition of one large 150-kilowatt generating plant to replace two 75-kilowatt plants in URB power car service, and eight small power plants for outfit car and section house replacements. Also included in this category is a large list of small shop and freight house tools, both hand and power operated, made up of 18 items with a total cost of $43,250.

The fourth category is nonprogramed reserve and this item represents $300,000. The rapid transitions taking place in the transportation industry, the necessity of being able to fund emergency structures requiring capitalization (such as the driving of a trestle following a washout), the need to create service facilities to meet new industries are some of the reasons why it is essential that a nonprogramed reserve be retained if the Railroad is to be able to operate in a manner common to the industry and to be ready to serve and develop additional traffic as the opportunity is presented. Exhibit C reflects actual and estimated costs for the disaster recovery program in the aggregate of $27,195,000 for the 4-year period, 1964 through 1967. Capital additions from excess sources without reimbursement appear on exhibit D.

The Alaska Railroad Revolving Fund

Exhibit A.—*Estimates of operating revenues and expenses*

[In thousands of dollars]

	1965 actual	1966 estimate	1967 estimate
REVENUES			
Rail line operations:			
Rail line:			
Freight	11,385	11,365	11,432
Passenger	361	361	370
Mail	66	66	66
Express	12	12	12
Wharfage and handling	437	437	437
Docking privileges	32	32	32
Equipment rentals	130	130	75
Switching	232	232	232
Storage, freight and passenger	2	2	2
Demurrage	31	31	31
Communications facilities	268	265	265
Unit rail boxes	48	15	15
Baggage	1	1	1
Sleeping car	5	5	5
Other	67	67	67
Revenue, rail line	13,079	13,021	13,042
Incidental:			
Dormitories	2	2	2
Messhouses	47	47	55
Hotels	7	7	7
Sale of power and steam	16	16	16
Buildings	19	19	19
Equipment	6	----	----
Reimbursements, work performed for others	114	50	50
Sales of noninvested property	48	----	----
Gain on inventory adjustments, current year	8	----	----
Other income	7	----	----
Subtotal, revenue, incidental	274	141	156
Incidental, disaster related:			
Messhouses	38	15	----
Whittier housing facility	63	20	----
Subtotal, revenue, incidental, disaster related	101	35	----
Total revenue, incidental	375	176	----
Total operating revenue, rail line operations	13,454	13,197	13,198
Other programs:			
Revenue:			
Buildings	42	42	42
River boats and related facilities	60	60	60
Land and other nonoperating property	175	175	175
Interest earned	27	26	25
Total revenue, other programs	305	303	302
Total revenue	13,759	13,500	13,500
EXPENSES			
Rail line operations:			
Maintenance of way and structures, ordinary:			
Superintendence	306	290	290
Maintenance of roadway and track	1,219	1,157	1,197
Maintaining track structures	17	17	17
Maintaining auxiliary structures	224	215	215
Dismantling retired nondepreciable property	39	20	20
Other road and structure expense	8	10	10
Removing snow, ice, and sand, and car cleaning	268	268	268
Retirements of nondepreciable property	116	100	100
Section mess operation	6	----	----
Depreciation	666	723	723
Total, maintenance of way and structures, ordinary	2,869	2,800	2,840

EXHIBIT A.—*Estimates of operating revenues and expenses—Continued*

[In thousands of dollars]

	1965 actual	1966 estimate	1967 estimate
EXPENSES—continued			
Rail line operations—Continued			
Maintenance of equipment, ordinary:			
Superintendence	212	170	170
Repairs to shop and powerplant machinery	63	25	40
Repairs to locomotives	465	475	487
Repairs to freight train cars	424	370	381
Repairs to passenger train cars	175	120	170
Repairs to freight train power cars	57	25	40
Repairs to work equipment	110	75	85
Repairs to roadway machines	329	300	325
Repairs to special equipment	5		
Repairs and operation of automotive trailing equipment	17	15	15
Shop expenses	521	400	400
Locomotive expenses	434	415	425
Train expenses	271	241	260
Repairs to unit rail boxes	23	20	20
Repairs and maintenance to URB appurtenances	18	15	15
Amortization of leased locomotive costs	2		
Locomotive expenses—Seward		7	15
Locomotive expenses—Whittier	17	8	
Depreciation	1,136	1,141	1,157
Subtotal, maintenance of equipment, ordinary	4,278	3,822	4,005
Maintenance of equipment, disaster related:			
Repairs to shop and powerplant machinery	3		
Repairs to locomotives	52		
Repairs to freight train cars	82		
Repairs to passenger train cars	7		
Repairs to freight train power cars	7		
Repairs to work equipment	43		
Repairs to roadway machines	245		
Shop expenses	4		
Locomotive expenses	3		
Train expenses	6		
Subtotal, maintenance of equipment, disaster related	453		
Total, maintenance of equipment	4,731	3,822	4,005
Traffic:			
Traffic expenses	146	146	146
Advertising and publicity expense	9	4	4
Total, traffic	155	150	150
Transportation service, ordinary:			
Superintendence	188	190	192
Station operations	1,638	1,672	1,704
Yard expenses	177	179	191
Casualty damages and expenses	11	12	12
Snow removal service	33	34	34
Hire of freight cars	174	196	199
Loss and damage claims	160	82	83
Locomotive expenses	688	711	720
Train expenses	1,135	1,176	1,191
Claim agent	42	43	44
Hire of unit rail boxes	12	12	12
Custodial services	34	38	38
Seward dock:			
Dock superintendence	13	25	26
Dock office expenses	23	48	84
Longshoring expenses	43	354	700
Operating expenses	7	55	90
Maintenance and repair expenses	13	93	75
Yard expenses		50	84
Hire of special equipment		69	70
Protective service	15	34	50
Depreciation	19	32	46

EXHIBIT A.—*Estimates of operating revenues and expenses—Continued*

[In thousands of dollars]

	1965 actual	1966 estimate	1967 estimate
EXPENSES—continued			
Rail line operations—Continued			
Transportation service, ordinary—Continued			
Whittier dock:			
Dock superintendence	23	12	
Dock office expenses	50	26	
Longshoring expenses	614	311	
Operating expenses	94	47	
Maintenance and repair expenses	60	30	15
Yard expenses	238	130	
Hire of special equipment	136	69	
Protective service	38	19	
Depreciation	8	15	11
Subtotal, transportation service, ordinary	5,687	5,764	5,671
Transportation service, disaster related:			
Station operations	3		
Loss and damage claims	−6		
Seward dock:			
Operating expenses	3		
Yard expenses	2		
Whittier dock:			
Dock superintendence	1		
Dock office expenses	1		
Operating expenses	1		
Yard expenses	19		
Hire of special equipment:			
Tugboats	32		
Floating cranes	1		
Subtotal, transportation service, disaster related	56		
Total, transportation service	5,742	5,764	5,671
Communications system operation and maintenance, ordinary;			
Superintendence	37	37	37
Crossing protection apparatus	5	7	7
Railroad communications systems maintenance	18	20	20
Railroad communications systems maintenance, radio	12	12	12
Joint maintenance of communications systems	127	134	134
Other communications expense	5	5	5
Depreciation	100	100	100
Subtotal—Communications system operation and maintenance, ordinary	305	315	315
Communications system operation and maintenance, disaster related: Joint maintenance of communications systems	2		
Subtotal, communications system operation and maintenance, disaster related	3		
Total, communications system operation and maintenance	308	315	315
Incidental operations:			
Dormitories	8	8	8
Messhouses	81	106	126
Hotels	31	31	31
Cost of power and steam sold	10	10	10
Buildings rented	25	25	25
Accrued costs, employees' compensation	48	91	91
Reimbursable work performed for others	105	40	40
Costs of property sold	38		
Bad debt losses	3	5	5
Other incidental expense	50	50	50
Subtotal, incidental operations	399	366	386
Incidental operations, disaster related:			
Messhouses	46	20	
Whittier housing facility	84	40	
Subtotal, incidental operations, disaster related	129	60	
Total, incidental operations	529	426	386

TABLE A.—*Estimates of operating revenues and expenses*—Continued

[In thousands of dollars]

	1965 actual	1966 estimate	1967 estimate
EXPENSES—continued			
Rail line operations—Continued			
General and administrative expense, ordinary:			
Office of general manager	104	104	104
Office of comptroller	61	61	61
Accounting branch	405	405	405
Office services branch	33	33	33
Mail service	19	19	19
Internal duplicating service	17	17	17
Property control section	7	10	10
Division of personnel	92	92	92
Real estate and contract agent	61	61	61
Special agents	73	73	73
Safety engineer	28	28	28
Seattle office	45	45	45
Washington office	25	25	25
Total, general and administrative, ordinary	970	973	973
Total operating expenses, rail line operations	15,304	14,250	14,340
Other programs, ordinary:			
Buildings	63	75	60
Equipment	1	1	1
Riverboats and related facilities leased	83	86	86
Other nonoperating property	13	13	13
Subtotal, other programs, ordinary	160	175	160
Other programs, disaster related: Buildings	153	75	----------
Subtotal, other programs, disaster related	153	75	----------
Total expenses, other programs	313	250	160
Total expenses	15,617	14,500	14,500
Net income	−1,858	−1,000	−1,000
Total revenues	13,759	13,500	13,500
Total expenses	15,617	14,500	14,500
Less:			
Depreciation	2,099	2,191	2,221
Retirements of nondepreciable property	116	100	100
Improvements expense	63	100	100
Funded costs (program and financing)	13,339	12,109	12,079
Revenues over funded costs	420	1,391	1,421

EXHIBIT B.—*Estimates for additions and betterments, and replacements—Annual program*

[In thousands of dollars]

	1965 actual	1966 estimate	1967 estimate
Railline program:			
Buildings:			
Office buildings	3	9	
Housing			15
Storage buildings		17	40
Service buildings	1	9	15
All other buildings		20	24
Total, buildings	4	54	94
Other structures and facilities:			
Electrical distribution systems	1	1	
Heating systems	30		
Harbor installations	−1	750	
Communications systems	5	69	
Storage (other than buildings)		1	
Roadbed and track	733	978	600
Tunnels		20	20
Bridge structures	1	117	36
Drainage ditches and retaining walls	29	30	
All other structures and facilities	6	75	
Costs associated with public domain lands		100	
Total, other structures and facilities	804	2,140	656
Equipment:			
Diesel locomotives	464	240	23
Freight train cars	173	795	
Passenger train cars	3		
Work train equipment	22	20	12
Highway motor vehicles	6	102	
Construction and material handling equipment	215	628	75
Electrical generation equipment	16		36
Repair shop equipment	17	37	28
Stoves	21	2	2
Refrigeration equipment	2		
Office equipment	17	225	3
Furniture and furnishings	10		
Engineering equipment	1		
Photographic equipment	3		
Technical equipment	4		
Communications equipment		9	
Unit rail boxes		[1] 380	
URB refrigeration and heating units	13		
Other equipment	2	3	
Total equipment	989	2,439	179
Nonprogramed reserve		500	300
Total rail line program	1,797	5,135	1,229
Other programs:			
Equipment		150	
Total other programs		150	
Capital outlay	1,797	5,284	1,229

[1] Carryover item from 1963 program; purchase pending determination as to alternate equipment needed to meet changing service requirements.

EXHIBIT C.—*Estimates of restoration costs—Disaster recovery program*

[In thousands of dollars]

	1965 actual	1966 estimate	1967 estimate
Undistributed costs:			
Engineering and design	218		
Repair and reconstruction of:			
Roadbed and track	2,742	1,920	114
Track structures	1,020	147	295
Auxiliary structures	1,967	261	
Communications systems	138		
Dismantling damaged properties	114		
Total undistributed costs	6,199	2,327	409
Capital outlay:			
Land:			
Seward yard and dock area [1]	114		
Potter Hill (line change)	74	39	
Total land	189	39	
Other structures and facilities:			
Heating systems	7		
Harbor installations:			
Seward dock [1]	2,812	7,969	
Whittier barge slip	13		
Total other structures and facilities	2,832	7,969	
Equipment:			
Diesel locomotives	199		
Freight train cars	1,886	821	
Work train equipment	566	11	
Construction and material handling equipment	150		
Electrical generation equipment		32	
Refrigeration equipment	1		
Cleaning and polishing equipment	1		
Furniture and furnishings	8		
Total equipment	2,811	865	
Total capital outlay	5,832	8,872	409
Total undistributed costs and capital outlay	12,031	11,199	409

[1] Allocation to Corps of Engineers.

NOTE.—Summary:

1964 actual	$3,554
1965 actual	12,031
1966 estimated	11,199
1967 estimated	409
Total	27,195

EXHIBIT D.—*Nonexpendable property acquired from excess sources without reimbursement*

[In thousands of dollars]

	1965 actual	1966 estimate	1667 estimate
Other structures and facilities:			
Communications systems	1		
Storage (other than buildings)	1		
Total other structures and facilities	2		
Equipment:			
Diesel locomotives	396		
Work train equipment	11		
Highway motor vehicles	10		
Construction and material handling equipment	57		
Electrical generation equipment	22		
Repair shop equipment	12		
Stoves	1		
Refrigeration equipment	1		
Cleaning and polishing equipment	1		
Furniture and furnishings	15		
Total equipment [1]	528		
Total fiscal year	529		

[1] Original acquisition cost $2,527,000.

FORMAL STATEMENT

Chairman HAYDEN. Mr. Manley, General Manager of the Railroad, has a statement. You may either read your statement or place it in the record for printing in full, either way you want.

Mr. MANLEY. I have a formal statement, Mr. Chairman. I would like to place it in the record and in the interest of time I will paraphrase the statement.

(The statement follows:)

It is a privilege to appear before this committee to present the program which The Alaska Railroad proposes for fiscal year 1967. I have with me Mr. Leland P. Draney, Comptroller for the Alaska Railroad, and Dr. E. M. Fitch, Assistant to the General Manager, who is stationed here in Washington.

The Alaska Railroad is not requesting an appropriation for fiscal year 1967. However, authority is being sought for a capital improvements and replacement program totaling $1,229,000 to be funded from revenues. This program covers four general categories; namely, buildings, structures and facilities, equipment, and nonprogramed reserve.

The general category of buildings totals $94,000 and is comprised of a modernization program for section facilities at Sunshine, the replacement of a portion of the floor of the Anchorage Freight Depot with a concrete slab, improvements to the Anchorage shop buildings, and, lastly, improvements to the depot at Wasilla.

The general category of structures and facilities totals $656,000 with the largest item a track improvement program, which will result in the installation of 50,000 treated ties to replace untreated ties that are rapidly deteriorating. When this program for fiscal year 1967 is completed, the Railroad will have remaining only 75,000 untreated ties in the entire main line, or a total of 135,000 untreated ties in all, including sidetracks, yards, and branch lines. Other items in the structures and facilities category are the installation of additional industry spurs, improvements to tunnels on the Whittier branch, the replacement of trestle decks with treated material, and the application of epoxy coating to concrete bridge seats to protect the concrete from the elements.

The general category of equipment toals $179,250 and is comprised of the following items: the upgrading of three diesel locomotives by converting "B" engines to improved "BC" engines, the conversion of work train equipment, the purchase of four new track patrol cars for replacement purposes, the acquisition of two large forklifts for replacement purposes, the acquisition of one large 150-kilowatt generating plant to replace two worn 75-kilowatt plants presently in unit rail box

power car service, and of eight small powerplants as replacements in outfit cars and section houses. Also included in this category is a large list of small shop and freight house tools and equipment, both hand and power operated, comprising 18 items with a total cost of $43,250.

The fourth category is nonprogramed reserve. This item amounts to $300,000, a reduction from $500,000 in the fiscal year 1966 program. The rapid transitions taking place in the transportation industry, and, particularly in Alaska, the necessity of being able to fund emergency structures requiring capitalization (such as the driving of a trestle following a washout), the need to create service facilities in a timely manner to meet new industry requirements, are some of the reasons why it is essential that a nonprogramed reserve be retained.

Highlights of operations for fiscal year 1965 follow: The Alaska Railroad moved 1,384,511 revenue tons of freight a distance of 172 million ton-miles. This represents a decrease in both tons and ton-miles from the previous year, largely due to a decline in the amount of Alaska reconstruction and the moving by the commercial oil companies of their port of entry to Anchorage, thus eliminating the petroleum haul to Anchorage from Seward and from Whittier. During fiscal year 1965 the Alaska Railroad handled 50,866 passengers a total of 8,377,626 passenger miles. The Railroad's financial statement for fiscal year 1965 shows a loss of $1,858,227 after disaster-related operating expenses of $794,060 and depreciation charges of $2,085,000.

In addition to normal revenue operations, the Railroad largely completed its portion of the reconstruction program occasioned by the effects of the 1964 earthquake. Since the earthquake, more than 3,083,000 cubic yards of rock and common fill have been hauled and placed to bring track and roadway back to grade. To place this operation in perspective, it is to be noted that this quantity of fill would have produced the volume of material required for Hungry Horse Dam. Also, since the earthquake, 7,583 feet of wood trestle have been driven or redriven. Major repairs were made to 34 steel bridges. The building complex at Anchorage has been restored.

While the Railroad is experiencing a reduced level of income, largely because of the earthquake, we are confident that the continued growth of Alaska will mean increasing use of the Railroad which will again place us in a position to earn a net income. At the same time, we expect to continue the policy of not requesting appropriations for capital improvement programs.

We will be happy to attempt to answer any questions members of your committee may have. Should we be unable to provide the answers immediately, we would appreciate the opportunity to obtain detailed answers and to submit them to the clerk of the committee for insertion in the record.

This concludes my statement and I thank you for the opportunity of presenting it.

Earthquake Recovery

Chairman Hayden. What is the status of the work which you have been doing to recover from the earthquake?

Mr. Manley. The work that the Railroad is doing is about 99 percent complete. There is a lag in the work on the Seward facility that is being constructed by the Corps of Engineers and they are estimating it will be completed by June 1 of this year.

Authorization Request for Capital Improvements and Replacement Program

Chairman Hayden. What is your primary aim in fiscal year 1967?

Mr. Manley. The Alaska Railroad is not requesting an appropriation. We are requesting authority for a capital improvements and replacement program of $1,229,000 to be funded from revenues.

I can break this down if you so desire. It is in four general categories; namely, buildings, structures, and facilities, equipment and nonprogramed reserve. The primary program in structures and facilities, which is the biggest single item we have, is largely the installation of 50,000 treated ties to replace untreated ties that are rapidly deteriorating.

When we finish the program the Railroad will have only 75,000 untreated ties in the entire main line and a total of 135,000 untreated ties in the Railroad in toto, including sidetracks and industry yards.

Removal of Fill Deposited by Earthquake

Chairman Hayden. Senator Bartlett.

Senator Bartlett. Thank you, Mr. Chairman.

Just a question or two, and I appreciate this because I am not going to be able to remain. I have to conduct a hearing of the Commerce Committee.

Mr. Manley, I was very interested to note in your statement that the amount of rock and common fill moved by the Railroad following the earthquake is equivalent to the amount of material required for Hungry Horse Dam. You have really been moving it.

Mr. Manley. Yes, sir; we moved more than 3 million cubic yards of rock and common fill to bring the line back up to grade.

Loss of Revenues From Petroleum Products

Senator Bartlett. You say here in your statement that the Railroad is experiencing a reduced level of income, largely because of the earthquake.

Mr. Manley, is that in part due to the fact that following the earthquake some of the oil companies moved their storage facilities from Whittier to Anchorage, thus depriving the Railroad of the haul?

Mr. Manley. Yes, sir. Standard and Texaco Oil Cos. had their facilities demolished at Seward; Union Oil had their facilities demolished at Whittier, and they all increased their capacity at Anchorage to carry them through the winter, and as a result the Railroad does not handle any petroleum products into Anchorage now with the resulting loss of about $1 million of revenue.

Railroad Capacity

Senator Bartlett. $1 million. What would be the capability of the Alaska Railroad to handle bulk petroleum products between Whittier and Anchorage if you had the opportunity to do so?

Mr. Manley. Mr. Senator, I would like to put that in perspective by picking an airport we think will exceed the requirements in Alaska for some time to come.

San Francisco International Airport has a throughput of approximately 8 million barrels a year of turbine fuel oil, including bonded and domestic. This represents slightly less than one train a day for the Alaska Railroad from the coast into Anchorage.

Senator Bartlett. You would have no difficulty whatsoever in handling any foreseeable amount of petroleum products that might come to the Alaska Railroad through Whittier or Seward?

Mr. Manley. No, sir.

Prior Losses Resulting From Army-Constructed Pipelines

Senator Bartlett. Mr. Manley, I think it is rather remarkable that you are able to come before this committee year after year and not ask for an operating appropriation.

First, the Army built a pipeline from Haines to Fairbanks; is that correct?

Mr. MANLEY. That is right.

Senator BARTLETT. And that represented a loss of revenue of how much to the Railroad?

Mr. MANLEY. Slightly over $3 million.

Senator BARTLETT. A year?

Mr. MANLEY. Yes, sir.

Senator BARTLETT. And then you say you are losing $1 million a year on account of the transfer of these bulk storage facilities?

Mr. MANLEY. Yes, sir; but that is commercial petroleum products.

ADDITIONAL LOSSES OCCASIONED BY NEW STEAMSHIP COMPANY ACTIVITY

Senator BARTLETT. That is commercial products. And then the entry of a comparatively new steamship company into the Alaska trade whereby ships ply directly from Seattle to Anchorage has caused a further diminishment of revenue; has it not?

Mr. MANLEY. Yes, sir. They are very competitive.

Senator BARTLETT. In what amount?

Mr. MANLEY. Mr. Senator, it is difficult to place a dollar-and-cents value on that because they supplanted the old Alaska Freight Lines. They have made further inroads not only directly to the Railroad, but to other carriers who use the Railroad as a substitute service van carrier.

ANTICIPATED LOSSES FROM MILITARY CONVERSION OF HEATING PLANT

Senator BARTLETT. And there is a possibility, is there not, that within the foreseeable future the military will convert their heating facilities at Elmendorf Air Force Base and Fort Richardson near Anchorage from coal to gas? You have had reports that this might occur?

Mr. MANLEY. Yes, sir; I have had reports of that.

Senator BARTLETT. If that did take place, what amount of revenue loss would that constitute for the Railroad?

Mr. MANLEY. It would cause a loss of approximately $800,000 a year, of which approximately $500,000 would be a net loss.

Senator BARTLETT. Mr. Chairman and Senator Young, I wanted to bring out these facts in particular so that if The Alaska Railroad is ever required to come before this committee for appropriations for operation it will be understood why this is the case. I think that it is really remarkable—this is my own opinion, but I think it can be supported by factual data—that the Railroad is able to operate within the revenues now produced in light of what you have told us as to how you have been reduced here, there, and the next place. I want to congratulate you, Mr. Manley, for having done what I think is a splendid job.

Mr. MANLEY. Thank you very much, Senator.

Chairman HAYDEN. There are no trucking companies in Alaska, are there?

Senator BARTLETT. There is some trucking competition, too, from Seward, a couple of LD's. I think Mr. Manley's complaints might

not be directed so much against trucks as against these other larger episodes which have smitten him.

Mr. MANLEY. The trucks do not provide the major competition.

FUNDS APPROPRIATED FOR RESTORATION OF RAILROAD

Senator YOUNG. May I ask a question at this point?

Has the Alaska Railroad received any other assistance like disaster funds that we appropriated last year or any other direct funds for construction in the last 2 or 3 years?

Mr. MANLEY. Yes, sir. Congress appropriated funds for the restoration of The Alaska Railroad. In fact, they appropriated a total of $25.4 million, of which $10.8 million was turned over to the Corps of Engineers which was assigned the responsibility of replacing the Seward dock facilities.

Senator YOUNG. You haul quite a little material for the military, I suppose?

Mr. MANLEY. About 45 percent of our revenue derives from military revenue.

Senator YOUNG. Do you have to haul this at a reduced rate, or at a regular rate?

Mr. MANLEY. In some instances we haul it on what a stateside railroad would call a section 22 tender. We are not subject to section 22 of the act, so we call it a billing instruction or a military tender.

Senator YOUNG. I agree with your good Senator that you have been doing a good job of running this Railroad under very difficult circumstances.

Mr. MANLEY. Thank you very much.

Senator BARTLETT. I notice that his hair becomes whiter each year that he appears before us.

Chairman HAYDEN. We thank you for your statement.

Mr. MANLEY. Thank you very much, Mr. Chairman.

FRIDAY, FEBRUARY 18, 1966.

OFFICE OF TERRITORIES

ADMINISTRATION OF TERRITORIES

STATEMENTS OF MRS. RUTH G. VAN CLEVE, DIRECTOR; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

PREPARED STATEMENT

Chairman HAYDEN. Mrs. Van Cleve, Director of the Office of Territories.

Mrs. VAN CLEVE. Mr. Chairman, I have a prepared statement which I should appreciate having made a part of the record. I would then like to give you a very quick summary of our appropriation situation.

(The statement follows:)

I appreciate the opportunity to appear before you to discuss the budgetary needs for the administration of our territories and the trust territory. I should like to present for your consideration, Mr. Chairman, our estimates of the sums required to discharge the responsibilities of the Office of Territories for the fiscal year 1967.

The estimate of $28,007,000 for 1967 for our territories and the trust territory represents a net decrease of $4,018,588 under the present adjusted appropriations for our activities for the current fiscal year.

Under the heading "Administration of Territories," we seek $10,513,000, an amount which is $4,066,000 less than the adjusted appropriation for 1966. The 1967 estimate provides funds for Guam to continue the rehabilitation program started in the 1965 fiscal year; funds for American Samoa, where we will continue to emphasize expanded programs in education, public health, construction of public facilities and communications; and funds for territorial support activities, such as the immediate offices of the Governors, the Virgin Islands Comptroller, and the Office of Territories.

With respect to the Trust Territory of the Pacific Islands the estimate of $17,494,000 is $47,412 more than the present adjusted appropriation for 1966. The 1967 program includes $2,536,600 to finance the cost of the construction program. Of this amount, $1,126,600 is for the education program; $90,000 for medical facilities; $150,000 for roads; $200,000 for airfields at Majuro and Truk; and $970,000 for power, water, and other facilities. Other significant amounts are $4,007,000 for educational services, $2,443,000 for medical services, $1,465,000 for resources management and development activities, and $4,662,000 for operations, maintenance, transportation and communications services.

Virgin Islands Corporation: Funds are not being requested for the Virgin Islands Corporation in 1967.

Mr. Chairman and members of the committee, with me here today are certain of our territorial officials and members of my office staff who will furnish any detailed information the committee may desire regarding our territorial budgetary programs for 1967.

Thank you.

JUSTIFICATION

Chairman HAYDEN. The proposed budget for "Administration of territories" in fiscal year 1967 is $10,513,000, a decrease of $4,066,000

from the amount appropriated in fiscal year 1966. The justification statement in support of this estimate will be included in the record.

(The justification follows:)

HIGHLIGHT STATEMENT

The major purpose of the Office is to assist in guiding the growth of the nonself-governing territories and the Trust Territory toward full economic and political maturity. Included in this program are the Virgin Islands, Guam, and American Samoa. The government of the Trust Territory of the Pacific Islands, which is also under the supervision of the Office of Territories, is discussed separately in this presentation. All of these areas are in different stages of political and economic development. They are encouraged to and are constantly moving toward a greater degree of home rule and economic development.

The budget year estimate of about $5.5 million for Guam provides for continuation of the rehabilitation program authorized by the Guam Rehabilitation Act, Public Law 88–170, approved November 4, 1965. Initial appropriations totaling $19 million were made available by the Congress in fiscal 1965 to start the program. The appropriation for the current year is approximately $9.7 million.

The budget year estimate of $9.1 million for American Samoa contemplates continued emphasis on programs for educatinon, public health, economic development, communications, and public works.

OFFICE OF TERRITORIES

INTRODUCTION

The Office of Territories promotes the economic and political development of those territories and the Trust Territory which are under U.S. jurisdiction and within the responsibility of the Interior Department. It originates and implements Federal policy, guides and coordinates certain operating programs, provides information and services, and participates in foreign policy and defense matters concerning the territories and the Trust Territory. In addition, the Office represents the Governors of the Virgin Islands, Guam, and American Samoa and the High Commissioner of the Trust Territory in Washington.

Administration of territories

Appropriation, 1965	$25,300,000	
Second supplemental appropriation, 1965	45,000	
Total available, 1965		$25,345,000
Total available, 1966		14,579,000

SUMMARY OF INCREASES AND DECREASES, 1967

Virgin Islands: Net decrease in operating costs for legislative expense and the Comptroller's office		−53,000
Guam:		
Funds for legislative expense no longer required	−$24,000	
To provide for continuation of the rehabilitation program	−9,049,000	
		−9,073,000
American Samoa:		
Net increase in operating costs for the Governor's office, legislative expense, and chief justice and high court	+14,000	
Net increase in grants due mainly to increased capital improvements requirements	+5,042,000	
		+5,056,000
Canton Island administration: Funds no longer required		−17,000
General administration: Increased operating costs		+21,000
Net decrease, 1967		−4,066,000
Budget estimate, 1967		10,513,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−) 1967 compared with 1966		
				Total	Pay cost	Program
1. Virgin Islands:						
(a) Governor's office	$91,374	$98,000	$98,000			
(b) Legislative expense	10,720	13,000		−$13,000		−$13,000
(c) Comptroller's office	181,667	192,000	152,000	−40,000		−40,000
Subtotal, Virgin Islands	283,761	303,000	250,000	−53,000		−53,000
2. Guam:						
(a) Governor's office	90,000	90,000	90,000			
(b) Legislative expense	18,750	24,000		−24,000		−24,000
(c) Loans	9,739,402	5,852,500	304,000	−5,548,500		−5,548,500
(d) Grants	7,071,466	3,804,500	304,000	−3,500,500		−3,500,500
Subtotal, Guam	16,919,618	9,771,000	698,000	−9,073,000		−9,073,000
3. American Samoa:						
(a) Governor's office	142,779	176,000	190,000	+14,000		+14,000
(b) Legislative expense	27,323	31,000	31,000			
(c) Chief justice and high court	75,987	91,000	80,000	−11,000		−11,000
(d) Grants		3,795,000	8,848,000	+5,053,000		+5,053,000
Subtotal, American Samoa	246,089	4,093,000	9,149,000	+5,056,000		+5,056,000
4. Canton Island administration	8,892	17,000		−17,000		−17,000
5. General administration	350,326	377,000	398,000	+21,000		+21,000
6. Servicing Alaska public works loans		18,000	18,000			
Unobligated balance available	7,536,314					
Total	25,345,000	14,579,000	10,513,000	−4,066,000		−4,066,000

1. Virgin Islands

	Estimate, 1966	Estimate, 1967	Increase or decrease
(a) Governor's office	$98,000	$98,000	
(b) Legislative expense	13,000		−$13,000
(c) Comptroller's office	192,000	152,000	−40,000
Total estimate	303,000	250,000	−53,000

(a) Governor's office:

Fiscal year 1966	$98,000
Fiscal year 1967	98,000
No change	

The operating costs of this office will continue at the current year level. Estimated expenses in the budget year are distributed as follows:

Personnel compensation and benefits	$94,600
Travel and transportation of persons	1,200
Transportation of things	2,200
Total estimate 1967	98,000

(b) Legislative expense:

Fiscal year 1966	13,000
Fiscal year 1967	0
Decrease	13,000

No funds are being requested for this activity in fiscal 1967 because the expenses are no longer the responsibility of the Federal Government as a result of passage of Public Law 89–98, approved July 30, 1965.

(c) Comptroller's office:

Fiscal year 1966	$192,000
Fiscal year 1967	152,000
Decrease	40,000

The budget year estimate of $152,000 represents a decrease of $40,000 from the current year. Estimated expenditures for this activity are distributed, as follows:

Personnel compensation and benefits	$140,000
Contractual services and supplies	12,000
Total estimate	152,000

2. GUAM

	Estimate 1966	Estimate 1967	Increase or decrease
(a) Governor's office	$90,000	$90,000	
(b) Legislative expense	24,000		−$24,000
(c) Loans	5,852,500	3,312,150	−2,540,350
(d) Grants	3,804,500	2,190,850	−1,613,650
Total estimate	9,771,000	5,593,000	−4,178,000

(a) Governor's office:

Fiscal year 1966	$90,000
Fiscal year 1967	90,000

No change.

Operating requirements of this activity are expected to be the same as estimated for the current year.

(b) Legislative expense:

Fiscal year 1966	$24,000
Fiscal year 1967	0
Decrease	24,000

No funds are needed in 1967 because this activity is no longer a Federal responsibility as a result of passage of Public Law 89–100, approved July 30, 1965.

	Estimate 1966	Estimate 1967	Increase (+) or decrease (−)
(c) Loans	$5,852,500	$3,312,150	−$2,540,350
(d) Grants	3,804,500	2,190,850	−1,613,650
Total estimate	9,657,000	5,503,000	−4,154,000

The estimates for these two activities are combined because the funds requested will provide for the continuation of the Guam rehabilitation program as authorized by Public Law 88–170, approved November 4, 1963. The first funds for this purpose were made available in the 1965 fiscal year.

The budget year program estimate of $5,503,000 consists of three major items which are continuing large-scale projects, namely: (1) Sewer system (second increment), $2,886,700; (2) water resources and distribution, $1,121,300; and (3) schools, $1,495,000. To finance this program, we request new appropriations totaling $608,000, and permission to fund the balance of $4,895,000 by reprograming funds previously made available for urban renewal projects that have not been spent.

The detailed justification for rehabilitation program projects in 1967 follows:

Guam rehabilitation projects, fiscal year 1967

Projects	Loans	Grants	Total estimate
Sewer system (2d increment)	$1,443,350	$1,443,350	$2,886,700
Water resources and distribution	1,121,300		1,121,300
Schools	747,500	747,500	1,495,000
Totals	3,312,150	2,190,850	5,503,000

Sewer system (second increment), $2,886,700

This is a continuation of the sewer program now underway with funds appropriated for fiscal 1965. The program is designed to provide a sewer system for Guam which will eliminate the hazard to health arising from a growing community's use of septic tanks and sewer holes on small lots. It will also eliminate pollution of beaches and will give protection to the ground water supply system. Of the 19 villages in Guam, only Agana and Agat are sewered, and these only in part.

Engineers retained to draw plans have recommended that the Guam sewer system be constructed in four increments. The first three increments serve 60 percent of the island civilian population.

The first increment has been contracted with 1965 appropriated funds totaling $3,677,600 and is now under construction. It covers main trunk lines for Agana, Agana Heights, Sinajana, Dededo, and Tamuning, including Tumon, plus an outfall to the sea and a central pumping station. The second increment for which funds are now being requested completes Agana, Dededo, Barrigada, and Yona, and covers additional installations in Sinajana, Mongmong, and Tamuning, including Tumon. The third increment covers the villages of Asan, Piti, and Toto, and the remainder of Mongmong, Tamuning, Tumon, and Agat, and possibly a central treatment plant. The fourth increment covers nine outlying villages. The cost of the total sewer system is estimated to be $14,102,000 at current costs.

The amount of $2,886,700 currently requested is for the second increment, excluding Yona which was covered in a 1966 appropriation.

The funds requested cover the following facilities:

1. Agana Heights and Sinajana main sewers

Sewer:	
6-inch pipe, 8,800 linear feet at $12.25	$107,800
8-inch pipe, 8,350 linear feet at $13.25	110,637
10-inch pipe, 830 linear feet at $14.50	12,035
Force main: 6-inch pipe, 2,680 linear feet at $7	18,760
Apugan pump station	33,000
Subtotal	282,232
Contingency, contract administration	47,979
Total cost	330,211

2. Dededo connection and pump station

Sewer:	
10-inch pipe, 2,980 linear feet at $14.50	$43,210
12-inch pipe, 6,430 linear feet at $16	102,880
14-inch pipe, 3,800 linear feet at $17.50	66,500
16-inch pipe, 2,500 linear feet at $19.50	48,750
Force main: 10-inch pipe, 1,200 linear feet at $10.50	12,600
Harmon sink pump station	134,000
Subtotal	407,940
Contingency, contract administration	69,349
Total cost	477,289

3. Barrigada-Mongmong connection to central system, main sewers and laterals

Sewer:	
6-inch pipe, 13,800 linear feet at $12.25	$169, 050
8-inch pipe, 16,800 linear feet at $13.25	222, 600
10-inch pipe, 3,200 linear feet at $14.50	46, 400
12-inch pipe, 50 linear feet at $16	800
Force main:	
6-inch pipe, 180 linear feet at $7	1, 260
8-inch pipe, 3,950 linear feet at $8.75	34, 560
10-inch pipe, 40 linear feet at $10.50	420
Leyang pump station	77, 000
Subtotal	552, 090
Contingency, contract administration	93, 855
Total cost	645, 945

4. Tamuning and Agana Heights lateral sewers; Sinajana Village pump station

Sewer:	
6-inch pipe, 18,037 linear feet at $12.25	$220, 953
8-inch pipe, 19,350 linear feet at $13.25	256, 387
Sinajana pumping station	39, 000
Subtotal	516, 340
Contingency, contract administration	87, 663
Total cost	604, 003

5. Agana to Adelup trunk sewer and West Agana lateral sewers

Sewer:	
6-inch pipe, 1,470 linear feet at $12.25	$18, 007
8-inch pipe, 7,730 linear feet at $13.25	102, 422
20-inch pipe, 1,720 linear feet at $28	48, 160
24-inch pipe, 5,940 linear feet at $32.50	193, 050
Subtotal	361, 639
Contingency, contract administration	61, 478
Total cost	423, 117

6. Tumon, main sewers, laterals and pumping station

Sewer:	
6-inch pipe, 500 linear feet at $12.25	$6, 125
8-inch pipe, 5,490 linear feet at $13.25	72, 742
Force main:	
6-inch pipe, 1,980 linear feet at $7	13, 860
Tumon pump station	62, 000
Subtotal	154, 727
Contingency, contract administration	26, 303
Total cost	181, 030

7. Dededo lateral sewers

Sewer:	
6-inch pipe, 8,980 linear feet at $12.25	$110,004
8-inch pipe, 6,219 linear feet at $13.25	82,401
Subtotal	192,405
Contingency, contract administration	32,700
Total cost	225,105
Summary:	
Labor	1,040,000
Material	1,558,000
Equipment	288,700
Total	2,886,700

Utilities, $1,121,300

Water resources and distribution

1. *Central well system, $812,300.*—Drilling of four wells and providing a reservoir, transmission lines, and attendant facilities near the Mangilar area, and drilling four wells in the Chalan Pago area, are essential to relieve a critical water shortage in these areas, which cover the villages of Mangilao, Barrigada, Mongmong-Toto, Chalan Pago, Ordot, Sinajana, and Agana Heights. These wells will produce 60 million gallons of water monthly and the system will be supported by a 1-million-gallon reservoir.

The cost details follow:

Wells (8) at $15,000 each	$120,000
Well piping	22,000
Transmission line, 29,170 feet of 12-inch pipe at $12 linear foot	350,000
Powerlines	17,000
Reservoir, 1,000,000 gallons	224,000
Total construction cost	733,000
Contingency, engineering	79,300
Total cost	812,300
Summary:	
Labor	324,900
Material	324,900
Equipment	162,500
Total	812,300

2. *Ylig-Talofofo well system, $125,000.*—Replacement of the present water system utilizing water from the Ylig River and serving Ylig, Windward Hills, Yona, Talofofo, Camp Witek, and Camp Dealey areas, is essential because the source facilities have so deteriorated that costly rebuilding is necessary. This can be done at considerably less expense by drilling two wells which will produce 15 million gallons monthly, the same amount withdrawn from the river.

Costs details are:

Wells (2) at $15,000	$30,000
Well piping	15,000
Elevated tank, 75,000 gallons	60,000
Powerlines	8,000
Total construction cost	113,000
Contingency, engineering	12,000
Total cost	125,000
Summary:	
Labor	50,000
Material	50,000
Equipment	25,000
Total	125,000

3. *Yona interconnection, $184,000.*—A pipeline connecting the village of Yona with the central system is necessary to give the Ylig-Talofofo-Yona area an emergency tie-in with the central system in case of well failure in the Ylig-Talofofo area.

Cost details are:

Pipeline, 13,000 feet of 12-inch pipe at $12	$156,000
Rehabilitate tank and piping	10,000
Total construction cost	166,000
Contingency, engineering	18,000
Total cost	184,000

Summary:

Labor	73,600
Material	73,600
Equipment	36,800
Total	184,000

Yigo Elementary School, $1,110,000

An 800-pupil elementary school is urgently needed to relieve overcrowded conditions now existing at the Andersen Elementary School near the Andersen Air Force Base, which school now accommodates 1,534 pupils, mostly military dependents. This school since its original construction has been expanded by an addition and by temporary classrooms to the point where it is severely overcrowded. It has an inadequate cafeteria, which can handle only 400 pupils, an inadequate number of restrooms and an inadequate playground, which was further decreased in size to permit construction of 13 temporary classrooms of plywood that are extremely vulnerable to typhoon damage. These should be replaced by permanent construction.

At present, housing accommodations for 200 additional families are being designed for Andersen Air Base, with construction to start within the next 6 months. This will bring a projected increase of 280 children. An additional 200 families will be housed within the next 2 years, and this can well be increased due to the turbulent conditions in the Far East.

The present overcrowded school at Andersen is totally inadequate to accommodate any increase of pupils. The enrollment should be reduced to a manageable number of 1,200 by eliminating the temporary classrooms. The solution is to build a new 800-pupil school. The situation is now critical and is becoming desperate.

The cost of an 800-pupil school is detailed below:

28 classrooms of 1,000 square feet each—28,000 square feet at $18 per square foot	$504,000
1 cafetorium, 8,000 square feet at $22 per square foot including equipment	176,000
1 library, 2,500 square feet at $20 per square foot including shelving	50,000
1 administration area, 4,000 square feet at $20 per square foot	80,000
Design	48,000
Contingency	86,000
Contract administration	66,000
Equipment	100,000
Total cost	1,110,000

Summary:

Labor	363,600
Materials	545,400
Equipment	201,000
Total	1,110,000

Dededo Elementary School addition, $385,000

The new Dededo Elementary School designed for a capacity of 500 pupils has a current enrollment of 508 pupils. It is situated about 5 miles from the Naval Communication Station and is immediately adjacent to a new and successful housing development, the largest of its kind in Guam. As of September 1, 1965, 107 houses were sold, 62 were under construction and sold, and 62 were being started. The additional 124 families for houses under construction will add a minimum of 250 pupils. Further military personnel additions to NCS, additional homes in the housing development, and the natural population expansion in the area indicate a critical shortage of classrooms in the near future.

The situation requires a 400-pupil addition to the Dededo Elementary School. This will cost $385,000, as follows:

12 classrooms, 1,000 square feet each—12,000 square feet at $23 per square foot	$276,000
Design	10,000
Contingency	27,500
Contract administration	2,500
Equipment	69,000
Total cost	385,000
Summary:	
Labor	120,600
Materials	180,900
Equipment	83,500
Total	385,000

American Samoa

Summary of appropriations and grants

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
A. Direct appropriations:				
1. Governor's office	$142,780	$176,000	$190,000	+$14,000
2. Legislative expense	27,323	31,000	31,000	0
3. Chief justice and high court	75,986	91,000	80,000	−11,000
Subtotal	246,089	298,000	301,000	+3,000
B. Grants:				
I. Health, education, and welfare:				
Samoan information	26,586	0	0	0
Department of education	2,871,027	3,333,547	3,333,547	0
Department of medical services	1,118,681	1,324,235	1,307,774	−16,461
Public defender	10,417	10,909	10,909	0
Public safety and legal affairs	235,241	291,463	309,275	+17,812
Local judicial	8,877	10,174	12,289	+2,115
Civil defense	2,646	7,020	7,008	−12
Subtotal, health, education, and welfare	4,273,475	4,977,348	4,980,802	+3,454
II. Economical and industrial development:				
Department of agriculture	321,424	338,601	338,601	0
Local government department	72,610	71,150	71,150	0
Office of tourism	6,174	20,000	20,000	0
Subtotal, economic and industrial development	400,208	429,751	429,751	0
III. Operations, maintenance, and transportation service:				
Communications	148,666	205,307	198,116	−7,19
Public works department	1,590,687	1,281,960	1,208,920	−73,040
Port administration	270,468	315,876	300,835	−15,041
Subtotal, operations, maintenance, and transportation service	2,009,821	1,803,143	1,707,871	−95,272
IV. General administration:				
Audit office	9,439	20,716	20,067	−649
Administrative services	390,501	505,922	524,097	+18,175
Executive office operations	13,110	20,596	20,596	0
Personnel	29,358	48,063	46,830	−1,233
Subtotal, general administration	442,408	595,297	611,590	+16,293
Total, operating costs only	7,125,912	7,805,539	7,730,014	−75,525
V. Construction	358,000	0	4,126,940	4,126,940
Subtotal, grants	7,483,912	7,805,539	11,856,954	4,051,415
Less:				
Local revenues	2,416,000	2,756,100	2,868,954	+112,854
Balance of excess revenues and savings from fiscal year 1964 and fiscal year 1965	----------	1,254,439	----------	−1,254,439
Electric utility amortization	----------	----------	140,000	+140,000
Total	2,416,000	4,010,539	3,008,954	−1,001,585
Net grants required	5,067,912	3,795,000	8,848,000	5,053,000
Total, direct appropriation and grants	5,314,001	4,093,000	9,149,000	5,056,000

3. AMERICAN SAMOA

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(a) Governor's office	$176,000	$190,000	+$14,000
(b) Legislative expenses	31,000	31,000	
(c) Chief justice and high court	91,000	80,000	−11,000
(d) Grants	3,795,000	8,848,000	+5,053,000
Total estimate	4,093,000	9,149,000	+5,056,000

The estimate for fiscal year 1967 for the Government of American Samoa is $9,149,000. This represents an increase of $5,056,000. The two major factors causing this increase are in the construction program where the increase required is $4,126,940 requested to finance the programs approved in fiscal years 1965 and 1966 but underfinanced at the time. That amount must be added to the required funds for the fiscal year 1967 program. In "Revenues," which reflect a decrease of $1,001,585 in fiscal year 1967, the decrease is due to the nonrecurrence of available excess revenues and accumulated savings from prior years budgeted in fiscal year 1966 as a reduction in "Grants" required in fiscal year 1966.

The island of Tutuila is the largest in the group of seven islands that constitute the territory of American Samoa. The island is divided into the eastern and western with the third, or what is known as the Manu'a district, comprised of three islands about 70 miles eastward. The seat of government is located in the bay area of almost landlocked Pagopago Harbor. The harbor is surrounded by towering mountains. Aunu'u Island is located at the southeastern tip of Tutuila, and the islands of the Manu'a district are comprised of Ta'u, Ofu, and Olosega. An unihabited island eastward of the Manu'a group is Rose Island, while 240 miles north lies Swains Island, also part of American Samoa. All the islands comprise 76.1 square miles of land, largely mountainous. Heaviest population is located in the bay area on the south side of Tutuila. The population of American Samoa in the last official census taken in 1960 was 20,051. In addition, over 5,000 aliens are also presently in American Samoa, primarily from Western Samoa, Tonga, and Niue Islands.

The government is divided into three branches, the executive, legislative, and judicial. Funds for expenses that are involved in the administration of the government are derived from a grant appropriated by the Congress of the United States and supplemented from local revenues. Funds requested for each branch of the government are justified as follows:

A. Direct appropriations

(a) Governor's office:

Fiscal year 1966	$176,000
Fiscal year 1967	190,000
Increase	14,000

A total of $190,000 is required for the Office of the Governor of American Samoa in fiscal year 1967. The original fiscal year 1966 request was reduced $10,535 due to the anticipated carryover of available savings from 1965 which will be used to augment the appropriation in fiscal year 1966. Of the $14,000 increase indicated above, $10,535 represents the reduction in 1966 funds as a result of the carryover available. There is no increase in personnel; however, "Personal services" costs increase $7,726 for regular increments and a slight reclassification of temporary Samoan employees. "Transportation and travel" show a net decrease of $1,998; all other object classes remain the same except for a $2,000 decrease in equipment, due to nonrecurring requirements this fiscal year.

The duties of the Governor as Chief Executive of the territory include supervision of the various agencies and instrumentalities of the Government of American Samoa and general direction of all departments of government. As the Chief Executive, he also formulates and executes territorial policies, subject to the approval of the Secretary of the Interior. All resolutions and bills that pass through the Legislature of American Samoa are presented to the Governor for approval or veto. Other duties of his office involve acting on behalf of other U.S. Federal agencies, such as the Passport and Visa Division of the Department

of State, and maintenance of contact with other Federal agencies through the Department of the Interior. The Governor is assisted by the Secretary of American Samoa in performing the various executive tasks. In addition, the Secretary serves as Acting Governor during any temporary absences of the Governor from the territory.

(*b*) Legislative expenses:

Fiscal year 1966	$31,000
Fiscal year 1967	31,000
No change	-------

The American Samoan Legislature includes the senate and house of representatives meeting in a major session early each calendar year and also in special sessions when the need arises. Such sessions are usually convened by order of the Governor after due consultation with the senate president and speaker of the house.

The senate has 15 members and the house of representatives totals 18. Under the current constitution senators are elected to office in accordance with Samoan tradition, through the majority opinion of the Samoan village councils. Each of the three districts provide five senatorial representatives. Members of the house are elected by popular vote, using the secret ballot. The current method is election of one representative from each county except from the more heavily populated ones. One in the bay area of the eastern district has three and one county in the western district has two. Swains Island is represented by a delegate without vote in the house. Both the senate president and speaker of the house are elected by their associates. The 1960 constitution allows members to receive a maximum of $300 yearly in salary.

(*c*) Chief justice and high court:

Fiscal year 1966	$91,000
Fiscal year 1967	80,000
Decrease	11,000

The sum of $80,000 is required for expenses in the office of the chief justice. The judicial system is comprised of a high court and five district courts. The former, with jurisdiction through the islands has an appellate, a trial and a probate division. Appeals may be taken from the district courts and the trial and probate divisions of the high court to the appellate division of the high court. The judicial branch of the government is under the administration and supervision of the Chief Justice of American Samoa. By constitutional provision, the judicial branch is independent of the executive and legislative branches. Two U.S. justices, the chief justice and the associate justice are assisted by four Samoan judges. Two temporary Samoan judges also sit on the courts occasionally. Samoan judges sit on all courts with the exception of the probate division of the high court.

The high court has a clerk, deputy clerk, two court clerks and a process server, who is also a court clerk. These same officials serve the district court for the first district, each in the same capacity as he serves the high court. Each of the district courts for the second through fifth districts has a clerk and a marshal. The clerk of the high court serves as court reporter and is also registrar of titles, registrar of vital statistics, secretary of the land commission and archivist for the Government. He and his deputy issue marriage licenses and perform the functions normally performed by a county recorder elsewhere in the U.S. The clerk of the high court is the custodian of land and matai name records, vital statistics records, marriage records and all court records. The deputy clerk of the high court and the court officer are the official interpreters for the high court and the district court for the first district.

(B) Grants

I. HEALTH, EDUCATION, AND WELFARE

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(1) Samoan information			
(2) Department of education	$3,333,547	$3,333,547	
(3) Department of medical services	1,324,235	1,307,774	−$16,461
(4) Public defender	10,909	10,909	
(5) Department of public safety and legal affairs	291,463	309,275	17,812
(6) Local judicial	10,174	12,289	2,115
(7) Civil defense	7,020	7,008	−12
Total, health, education, and welfare	4,977,348	4,980,802	+3,454

(1) Samoan information: This function has been reorganized and integrated with the department of education beginning in fiscal year 1966. See (2) below.

(2) Department of Education:

Fiscal year 1966	$3,333,547
Fiscal year 1967	3,333,547
No change	

With the addition of three ETV channels for the secondary system, the completion of 23 consolidated elementary schools and two new high schools in operation in fiscal year 1967, the basic plant will be completed. The department of education has undergone a complete reorganization and with the admittance of ninth-grade students into the secondary education system in 1966, the staffing requirements have been determined. The office of Samoan Information was incorporated into the department and the sum of $42,748 authorized by Congress for this activity last year is included in the above figure. Fiscal year 1966 staffing of the department is 467 Samoan and 157 statesiders on contract, with fiscal year 1967 planned for a reduction of six Samoan and 16 stateside positions. "Personal services" shows an increase of $72,307 of which $10,210 is a result of the minimum wage law passed by the legislature and the balance is $5,597 salary increments for Samoan employees and $56,500 terminal leave of contract employees. The increase of $2,775 in "Personnel benefits" is a result of the increase in social security tax rates. "Travel and transportation of things" has an increase of $101,155 over the previous year due to repatriation of 35 stateside personnel (16 in TV and 19 in elementary administration). "Rent, communication and utilities" has a small increase of $1,841 based on a projected electric usage. Printing has increased $660. A sharp decrease of $25,000 in "Other services" is primarily due to reduction of teacher trainees and reassessment of costs in TV for freight shipment of film and repair costs of studio equipment. "Supplies" show a decrease of $75,226 due to closer economy and planning in per pupil enrollment costs; "Equipment" is reduced by $32,142 due to nonrecurring requirements. On balance, the department expects to effect approximately $45,000 of further economies in fiscal year 1967 in order to operate within the fiscal year 1966 allowance, which is maintained here as a ceiling.

(3) Department of Medical Services:

Fiscal year 1966	$1,324,235
Fiscal year 1967	1,307,774
Decrease	16,461

A total of $1,307,774 is required for "Medical services" in fiscal year 1967. The decrease from 1966 of $16,461 results from decreased utilities costs and reduction in equipment requirements. Personnel requirements for 1967 are unchanged and remain: 25 United States and 325 Samoan employees. Outpatient services show a continued increase having risen from last year's 55,000 to 60,062 for 1965. Selection of high school graduates only for nurse training is showing results in better educated candidates to eventually replace older nurses who will retire due to age or return to the home. "Personal services" show a net increase of $29,802 due to incremental salary increases and some regrading of key personnel. "Social security" is increased $6,792 because of the rate increase in 1966.

"Travel and Transportation of Things" has decreased $7,704 based on repatriation demands for the year. "Rent, communications and utilities" costs are decreased $13,670. "Other services" show a small increase of $575 due to technical services required. "Supplies and materials" have a decrease of $14,800, primarily in the public health program. Equipment has decreased by $17,161 due to anticipation of the new hospital with the concurrent replacement of all equipment worn out and uneconomical to repair.

(4) Public defender:

Fiscal year 1966	$10,909
Fiscal year 1967	10,909
No change	

One Samoan lay counsel and a clerk comprise the permanent staff of this office, with legal services from off-island generally obtained in the past in all criminal cases prosecuted here.

(5) Department of public safety and legal affairs:

Fiscal year 1966	$291,463
Fiscal year 1967	309,275
Increase	17,812

A total of $309,275 is required in fiscal year 1967 to provide minimal police and fire protection, immigration registration and control, prison services, and for the office of the Attorney General.

Just prior to the close of fiscal year 1965 a new Commissioner of Public Safety was hired on a loan basis from the Honolulu Police Department. He is in the process of completely reorganizing the Office of Public Safety, which includes the police and fire departments and the prison. As a result of the reorganization and improved methods to be obtained, much more is required in the area of public safety than has previously been requested. Services required will increase greatly upon the opening of the new hotel which will bring with it an immediate increase in the island population.

"Personal services" increase of $75,607 is primarily due to reclassification of police positions; heretofore all policemen entered the service at the minimum wage figure which failed to attract the type of personnel required for the important function.

"Personnel benefits" have increased $6,332 based on new social security rates. "Travel and transportation of things" has decreased $2,740; "Rents, communications, and utilities" has a slight increase of $166 based on electrical costs; "Printing" has decreased $250 and "Other services" have been reduced $2,250; by having a highly qualified police officer at hand for training purposes, the requirement for outside assistance is obviated. "Supplies" show a slight increase of $150, based on current needs; "Equipment" has a sharp decrease of $11,720 due to nonrecurring requirements.

The Attorney General acts as Legal Officer in American Samoa and serves as the Director of the Department of Public Safety and Legal Affairs with duties that include immigration matters, and incorporation of all amendments into the Code of American Samoa for publication.

During the past year 407 complaints, other than traffic, received a full investigation, and 126 persons were charged, 58 with felonies and 68 with misdemeanors. Of the 126 charged, 93 were convicted. This represents an increase of 33 percent in the number of investigations required and performed. There were 911 traffic cases prosecuted during the year; 108 cases were nolle prosequi; there were 691 convictions; and 112 found not guilty. This represents an increase over the previous year of 47 percent in traffic cases handled. The average prison population during the year was 35, representing a decrease of approximately 10 percent.

Economies in the neighborhood of $50,000 will have to be achieved in order to accommodate this expanded service within an increase limitation of $17,812.

(6) Local judicial:

Fiscal year 1966	$10,174
Fiscal year 1967	12,289
Increase	2,115

An increase of $2,115 is required for a slight upgrading in the salaries of the Samoan associate justices along with an increase required for social security costs totaling $135. This budget also includes the salaries of clerks and marshals of the four outlying district courts. During the fiscal year ending June 30, 1965, 988 persons were tried on criminal charges in the various courts and 747 civil cases were decided, an increase of 39 percent over 1964.

(7) Civil defense:

Fiscal year 1966	$7,020
Fiscal year 1967	7,008
Decrease	12

Cost of operation of this division is about the same this year with no changes contemplated in personnel. One-half of the expenses involved are borne by the national civil defense program under Public Law 920, 81st Congress, as amended, and Public Law 85-606 which amended portions of Public Law 920, together with Executive Order 10925 of August 1, 1961. The functions of this division, a staff activity under the Governor, is similar to defense agencies in the United States; i.e., organization and training of local personnel in radiological monitoring, manning of shelters, and first aid. The location of suitable shelters is also a task of this division. The director directs operations as required during any local disasters.

II. ECONOMIC AND INDUSTRIAL DEVELOPMENT

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(1) Department of Agriculture	$338,601	$338,601	
(2) Local government	71,150	71,150	
(3) Office of tourism	20,000	20,000	
Total, economic, and industrial development	429,751	429,751	

(1) Department of agriculture:

Fiscal year 1966	$338,601
Fiscal year 1967	338,601
No change	

An additional 11 new Samoan positions are needed in the insect pest and rodent control sections and quarantine officers of the Entomological Division. These additional costs plus incremental salary increases and terminal leave total a $29,780 increase for personal services. Social security costs increased $2,421 due to increased rates. Travel and transportation costs are up $13,180 due to repatriation of contract personnel not required last year along with the transportation of the new personnel. Utility costs have increased by $3,370. The cost of other services has increased $13,800 primarily to provide the government of American Samoa contribution to the U.S. Fish and Wildlife Bureau of Commercial Fisheries program wherein we are required to fund 25 percent of a total of $51,600 for this program in American Samoa. Supplies and material cost has increased $16,216 for the supplies required in the rodent and pest control program. This program is a necessity in the territory if we are to promote the health of the Samoans and protect the health of the tourists. Equipment costs are increased $3,980 for refrigeration equipment used in the sales of farm produce.

The Department of Agriculture is comprised of the Director's Office, experimental (production) farm, Extension Service, Entomological and Fisheries, and Forestry Divisions. There will be an increase in agriculture revenues totaling $66,900 (see table 1) due to increased sales of produce from the production farms. A total of 90 acres will be under production in fiscal year 1967 which is an increase of 42 acres. A large part of this increase will be "sold" to the school lunch program in American Samoa. This department is also responsible for quarantine measures, and for developing improved fishing methods among the Samoans and for encouraging them to bring their catch to the fresh fish market in the new marketplace. The forestry section is working in conservation and teaching efficient use of exotic hardwoods and timber for construction as well as in local handicrafts.

To the extent that the increased program is implemented, the Department of Agriculture will have to find means of absorbing up to $82,000 in increased costs.

(2) Department of local government:

Fiscal year 1966	$71,150
Fiscal year 1967	71,150
No change	

The $71,150 available in fiscal year 1966 is requested again for the local government operations in fiscal year 1967.

Personal services show a net decrease of $587. Social security increases are $324. Travel has a slight increase of $300 and utilities are now up $561 based on current electric usage. Other services are increased $2,100 for election costs and supplies have a decrease of $50. Employees in this department are the Secretary of Samoan Affairs, a Samoan with two specially trained Samoan assistants and a clerical staff. Also included are three district governors and 14 county chiefs, and the remaining 60 are village mayors or "Pulenu'us". The larger villages also have policemen or "leoleos". Acting as a link between the Samoan chiefs and the people, this department serves in all village, county and district matters with a goal of achieving a self-sustaining and self-reliant system of local government. The department is responsible for the taking of a census and handling regular and special elections. It will be required to absorb some $2,500 in increased costs for its activities.

(3) Office of tourism:

Fiscal year 1966	$20,000
Fiscal year 1967	20,000
No change	

With the planned opening of the new 100-room hotel for December 1 and the announced increase in air service with the inauguration of jets by Air New Zealand as well as increased flights by Pan American, additional tourist service activity will have to be provided in fiscal year 1967 at the fiscal year 1966 appropriation level.

III. OPERATION, MAINTENANCE AND TRANSPORTATION SERVICES

	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
(1) Communication	$205,307	$198,116	−$7,191
(2) Department of public works	1,281,960	1,208,920	−73,040
(3) Department of port administration	315,876	300,835	−15,041
Total, operation, maintenance & transportation services	1,803,143	1,707,871	−95,272

(1) Communication:

Fiscal year 1966	$205,307
Fiscal year 1967	$198,116
Decrease	7,191

A total of $198,116 is required to provide the Government of American Samoa with communication service in fiscal year 1967. These services include wireless messages, telex service, oversea telephone, teletype service, ship-to-shore radio and point-to-point interisland communication. No changes are contemplated in personnel. They remain: 4 contract and 32 Samoan employees. "Personal services" reflects an increase of $4,290 due to repatriation of one contract employee and routine step increases of personnel. Social security rates having risen, an increase of $753 is needed. "Travel and transportation of things" shows a net decrease of $380. "Rent, communications and utilities" reflects an increase of $10,116 due to increased communication operations and heavier payments to RCA Communications, Inc., American Telephone & Telegraph and electric power consumption. "Other services" show a decrease of $20,218 due to greatly reduced reimbursement to FAA for service charges for integrated use of facilities. "Supplies" indicates an increase of $2,200 for increased need of supplies because of increased traffic loads and increased circuits and equipment.

Integration with FAA facilities has been determined feasible without the addition of the number of technicians at the FAA site originally thought necessary. No funds for new equipment are included since most of the local requirements are being met through FAA integration of facilities. Also there has been some success in the use of the GSA excess property program wherein high-value electronic equipment has been obtained to activate some of the more important communication circuits not included in the integration program, with only the cost of shipping expense involved. An anticipated savings in communications construction funds may be realized in fiscal year 1967 when the cost of the FAA integration of facilities is finally determined.

(2) Department of public works:

Fiscal year 1966	$1, 281, 960
Fiscal year 1967	1, 208, 920
Decrease	73, 040

A decrease of $73,040 is primarily due to a $65,777 decrease in equipment needs for this fiscal year. A total of 17 stateside and 372 Samoan positions are required for fiscal year 1967. U.S. employee salary costs have increased by $8,622 due to terminal leave and some salary increases necessary to obtain skilled personnel required. A net increase of $6,700 for Samoan salaries is mainly from incremental salary costs. Social security costs have increased $4,628 due to tax rates becoming higher this fiscal year.

"Travel and transportation of persons and things" has decreased $11,400. Utility costs have decreased $4,951 and are based on monthly electrical costs for operations by this department. Printing costs have decreased $2,250. Supplies and materials are decreased $8,612 based upon anticipated reduction in requirements for materials and supplies to maintain repairs to government buildings. Equipment has decreased $65,777 due to nonrecurring requirements.

The public works department supervises the entire construction program of the government as well as the maintenance work of its divisions connected with work on roads, buildings, grounds, vehicles, water supply, and the telephone system. Divisions in this department are comprised of the office of the director, lands and survey, maintenance and repair and the land transportation and equipment divisions. The marine railway and yard division is also under its supervision as is the utilities division. The latter operate on an industrially funded basis. See tables 1(3)A and 1(4).

(3) Department of port administration:

Fiscal year 1966	$315, 876
Fiscal year 1967	300, 835
Decrease	15, 041

A decrease has been made possible largely through lessening costs for travel and transportation of things and a reduction in supply requirements. The latter is mainly in the office of the director wherein supply expenses for harbor mooring materials have been reduced. The transfer of the Hugh M. Smith to the Philippines via the Agency for International Development will also enable this department to hold down operating costs and the crew will concentrate on operating the YF 340 during peak hauls of construction equipment for Manu'a.

No increase in personnel is anticipated. The department will continue to function with 5 contract and 71 Samoan employees at a net savings of $1,565 due to nonrecurrence of repatriation of personnel.

"Personnel benefits" are $1,091 higher due to social security tax increase for this year. A total of $6,400 is saved in "Travel and transportation of things"; $1,600 in "Rent, communications and utilities." "Other services" is increased by $3,000 to cover repair work and mooring maintenance and drydock costs for the YF 340. Supplies are reduced in cost by $10,867 compared to the previous year and equipment has a decrease of $1,200.

This department has the responsibility for all matters pertaining to the operation of the port of Pago Pago as well as the Pago Pago International Airport. All customs regulations are enforced by this department along with baggage inspections. All interisland traffic and small craft requirements of the government along with all port security are under the cognizance of the department of port administration.

IV. GENERAL ADMINISTRATION

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(1) Audit office	$20,716	$20,067	−$649
(2) Department of administrative services	505,922	524,097	+18,175
(3) Executive office operations	20,596	20,596	
(4) Personnel office	48,063	46,820	−1,233
Total, general administration	595,297	611,590	+16,293

(1) Audit office:

Fiscal year 1966	$20,716
Fiscal year 1967	20,067
Decrease	649

A decrease of $649 in this activity is possible due to savings in equipment purchases this fiscal year. Personal services shows a net increase of $59. The salary of the U.S. auditor position is raised by $1,000 in order to attract a well-qualified auditor for this position. The additional cost was offset by reduction of one local typist position. Social security costs are raised $142 based on the increased rates. All other objects remain the same except equipment which is reduced by $850 due to nonrecurring requirements of capitalized items this year.

The Audit Office conducts internal audits of all phases of Government finance and management and also reviews methods and systems in current operation. This activity makes its reports directly to the Governor of American Samoa.

(2) Department of administrative services:

Fiscal year 1966	$505,922
Fiscal year 1967	524,097
Increase	18,175

Duties of the administrative services department involve the fiscal and financial accounting of all government activities, collection of all revenues, disbursements of both Federal and Territorial funds as well as the complete budget process and the management of all business type activities which include general supply, construction supply, land transportation, print shop, liquor store and a restaurant activity. The department also acts as the business office of the government and administers the Samoan Income Tax Code. The U.S. Income Tax Code as adopted by the Samoan Legislature is in effect here with some changes only for local conditions. The volume of work and services required has continued to increase greatly with the expansion of the local economy to include the administration of laws to provide for uniform standard grades for building materials sold to the public and the uniform weights and measures act.

(3) Executive office operations:

Fiscal year 1966	$20,596
Fiscal year 1967	20,596
No change	

There is no increase in the cost of operation of this division during the current year. Expenditures of this division cover the expenses of operation of Government House and the executive office operations related to visiting dignitaries.

(4) Personnel office:

Fiscal year 1966	$48,063
Fiscal year 1967	46,820
Decrease	1,233

A decrease of $1,233 results primarily from savings in travel due to nonrepatriation of personnel this fiscal year. Personnel requirements remain the same and personal service costs show a net increase of $1,222 due to normal step increases. Social security costs are $315 higher. Travel and transportation of things has a net decrease of $3,050. Printing is increased $300 due to requirements of recruitment brochures. Equipment is reduced by $120 due to nonrecurring needs.

Duties of the Personnel Office involve procurement and processing of all personnel employed by the government of American Samoa. This includes all matters pertaining to personnel promotion, transfer, discharge and advice on social security rights and coverage. Documents relating to travel and transportation are usually prepared by this office.

V. CONSTRUCTION

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(1) Water development	$180,000	$200,000	$20,000
(2) Sewerage and sanitation development	250,000		250,000
(3) Harbor development	110,000	157,500	47,500
(4) Building construction and renovation	113,880		113,880
(5) Samoan market and distribution center	96,080		96,080
(6) Land development	25,000		25,000
(7) Secondary school system	494,480		494,480
(8) Hospital equipment		500,000	500,000
(9) Land purchase program		500,000	500,000
Subtotal—construction	1,269,440	1,357,500	88,060
Add under-financed fiscal year 1965 and 1966		2,769,440	2,769,440
Appropriation request	1,269,440	4,126,940	2,857,500

General

In fiscal year 1965, the Congress approved a construction program for American Samoa totaling $2,858,000 and in 1966 a program of $1,269,440. However, due to slippage anticipated in actual construction and the availability of excess cash caused thereby, the Congress "underfinanced" the budget estimate in these years by $2,500,000 and $1,269,440, respectively, but authorized construction of these programs to the extent of the available cash. Construction on all the approved major programs is moving along very well. Construction of the hospital will be beginning shortly and will be in full swing in February 1966. The sewer and sanitation facility is being constructed and work continues on the main and secondary roads. The primary phase of the water program is virtually completed. We have the capacity to construct and/or the ability to obligate funds economically for all of the approved programs through June 30, 1967.

(1) Water development:

Fiscal year 1966	$180,000
Fiscal year 1967	200,000
Increase	20,000

The first and primary phase of major improvements to the water system in the bay areas and vicinity was authorized in fiscal year 1964 at $1 million. A total program of $2,500,000 was planned to provide a storage capacity for an 8-day water supply in the bay area along with replacement of the existing prewar water mains. Storage capacity and mains are planned from the Tafuna area to Breakers Point and separate water systems are being developed for consolidated elementary schools and high school locations. These outlying systems are being coordinated with village requirements, with the individual villages funding their portion separately and in most cases a joint system constructed. In fiscal years 1965 and 1966, funds were approved in the amount of $240,000 and $180,000 respectively. These funds were programed for use in connection with the Tafuna area system and hookup to the main system constructed in the bay area. The amount requested in this budget will complete the funding of the necessary water systems, catchments, and distribution required for the consolidated elementary schools and the high schools. Work on these systems progressed throughout 1965 and 1966, using the funds made available in the overall program. The primary system of the main and storage facilities has been let to commercial contract; however, part of the funds requested here are required to complete the rain storage facility, Vaipito Reservoir, which is being constructed by force account.

(2) Sewerage and sanitation development:

Fiscal year 1966	$250,000
Fiscal year 1967	None
Decrease	250,000

No additional funds are requested for the sewerage and sanitation program in fiscal year 1967. The entire system was reengineered resulting in a single treatment plan and an outfall near Breakers Point. The sewerage collection system from Fagatogo to Breakers Point is being installed as a first phase of construction which will be followed by the connection with the Faga'alu village system, the location of the new hospital. The large second-phase construction will circle the bay area, bypassing the cannery industrial complex. The present plan is for the canneries to treat and handle their own waste. Construction capabilities are presently funded through fiscal year 1967 and therefore no additional funds are requested at this time pending receipt and valuation of the design for the entire system.

(3) Harbor development and land reclamation:

Fiscal year 1966	$110,000
Fiscal year 1967	157,500
Increase	47,500

The budget estimate of $157,500 is required for interisland terminal improvements, for extension of the receiving shed and customs areas, and for small T piers for interisland boats and the sea search and rescue Coast Guard 93-footer stationed in American Samoa. There has been a need for some time to improve the area and facilities on the dock which service the interisland vessels and to provide for an adequate place for the Coast Guard cutter stationed in American Samoa. The very old World War II termite-ridden harbor craft shed and customs shed will be removed and replaced in this renovation. This area will also serve as the interisland passenger terminal area with space for immigration, quarantine, and fumigation spaces, and it will eliminate conflict with growing interisland small boat service. This is a portion of the continuing overall program planned for the improvement of the Pago Pago harbor facilities.

(4) Building construction and renovation:

Fiscal year 1966	$113,880
Fiscal year 1967	None
Decrease	113,880

Nonrecurring.

(5) Samoan market and distribution center:

Fiscal year 1966	$96,080
Fiscal year 1967	None
Decrease	96,080

Nonrecurring.

(6) Land development:

Fiscal year 1966	$25,000
Fiscal year 1967	None
Decrease	25,000

In fiscal year 1966 Congress made available $25,000 for area planning feasibility and engineering of the Matai Ridge area.

It is not possible at this time to determine the requirements for the development of this area and due to priorities and capabilities, further funding of this item is being deferred to a future year.

(7) Secondary school system:

Fiscal year 1966	$494,480
Fiscal year 1967	None
Decrease	494,480

The Leone High School (western district) is completed and in operation this fiscal year. The construction of the Manua High School will continue for the next several months.

In fiscal year 1966 the Congress funded the final high school facility for the eastern district which will complete the basic facilities for secondary education in a central location for Samoa's four major population areas; Pago Bay area,

western district, the eastern district and Manua district. Present indications of costs of the completed Leone facility and construction at Manua indicates that additional funds may be required in this construction; however, it is not possible at this time to estimate the amount.

(8) Hospital equipment:

Fiscal year 1966	None
Fiscal year 1967	$500,000
Increase	500,000

In fiscal year 1964, the Congress approved the construction of a new medical facility (hospital and nurses quarters) in American Samoa totaling $3 million to replace the old military termite-ridden barracks now being used as a hospital. Construction of the nurses quarters is underway based on a local design and the hospital architects at this time have furnished necessary preliminary information to begin work on the foundation and the precast concrete bents which are being designed in the construction of the hospital. At the time we requested the funds for the construction of the medical facility, we advised that it was a conservative figure and did not include the cost of equipping the new hospital. The equipment cost is estimated at $500,000. With the completion of this medical center, American Samoa will be in a position to lead the islands of the South Pacific in medical advancement, resulting in a lower infant death rate, the eradication of diseases, and the improvement of the general health of these areas.

(9) *Land purchase program:*

Fiscal year 1966	None
Fiscal year 1967	$500,000
Increase	500,000

In May 1965, a survey was conducted in American Samoa by top personnel of the National Park Service and the Bureau of Outdoor Recreation with a view to initiating territorial parks and outdoor recreation facilities in American Samoa. As a result of this survey, eight major areas were recommended for public protection under a territorial park program. While no specific threat to the proposed park areas is immediately discernible, it is axiomatic that on a limited area island future economic and population needs will present a threat to these areas. Land costs heretofore have remained rather stable and reasonable; however, there is growing evidence of rising land prices. Two-fifths of all American Samoa consists of wooded uplands, and it is planned to preserve the ruggedness and natural beauty of these areas along with developing and preserving ocean frontage, large rock outcroppings surrounded by coral reefs, coves, blow hole sites, and high plateaus with trails and overlooks. The acquisition of certain land on Swains Island is also contemplated.

On March 8, 1965, Public Law 9-6 titled "Territorial Parks and Recreation" was enacted by the Legislature of American Samoa for the purpose of developing a territorial parks system in American Samoa. It is to carry out the intent of this legislation that this request is made.

AMERICAN SAMOA

Statement of revenue by sources

	Actual, 1965	Estimate, 1966	Estimate, 1967
Department of agriculture:			
Experimental farm	$24,657	$65,800	$134,000
Sale of livestock	6,884	7,000	5,000
Other	4,402	3,300	4,000
Total	35,943	76,100	143,000
Department of administrative services:			
Income tax:			
Individual	600,399	625,000	650,000
Corporate	441,858	500,000	536,000
Rents and leases	143,693	160,000	170,000
Territorial liquor store	78,489	80,000	90,000
Land transportation	31,657	30,200	32,000
Print shop		3,000	16,730
Profit on sales	14,588	20,000	15,000
Other	50,308	33,000	5,000
Interest on time savings deposits	380,696	60,000	
Rainmaker and Atauloma hotels	18,700	74,800	
Total	1,760,388	1,586,000	1,514,730
Communications:			
Radiograms	34,144	58,000	50,000
Overseas telephone	25,414	25,000	30,000
Total	59,558	83,000	80,000
Department of education: Miscellaneous	1,185		2,000
Department of medical services:			
Hospital care and nursing	27,550	31,000	30,000
Laundry services	3,706	3,500	5,000
Other	12,210	7,000	14,000
Total	43,466	41,500	49,000
Department of public works:			
Electric utilities	436,913		90,724
Water sales	19,037	25,000	25,000
Marine railway		5,000	20,000
Telephone	12,155	20,000	20,000
Other	532	500	500
Job orders, local		30,000	10,000
Total	468,637	80,500	166,224
Department of port administration:			
Import and export duties	522,075	600,000	600,000
Piers and docks	72,248	75,000	80,000
Customs and harbor charges	86,311	100,000	100,000
Airport tariffs and leases	7,793	22,000	24,000
Harbor craft operations	20,758	12,000	24,000
Other	2,381	3,000	3,000
Total	711,566	812,000	831,000
Miscellaneous other sources:			
Licenses and certificates	45,942	45,000	50,000
Travel permits	11,525	15,000	15,000
Court fees and fines	7,203	10,000	10,000
Other taxes and fees	7,962	7,000	8,000
Total	72,632	77,000	83,000
Grand total	3,153,375	2,756,100	2,868,954

4. CANTON ISLAND ADMINISTRATION

Estimate, 1966	$17,000
Estimate, 1967	
Increase or decrease	−17,000

Funds are no longer required for this activity.

5. General Administration

Estimate, 1966	$377,000
Estimate, 1967	398,000
Increase or decrease	+21,000

The $21,000 increase will provide $18,000 for a resources planning assistant at the GS–15 level, and $3,000 for periodic salary increments. The present staff assists in the administration of the accelerated and expanded programs for the territories and the trust territory and provides numerous services for these activities in Washington.

Estimated expenditures for this activity are distributed as follows:

Personnel compensation and benefits	$360,000
Contractual services and supplies	36,500
Equipment	1,500
Total estimate	398,000

6. Servicing Alaska Public Works Loans

Estimate, 1966	$18,000
Estimate, 1967	18,000
Increase or decrease	-------

Public Law 88–229 approved December 23, 1963, authorized the Secretary of the Interior to investigate claims for relief by recipients of APW projects and, when warranted by the circumstances, to compromise or release any claim or obligation held by him under the Alaska Public Works Act. Pursuant to the provisions of that public law, the Secretary has delegated his authority to the Administrator of the Housing Home Finance Agency, which has particular expertise in connection with such matters.

The $18,000 requested for the budget year will cover reimbursement to HHFA for estimated expenditures in discharging the functions delegated.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
PROGRAM AND FINANCING				
Total obligations	$17,808,686	$17,188,314	$15,440,000	−$1,748,314
Unobligated balance available, start of year	----------	−7,536,314	−4,927,000	+2,609,314
Unobligated balance, end of year	+7,536,314	+4,927,000	----------	−4,927,000
Appropriation	25,345,000	14,579,000	10,513,000	−4,066,000
OBLIGATIONS BY OBJECTS				
11 Personnel compensation	808,339	891,111	840,096	−51,015
12 Personnel benefits	51,115	51,889	51,904	+15
21 Travel and transportation of persons	57,192	67,900	53,772	−14,128
22 Transportation of things	2,650	10,475	8,175	−2,300
23 Rent, communications, and utilities	21,918	22,375	25,575	+3,200
24 Printing and reproduction	11,086	13,800	13,300	−500
25 Other services	24,124	34,684	33,720	−964
26 Supplies and materials	13,628	16,919	14,329	−2,590
31 Equipment	7,766	11,350	5,129	−6,221
33 Investments and loans	9,739,402	4,585,000	3,312,000	−1,273,000
41 Grants, subsidies, and contributions	7,071,466	11,482,811	11,082,000	−400,811
Total obligations	17,808,686	17,188,314	15,440,000	−1,748,314

1967 Budget Request

Chairman Hayden. Mrs. Van Cleve, would you please present your statement in support of the estimate to the committee?

Mrs. Van Cleve. Thank you, Mr. Chairman.

We seek a total of approximately $28 million for the fiscal year 1967 for the Office of Territories and its constituents. This is a sum which

is roughly $4 million less than the amount appropriated for the current fiscal year.

GUAM REHABILITATION PROGRAM

We can divide that $28 million into four principal areas: First, the Guam rehabilitation program, for which we this year ask for very little new money, only $608,000.

As you will hear shortly, we also, however, seek the reprograming of somewhat over $4.5 million, funds which have been appropriated in the past for urban renewal, but which will not at this time be used for that purpose.

If that sum is reprogramed and if there is added to it the new money which we seek it will be possible for Guam to proceed with its rehabilitation program with particular regard to water, sewer, and school projects in the fiscal year 1967.

To testify as to the details of the Guam rehabilitation program we have here this morning Governor Guerrero from Guam and the assistant secretary, Mr. Ingling.

AMERICAN SAMOA

Secondly, with respect to American Samoa, we seek approximately $9 million. This is about $5 million over that which was appropriated for the present year. The explanation is largely that projects which have been approved in prior years and which were authorized to be commenced without full financing now do require the full financing.

To present the details concerning American Samoa there are present this morning Governor Lee of Samoa; the secretary of Samoa, Mr. Owen Aspinall; and the director of administrative services from the Government of Samoa, Mr. Screen.

TRUST TERRITORY

Thirdly, we seek for the trust territory a sum which is very close to the maximum permitted by law. As you are aware, the statutory ceiling currently upon trust territory appropriations is $17.5 million. We will attempt to justify to you an appropriation for fiscal year 1967 of $17,494,000. This is the sum which will not permit very much expansion in services and facilities in the trust territory. It will permit largely the perpetuation of the current situation.

MISCELLANEOUS

The last category can best be described as miscellaneous. It represents a total sum of substantially less than $1 million. It involves the Office of Territories in Washington, the support of the Governors' offices in Guam and the Virgin Islands, which under the Organic Acts are required to be financed by Federal funds, the Virgin Islands Comptroller, and also a very small amount for the liquidation of the Alaska Public Works program.

In conclusion, I would note that the Virgin Islands Corporation which we represented last year as very close to termination, will for all practical purposes be liquidated as of June 30 of this year.

Accordingly, we seek neither funds nor program authority for the Virgin Islands Corporation for the fiscal year 1967.

That, Mr. Chairman, concludes my summary of our appropriation.

Closing of Federal Aviation Agency on Canton Island

Chairman Hayden. Before we hear from Governor Guerrero of Guam and Governor Lee of American Samoa, I have a couple of questions.

The first is, why is it not necessary in the coming fiscal year to provide funds for Canton Island administration?

Mrs. Van Cleve. The Office of Territories obtained funds for Canton Island administration in preceding years in order to sustain the cost of a schoolteacher and some additional minimal administrative costs because the Federal Aviation Agency had on Canton Island, until relatively recently, a sizable facility.

It was the responsibility of the Interior Department to provide among other things, for the education of dependents of the FAA personnel.

As of June 1 of 1965 the Federal Aviation Agency closed down its facility on Canton Island and all of its personnel have since left the island. Accordingly, there is no further need for appropriations for Canton.

Senator Young. May I ask a question?

Isn't this airport being used there at Canton Island now?

Mrs. Van Cleve. I believe it is being used by the National Aeronautics and Space Administration on a from time-to-time basis. There is almost no commercial use of the Canton air facility at this time.

Senator Young. This was a busy port for commercial lines a few years ago.

Mrs. Van Cleve. Indeed it was but, with the advent of jet air service apparently it is possible now, almost always to, overfly Canton Island and consequently the FAA concluded that it no longer needed to be maintained.

Senator Young. Do more of them land now on American Samoa?

Mrs. Van Cleve. Certainly we have increasing flights into American Samoa. I don't think it would be correct to say that it is the former Canton flights that go to Samoa. I believe the answer is simply that flights that formerly flew there are now overflying.

Senator Young. I would like to visit American Samoa again since they have an airport there. I got held over in that converted minesweeper there.

Mrs. Van Cleve. I am sure Governor Lee will be glad to extend a proper invitation for you to do so.

Senator Young. I came almost staying there until you got an airport.

Employment of Resources Planning Assistant

Chairman Hayden. The next question concerns your proposal to employ a resources planning assistant at grade GS–15. Will you detail to some extent the need for this employee and the accomplishments which you expect of him?

Mr. VAN CLEVE. Yes. As I am sure you are aware, the executive branch generally is attempting to embark upon a programing-planning-budgeting technique which differs markedly from the budgetary system which has been employed in most parts of the executive branch up to the present time. It is a technique which is complex and which is important and which we think will reveal information useful to this committee and useful to ourselves in a way the prior information has not.

You are aware I believe, too, that the Office of Territories in Washington is a very small unit. We have, counting all the messengers and secretaries, only about 30 people on our staff in Washington.

If we are to perform the highly complex, highly expert, work associated with the new planning-programing-budgeting technique we believe it will be essential to create a new position for this purpose because this is to be an exceedingly important job, really the core of the program work in the organization.

It needs to be at a high level. For that reason we propose to create a new job at that high level solely for the programing-planning-budgeting effort.

Chairman HAYDEN. We thank you for your appearance.

AMERICAN SAMOA

STATEMENTS OF H. REX LEE, GOVERNOR; JOSEPH F. SCREEN, DIRECTOR OF ADMINISTRATIVE SERVICES; OWEN S. ASPINALL, GOVERNMENT SECRETARY; MRS. RUTH G. VAN CLEVE, DIRECTOR, OFFICE OF TERRITORIES; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

PREPARED STATEMENT

Chairman HAYDEN. We will next hear from Governor Lee of American Samoa.

Governor, would you please file your written statement for the record and highlight it for the committee?

Governor LEE. Thank you, Mr. Chairman.

(The statement follows:)

It is a pleasure for me to appear again before your committee and to outline what we have accomplished to date and to explain our needs and problems in American Samoa. This committee has been very helpful in what we are trying to do in Samoa. We were delighted to have so many Members of the Congress, and particularly Senator Bible and staff of this committee, along with members of the House Appropriations Committee, Mr. Denton, Mr. Kirwan, and Mr. Reifel; plus Mr. Aspinall, chairman of the House Interior Committee and members of his committee, Mr. Taylor, Mr. Craley, Mr. White, Mr. Saylor, and Mrs. Reid come to American Samoa last December to review our projects and participate in the dedication of our new Hotel Pago Pago Intercontinental. I hope within the year to come the remaining members of this committee will have an opportunity to visit American Samoa. I think your visit was very worthwhile not only in terms of letting this committee and other Members of the Congress see how our money is being spent but we profited a great deal in being able to discuss and obtain advice on our many problems. Your visit was greatly appreciated by the American Samoa people and I am sure had a substantial impact on our neighboring islands by demonstrating U.S. interest in the development of the South Pacific.

We have made good progress since I appeared before you last year and we are moving rapidly ahead with the completion of our Manua Island group school construction. In the school year 1965–66 we are broadcasting educational television in grades 1 through 12. Our broadcasts are received without difficulty in western Samoa using the simplest of antennas. Interest in the area is very high in using these "free" broadcasts in their own educational systems.

It would have been possible to have completed more of our projects; however, we have held the importation of stateside personnel to a minimum and in many instances, this has slowed down our progress. We have been able to hold our costs down and receive the side benefit of training Samoans in the building trades.

The only new major project we are asking for in fiscal year 1967 is in the area of land acquisition for the development of a territorial park system. While no specific threat to park areas is immediately discernible it is axiomatic that on a limited area island future economic and population needs will present a threat to these areas. For this reason, we wish to move ahead and acquire the necessary sites for this program. We are requesting funds to continue projects already started and for the necessary funds to equip the hospital which should be substantially completed in the next fiscal year. We are having difficulty in completing some projects approved in past years with the amount of money previously estimated. I would like to review these problems and the status of our major programs that are underway.

Schools

Our construction program in the American Samoa elementary school system was the consolidation of 43 village schools, most of which are simple thatched fales (houses) into 26 new elementary schools specially designed for educational television; 14 of these schools have been completed and are in operation. It is tentatively planned through later consolidation and utilization of existing facilities to reduce the number of schools originally programed. Originally our costs were relatively high but we have been cutting our costs as we proceed with the other schools as our Samoan workers become more skilled and it now looks possible to complete 22 of these schools with the money allocated and reprogramed. Land title and acquisition problems have caused some delays in the remaining sites to be constructed; however, virtually all of the remaining sites have now been acquired and will be constructed and in operation for the 1966–67 school year. These elementary schools serve as community centers for adult education after normal school hours.

The new high school in the western district at Leone has been in operation since last September and the high schoool under construction on the island of Tau in the Manua district is moving along well and will be ready for operation in September of this year. We have solved the problem of landing materials in Manua through the dangerous swells over the reef; however, it is costing us more than we had estimated in the transportation of these materials even with the Samoans providing free labor in landing the materials.

We were able to keep to our construction time schedule with funds your reprogramed for the construction of the second three channels required for the secondary education system. Our educational television studio is completed and we have been broadcasting regular education programs throughout the day on the six channels since October 1, 1965.

In June of this year, high school teachers who had 1 year remaining on their contracts and who were on American Samoa during this transitional period will be returning to the States and the request for education operating funds herein reflects only the staffing required for the educational system by television as programed. Until it is possible to upgrade the Samoans' education and English language capabilities, it will be necessary for us to provide an accelerated program for advanced Samoan students and dependents of stateside employees.

Our aerial tramway which is constructed across Pago Pago Bay to the top of Mount Alava (1,700 feet) for access to the transmitter site, has been opened as a tourist attraction and on one day recently when the former SS *America* (now the SS *Australia* tourist ship was in port, we transported 502 tourists to the top of the mountain with a gross revenue of over $1,200 for that day. The aerial tramway should prove to be an outstanding attraction in the development of tourism.

Airport

We have substantially completed our jet airport, terminal and service buildings and other auxiliaries that go to make an airport functional although we will have to make additions as our traffic increases. Some work will be continued on the seawall and shoulders and we are adding two new fueling pads. Our air traffic is increasing rapidly as more and more of our military planes are using it instead of using the airport at Nandi, Fiji. For a period of approximately 6 months from October 1965 through March 1966, we are hosts to a U.S. Air Force aerial survey team with four aircraft stationed in Pago Pago flying regular flights in support of their mission. We have supplied logistical support for an average of 130 personnel. This one capability alone saved an estimated $600,000 in gold flow and gave an added boost to our economy. Air New Zealand recently inaugurated their jet flights to Pago Pago and Pan Am has added an additional flight from Honolulu through Pago Pago to Papeete and return. We also expect an increase in commercial flights and chartered flights of tourist groups as a result of the completion of our new hotel.

Electricity

The central powerplant located in the Pago Pago Harbor area now has a generating capacity of 6,000 kilowatts. Design and specifications for the new 3,000-kilowatt unit which was approved in fiscal year 1965 have been completed and a contract let for the manufacture and installation of this unit. Barring unforeseen delays, this 3,000-kilowatt unit should be installed by the end of this fiscal year. The work on the design and specifications for the power program in the Manua Islands is proceeding rapidly. The Tutuila-Aunuu distribution

system has been completed and service has been installed to all villages out of a total of 59 on the planned grid. We are now in the process of extending service to additional small areas that do not have service.

Telephone System

The new central office exchange in the bay area is completed and the new equipment with a capacity of 600 lines and 750 connectors installed. Service in this area has been installed almost to the capability of the equipment. We are experiencing a much higher increased demand than originally contemplated which may require our expansion of these facilities in the near future.

The new 50 line automatic exchange located adjacent to the airport at Tafuna is installed and a distribution system has been engineered and is being constructed.

Water Development

The contract let for a total of $1,017,750 for improvements consisting of three 1-million-gallon storage tanks in the bay area and one 500,000-gallon tank in the Tafuna area for treated fresh water and the rubble, masonry-concrete dam for 2,400,000 gallons for raw water storage is about completed. A number of pumping stations, wells, chlorinators and sections of new water main have been constructed under this contract. Our public works department is moving ahead on the overall water development program which includes the Varpito Reservoir which will provide 2,250,000 gallons raw water storage in addition to improved chlorinator facilities. This storage and reserve along with our present capacity of 1,740,000 gallons will provide us with 6½ days supply of water in the center of the population area. Our consumption presently is about 1,500,000 gallons daily and increasing continually due to industrial and tourist development in the bay area.

The contractor that submitted the low bid and received the contract for this work has submitted numerous claims to the Government of American Samoa. These are now being evaluated. If some of them should be allowed additional funds will be required. The contract provided for liquidated damages against the contractor for late performance in the amount of $300 per day. The contractor is 128 days late at the time of this submission.

The development of water sources for the consolidated elementary schools and the high schools is being coordinated with the village requirements with the individual villages paying for their portion separately and a joint system constructed by our public works force account labor. By this means, the villages are acquiring a reliable, adequate, sanitary water supply.

Housing

Our total housing program comprises 88 houses for our stateside ETV teaching supervisors, technicians, and administrative personnel. A total of 80 houses have been completed and the remaining are in various stages of construction at the consolidated school sites. A house is being constructed at each of these consolidated elementary school sites to house the stateside principals. The overall average cost for the houses completed is just over $16,000 which does not include the landscaping or driveways which have not yet been funded or accomplished. In addition, we have constructed 17 houses for the FAA and 6 for the Weather Bureau in our central housing area.

Marine Railway, Harbor Development, and Land Reclamation

We are now ready to move ahead rapidly on this important phase of our development. We have deliberately delayed these projects pending the availability of a hydraulic dredge being used by the government of Western Samoa in their harbor project. We have reached an agreement with the government of Western Samoa for the utilization of this dredge and it is now in Pago Pago where the first project will be the reclamation of some 4 acres of land at the head of the bay. We have gained not only the use of the dredge but the technical capabilities of the contractor in the harbor work in Western Samoa as required in the development of our own projects. This dredge will be available for a maximum of 5 months and it is planned to complete all of our land fill projects including the construction of the marine railway during this period.

Sewer and Waste Disposal Program

The entire system for the bay area has been designed and the first phase of the system installed. The first phase included the area taking in the new hotel and the village of Utulei to a Blunts Point outfall with two pumping stations. The second phase construction is now getting underway and will include the area between the new hotel at Utulei around the head of the bay past the industrial area to the village of Atu'u with a treatment plant to be constructed near the Blunts Point outfall. Concurrent with this installation the required treatment facilities to treat effectively the industrial wastes from cannery operations will be installed by the cannery operators to complete the second phase of the system for the bay area. Work will then proceed on collection areas and laterals for the villages within the bay area. Some of our sewer funds were required for construction of waste disposal facilities at the high schools and consolidated elementary school sites. Sanitary facilities at the school sites are also used by the Samoans in the villages.

Hospital and Medical Facilities

We have moved ahead with our hospital facility design and construction based on local planning. You will recall in 1965 we advised that we had received previous estimates from stateside A. & E. firms that ranged from $4½ to $7½ million for the construction. Our requirements were reviewed and reworked into planning for a facility compatible with the island and a schematic design to fit these requirements was produced locally. We then went to a selection board and an architect was selected to design a hospital for us within our capabilities to construct locally. Our hospital design is completed and will be let to bid by March 1966. We feel we have a design for a hospital that can be constructed within the funds you made available and if we do not receive a responsive quotation from a contractor with demonstrated capabilities, we will proceed with this construction with public works force account labor. There is, however, a possibility of our not completing this construction with the amount of money you have made available. We will keep the committee informed. Contractor installed equipment will have to be procured immediately and we are requesting equipment funds in this budget for fiscal year 1967.

Our school of nursing and student nurses facilities are under construction and moving ahead rapidly based on local design and completion anticipated approximately March 15.

Territorial Parks and Outdoor Recreation

The budget presented herein includes funds requested for a land purchase program for the purpose of initiating territorial park and outdoor recreation facilities. A survey was conducted in American Samoa by top personnel of the National Park Service and the Bureau of Outdoor Recreation who recommended eight major areas for public protection under a territorial park program. There is growing evidence of rising land prices which heretofore have remained rather stable and reasonable and savings can be substantial in the timeliness of this program. Two-fifths of all American Samoa consists of wood uplands, large rock outcroppings surrounded by coral reefs, blow hole sites, and high plateaus with trails and overlooks. It is planned to preserve the ruggedness and natural beauty of these areas throughout this territorial parks program. The acquisition of Swains Island is also contemplated. The total program is estimated at a cost of $1 million, half of which is requested in fiscal year 1967.

Secretary Udall has allocated $114,000 to American Samoa from the land and water conservation fund for outdoor recreation projects. By letters from the House and Senate committees you approved reprograming $114,000 of local funds on a matching basis for this program. Our first project which has been found adequate to qualify for funding is the Utulei public beach development and we have secured the services of a qualified beach and erosion engineer from the Army Corps of Engineers in Honolulu who has come to American Samoa to advise us on this project. Work will begin making maximum use of the hydraulic dredge we presently have under lease. Our second project which we have qualified with the Bureau of Outdoor Recreation is for the Pagopago Park and Marina development. This area comprises approximately 4 acres which is scheduled as the first fill site for the hydraulic dredge. One other project on which we are working is the location, development, and construction of a golf course. This project requires more research locally for site selection and topographic survey.

Primary and Secondary Roads

Our road program is moving slowly and is costing more money than we had estimated for the completion of the 35 miles of primary road but is not costing more than our original estimates for the 15 miles of road construction which you approved in 1962. We have been using the road work as a fill-in when equipment was available from higher priority construction in the school program. We have done this because we did not want to oversupply our requirements for dump trucks that would be surplus at the end of our construction program. In addition, we have had rights-of-way problems and more extensive scaling work than originally estimated to prevent slides and falling rock from making the road unsafe. Our original engineering estimate which included the necessary equipment for the construction of 15 miles of main shore roads indicated a cost of just over $100,000 per mile. Proper amortization of the equipment reduces this original cost to approximately $82,000 per mile.

We have completed 26.4 miles of primary road and paving of approximately 2 miles of secondary road at an overall average cost of $81,560. There remains approximately 8.6 miles of primary road work to be completed which can be finished for a total of $312,000. We have proceeded to complete this primary road to Amanave village at the far, most western end of the island which is presently about 2.6 miles from the end of the paving and this will cost us $94,000 which we are taking from the secondary road program which you approved in fiscal year 1965. The 6 miles remaining from the end of the paving to the farthest village in the eastern district will cost approximately $218,000. Now that we have the rights-of-way, we wish to complete this paving from the fiscal year 1965 approved secondary road program. We are continuing on from Amanave village in the western district with a narrow secondary road to the village of Poloa which will enable us to further consolidate our elementary school systems by transporting the children over this 1½-mile spur on to the Nua village school. When all of the paving presently contemplated is completed, we will have paved 35 miles of primary road and 3 miles of narrow secondary road at an overall average cost of approximately $70,000 per mile.

Construction Summary

We believe our construction is costing us far less than had we contracted our program to stateside construction firms. There has been a great advantage to the territory in this public works construction by force account labor in that we are training literally hundreds of Samoans in construction trades and crafts. Our entire building program is a continual training process. In many instances our better trained employees leave government service to take higher paying jobs in other industries and the use of force account labor may tend to slow down our construction progress; however, we feel the training acquired and the pride of local achievement offsets these problems. This report in some respects is a disappointing one in that we had hoped that we would have been able to complete more projects that we have at this time. In some instances we have underestimated our costs. We have continually reprogramed funds or delayed projects. So far with your approval we have been able to make up some of these deficiencies in cost estimates by reprograming operational savings and revenues earned in excess of budget amount. While we have made some mistakes, I believe on the overall our project costs will compare very favorably with any U.S. construction cost in the Pacific. We are being as careful as we can and are obtaining the best technical advice we can before proceeding on each project. We are requesting this year that you fund the majority of the programs which you approved in fiscal year 1965 and 1966 along with the fiscal year 1967 budgetary request allowing a carryover of $1 million underfinancing. We feel we could substantially complete the construction or obligate funds for all of the remaining major projects before the end of fiscal year 1967, however, we are deliberately programing a gradual slowdown in our construction effort.

Tourism and Economic Development

The 101-room Hotel Pago Pago Intercontinental was completed and dedicated on December 5, 1965. This hotel is owned by the American Samoan Development Corp. which consists of approximately 1,300 Samoan stockholders who provided the equity capital for this project. Additional financing was arranged through the Bank of Hawaii, the Bank of American Samoa, and the Area Redevelopment Administration. A contract was entered into between the American

Samoan Development Corp. and the Intercontinental Hotels Corp. (a subsidiary of PAA) which guarantees first-class management in this budding tourist development. A series of small businesses are being developed such as beauty shop, flower shop, barbershop, sport fishing, local handicraft gift shops, U-drive car rentals and the like by native Samoans to service the tourist industry. We are doing our best to preserve small business opportunities for native Samoans. All of the other island areas feel very gratified that the natives are being given this opportunity to own and operate these small businesses. There are many people wanting to come to American Samoa to exploit these many opportunities and we have been severely criticised for our position of local development by the local people, but we feel the benefits accruing to the Samoans in this type of development and to the image of the United States in this part of the world cannot be underestimated.

The American Samoan Development Corp. is exploring other business opportunities that are compatible with the island development and which require the broad capital base which they can provide. In addition, this corporation is securing various distributorships in an effort to bring higher quality merchandise at more reasonable prices to the marketplace in American Samoa.

Our Industrial Incentive Act has been designed to induce new industries to locate on American Samoa and, in general, tax inducement is tied directly to the number of native Samoans who will be employed in prospective industries. Initially, the hotel alone has employed 150 Samoans and it is estimated that this figure could rise to 250 when a steady high occupancy rate is achieved. Our estimated income per capita was $285 in 1963 jumping to $353 in 1964. Our individual income tax base increased from $6,728,800 in 1963 to $8,379,800 in 1964.

Island Goal of Self-Sufficiency

Governor Lee. It is a pleasure to be back before your committee again. We were in hopes that we would have more of your committee visit us in Samoa last fall and we still extend an invitation to you.

Senator Young, I am delighted to hear that you would be glad to come now that we have an airport. Your demand is not quite as difficult to meet as a Congressman that I had invited to Samoa. He said, "Governor, as soon as you build a bridge I will be delighted to come down."

We do have a good airport and we would be delighted to have you.

Our program is moving along rather nicely. We think that we are making good progress. Sometimes we don't make as much progress as we would like to make, but by and large we are staying within our budget estimates for improving the islands greatly. I think our future looks bright. We would hope within 5 to 10 years to make these islands self-sufficient. They are moving rapidly toward that goal.

Senator Young. How are you doing this?

Tourist and Other Industries

Governor Lee. We are encouraging a number of industries. Employment is up. One of our most encouraging industries is the tourist industry. We have some very delightful islands. We have just completed the finest hotel in the South Pacific and the response to this has been very good; that along with our fish canneries. We also have several prospective small factories that we are trying to put in there and all in all I think that we are moving toward self-sufficiency.

Senator Young. Is this fish cannery a successful operation?

Governor Lee. It is extremely successful, Senator. We have two very large fish canneries now, two of the largest in the United States.

As a matter of fact, we have the two biggest tunafish canning companies in the world, Van Camp and Starkist.

Senator YOUNG. That is a wonderful thing. When I was there you were just talking about the possibility of this.

Governor LEE. It had a long, hard time but it is now a very, very prosperous fishery, probably the biggest in that part of the world. We have these two very large companies there and we have also been successful in getting the American Can Co., of New York, to put a can fabrication factory down there between the two factories so they feed the tin cans to the two canneries.

All in all, this provides a great deal of hope. The most promising thing, as I say, is this new hotel that we just completed. The reaction of the tourists has been good and we are building the island up for tourism and we think this is going to bring in a lot of money.

FINANCING OF SAMOANS IN SMALL BUSINESSES

One of the real attractive parts of this industry is that it creates a lot of small businesses and we are saving those businesses for Samoans and putting them in very rapidly. We are financing them and helping them to get into these businesses. The Samoans are very encouraged about it.

We were delighted to have Mr. Eaton and Senator Bible down there this fall when we dedicated that hotel and I am sure they can give you a brief summary of what they saw, but all in all we think everything is moving along.

We have had, and I will explain it in a few minutes, a temporary setback; we have had the worst disaster that Samoa has ever had in recent times, or recent on record, 2½ weeks ago, and this has given us a temporary setback that I will talk about.

Our school program is moving along all right. We will be able to complete all of our schools with the money that we have on hand.

AIRPORT AND TERMINAL FACILITIES

We have one of the finest jet airports and terminals in the South Pacific area, and as to your question about Canton, the FAA has moved their installation from Canton to American Samoa and we do get a good share of the traffic that formerly used Canton Island.

We have spent a great deal of time with our military people encouraging them to use this airport. It is centrally located. It is halfway between Australia and Honolulu, a 5-hour jet trip.

Senator YOUNG. Is Canton still available as an alternate landing place?

Governor LEE. Available as an emergency landing place; yes, sir. The military, though, is using our airport. On one operation alone we estimated that they saved over $600,000 in gold flow by using our airport instead of the alternative foreign airports that they had used in the past. They are encouraging us. We are building it up. We are having to increase our facilities there.

We had reported to you last year that we had some small savings on our airport budget, that we hoped to divert to some of these other projects. We are having to use that to increase the facilities at American Samoa for the simple reason that we do have this big traffic.

We are having to put in two new big fuel pads. We will probably have to put in some more warehouses there because of this increased activity. It is going to provide service to the United States and it is going to bring a lot more revenue to the Samoa Islands.

Road Program

Roads we have had more difficulty on. We have not completed our road system because we have used it as a filler on our other more important work. We work on roads in between other projects. They are turning out to be a little more expensive than we told you a year or 2 years ago.

Our costs are running still less than we had originally estimated. We estimated them at about $100,000 per mile for our primary roads and we are down to about $82,000, but this is more than we anticipated and we are having to use some of the secondary road money that you appropriated last year and the year before to complete this primary road system.

We will complete it with the road money we have. We will also get some of these secondary roads, but it has not gone as far as we estimated.

Utilities Programs

On our electrical program, we have virtually everything on the island of Tutuila electrified, sort of rural electrification. It is greatly improving the standard of living. It is improving the dietary habits of the Samoan people. Before we were sort of a feast-and-famine economy because we had no refrigeration. We will complete this program with the money that we have.

Our telephone system is moving along. While we will complete it with the money we have because of the very great development in the territory, we probably will have to increase this system as the years go by.

Our water improvement program is virtually completed in the bay area. We have a little bit of a problem that I want to warn you about. This was one of the projects that we let a stateside contract on rather than doing it with our public works construction people.

The contractor that took that contract for $1,017,000 moved in there a little over a year ago. The project was to have been completed in September. It is still not completed. It will probably be another month before it is completed. He has filed a number of claims with the government of American Samoa.

We, in turn, have a claim against him because of the delay in the completion. We have a rather severe penalty for noncompletion, liquidated penalty, and these claims are now being reviewed in my office.

If some of these are valid claims, then we will be in trouble on our water money. If they are not we will be in as good shape as we originally were when the contract was let.

Housing Program

In housing we have completed 80 of the staff houses out of 88 authorized. These houses have cost us about $16,000 per unit. We have eight houses to complete in outlying areas as we build the

schools. On money, we have adequate financing for them. We have delayed the completion on the marine railway, which is very important to this fishery because we have a very large number of fishing vessels and other vessels in that part of the Pacific that are using our marina and our services are completely inadequate.

We have delayed it pending the use of a dredge from our neighbors, the independent country of Western Samoa. That dredge was moved in last week and started to operate and we will move very rapidly on the marine railway, on land, and the land and harbor development projects. We expect completion within 5 or 6 months' time so we are in good shape on that.

Sewer and Sanitation Program

We have completed the first section of our sewer program from the site of the new hotel out around to the edge of the bay and we are cleaning up those waters, and the next phase will be to move from that point around the end of the bay past the canneries. The canneries have agreed to provide their own sewage disposal plants and they are moving on that.

Hospital Program

On the hospital, we have a long and sort of a tortuous route in getting this hospital built. You people appropriated $3 million 2 years ago. This was the amount we requested. Our original estimates from our architects first were $7 million, then $6 million, then $4.5 million.

We have refused to go ahead with the hospital until we could get the design that we thought was adequate and can still be built for this amount of money. We are letting a contract on it to see what our contractors will do this coming month.

If we cannot bring it in for the $3 million, then we intend to proceed on force account. We think we can build it for about this amount of money. It may be slightly over, but we hope not.

Senator Young. It seems to me, if I remember correctly, some church had a sizable hospital when I was there.

Governor Lee. No; we have a school. There are several churches that have large schools, but no hospitals. This has been an old marine hospital that was built back during World War II, a temporary type structure, and we are replacing this with a good modern island type hospital.

I am convinced that we have a good design now, a design that is adequate and yet is not going to have a lot of frills on it that would bring this cost up to some of these original estimates that we had.

Senator Young. Where would you get your doctors?

Governor Lee. We get our doctors from stateside. We recruit from throughout the United States. We have six stateside doctors that we recruited. In addition to that, we have what we call Samoa medical practitioners. We have 10 of these. These are young men that are trained in the Fiji medical school and go direct from high school into this medical school.

They have 5 years of medical training. Many of them do a very excellent job. They simply do not have all of the background and the training that a licensed M.D. does in this country. We use them to assist our stateside doctors.

New Park Program

We have one new program in this estimate and that is on parks. We had a complete survey of our island by the U.S. Park Service and by some other people. We are proposing a land purchase program in some of the more scenic areas. We feel that now is the time to do it.

The pressure of development is beginning to be felt on land values. We have many very, very scenic areas that we think should be preserved for the future and we have $500,000 in this budget to start that program out. We feel very keenly on it. We think it is necessary in relation to our tourist development program and in the long run it will be money very well spent.

Request for Promotion of Tourism

I have mentioned the tourism aspect of our program. We only have a $20,000 item in here for the promotion of tourism. We think this is a very modest sum. I am sure that in the years to come we are going to have to increase it in order to encourage tourists to come to Samoa, but we think this is adequate for this year.

Recreational Projects

Senator Young. You are building a golf course?

Governor Lee. Yes.

Senator Young. In connection with the hotel?

Governor Lee. I am delighted that you mentioned that. In my statement here I point out that the Secretary of the Interior out of the land and water conservation fund has allotted $114,000 to us to develop some recreational projects to complement our hotel and so on. We have three projects.

You have permitted us to match this with our local revenues so that we have $230,000 available. We are starting on three projects. One is a large park development and marina development at the head of the Pago Pago Harbor, the mudflats there. This work is underway with this new dredge.

The second one is to create a large beach from the hotel to the point of the harbor entrance.

And the third one is to hire a specialist to engineer a golf course for us, which seems to be pretty much a requirement for modern-day tourists.

Industry and Employment of Samoan People

Senator Young. I was very interested in your testimony, and we are pleased with the progress you have made in Samoa. This is a great change since the time I was there about 8 or 10 years ago.

Governor Lee. Senator, we think the Samoan people have done an unusual job. They have worked around the clock in many instances on these projects.

Senator Young. There was no employment for local people at all at that time.

Governor Lee. Virtually everyone at the present time is employed that is capable of work.

Senator Young. I never thought that was possible.

Governor Lee. Many of them are working on this development program, but at the same time as we finish our development program we are trying to phase them into industry and I think we are being

successful along this line, and we would hope that, as I say, within 5 to 10 years' time these people can be self-sufficient and we won't have to be coming back to you for taxes and appropriations and we will no longer come to you with our hand out. These people have made remarkable progress in the last few years.

JANUARY 1966 HURRICANE

Chairman HAYDEN. Would you tell the committee what damages occurred as a result of the hurricane which struck American Samoa during the last week of January?

Governor LEE. Yes, Senator Hayden.

We had what is recorded as the worst hurricane of the century. It is the worst in the remembrance of local inhabitants there. I have some pictures here that give you an idea of the kind of havoc it wreaked on the islands.

Fortunately, in spite of all of the damages that we had, we only had two local deaths. We did lose 23 of our fishermen out at sea. These were South Koreans fishing on two separate vessels. One vessel went down. Another one was washed over by a huge wave as it went to the rescue of the first one. We also lost a small sailing ketch out there with five people. We have still been unable to locate it; so while our local deaths were negligible, we did have these sea losses.

We had complete destruction of 20 to 25 percent of our houses. Those are some of the pictures there. Many of the families were in these houses when these houses went down. It is somewhat of a miracle that more people did not get killed. These people seemed to know how to take care of themselves.

Despite all the houses that went down, as I say, we only had two deaths. We had two serious injuries, hundreds of minor injuries, but we felt that we were rather lucky.

ISLAND POPULATION AND HOME DEVASTATION

Senator YOUNG. What is the population of American Samoa?

Governor LEE. We have about 26,000 people on the 6 islands. On a quick survey that we took a few days after the hurricane we found 1,550 houses that were completely destroyed, another 3,500 severely damaged, and 1,900 slightly damaged. This covers virtually all of the houses that we have on the island.

DAMAGE TO GOVERNMENT FACILITIES AND UTILITIES

Our government facilities were badly hit, although I am happy to to report that few of the improvements that we put there in the last 5 years were seriously damaged. They were damaged, but not beyond repair. We have most of them repaired as of the date of this report.

As to the utilities, wherever an electric line was opened up we had one broken down. The same thing is true of telephones. The communications were completely out. Most of our village water systems were destroyed, although our main system in the Pago Pago bay area was not damaged to any great extent.

Damage to Roads and Schools

On roads we did not lose any of our improved roads although we lost lots of seawall. You will note several of the pictures there where the sea moved right to the edge of the pavement but stopped; and we have been busy rebuilding seawalls to prevent further damages, and I think we are going to save all of our roads. There are some expenses involved in it.

We had thousands and thousands of trees down on the island. We had a cleanup job to get through our roads. On schools, all of the old schools were torn down or virtually all of them. A few of our new schools suffered damage but only two of them had extensive damage. You will see in one of these pictures one of our new schools with a tree on top which did not knock it down. You will see another one that was cracked by the seas running over it from one side and a flash flood from the mountains on the other side. That is the only new building that really had great damage.

We had one of our new apartment buildings, that had a roof knocked off. That is back on with a different type of roof.

Educational Television Station

Our educational television station had part of one corner of the roof torn off. We have had to reroof it.

We have had some water damage, but none of our electronic equipment was damaged to any great extent and we are back on the air with our school programs. Fortunately, our transmitter building that is balanced on top of a very narrow ridge on top of Mount Alava withstood the hurricane. It had $1 million worth of equipment in it. We didn't know for 12 hours whether it was down on the other side of the mountain or not. We just couldn't see it. We had a man up there incidentally. But it apparently was well designed. It simply kept rocking up there and scared the man to death. It held tight. We think we have a good design on it. Our two television towers withstood the terrific hurricane. All of the lines were sheared off which created some problems and our powerlines up there were shredded, but we have these back in operation.

Loss of Food Crops

Two big problems this caused in connection with these immediate damages. We lost most of the food crops on the island. On the breadfruit trees which produced one of the big staples in the Samoa diet, we lost about 85 to 90 percent of these trees. They are huge trees. They were all knocked down. These are gone. These are out of our economy for at least 5 years' time.

Immensity of Hurricane and Newly Built Houses

Senator Young. How frequently do you have a hurricane there?

Governor Lee. Senator, we had one in 1958 that destroyed a few homes. We had one in the thirties that was very destructive, but nothing like this. There is nothing on the record that meets this, so they tell me. This was widespread. It hit all of our villages. It hit all of our islands.

Senator YOUNG. Was this housing that you just completed or about to complete, these 80-some houses—are they built to withstand storms like this?

Governor LEE. They were built to withstand it. We lost one wall. We had one wall collapse. We still don't know how it happened. We had two houses that had damage. They were not totally destroyed. As a matter of fact, the damage was not great. I would say, on one house that I looked at, the damage was below $500, but we feel we are lucky.

Most of these new investments stood up very well and they were all repaired and back in full operation 2½ weeks after the hurricane. We immediately got technicians from Pearl Harbor and they were on the island within a few hours after the hurricane.

REPAIR OF COMMUNICATIONS AND ELECTRICAL POWER

We have repaired our communications. We got our power back in operation in time to save most of our food. We lost no big quantities of refrigerated food on the island and things are pretty much back to normal except we have probably 25 percent of the people that have no roof over their heads, this plus the food problem.

FOOD SHORTAGE AND USE OF DEPARTMENT OF AGRICULTURE SURPLUS PROGRAMS

We lost all of our banana crop. We lost a substantial amount of our taro. We estimate that we are going to have to feed a substantial number of people from 3 to 9 months' time before we can get crops in and produced.

The Office of Emergency Planning has been very good. They had a man down 2 days after the hurricane. The National Red Cross has been there. They have helped us work out a food distribution plan. The first ship arrived the day before yesterday with food supplies.

I think we have a system worked out. We do not want to continue this 1 minute longer than we have to, but we will have to do some feeding and all of this food will come out of the Department of Agriculture surplus programs so we will not be back to you for money for this.

AVAILABILITY OF DISASTER FUNDS

Senator YOUNG. Are you eligible for disaster funds?

Governor LEE. We are eligible for disaster relief and we have gone to the disaster agencies for help on all of these problems. We have been promised reimbursement for all of the damages that we suffered on these public facilities.

We have simply gone ahead and repaired them immediately out of funds that we had available for other projects that you have authorized.

SUPPLEMENTAL BUDGET REQUEST NECESSARY IF BORROWING EFFORT IS UNSUCCESSFUL

Chairman HAYDEN. Do you believe that a supplemental budget estimate will be required in order to repair the damage sustained?

Governor LEE. Senator, I think that we might need to in one field, and this is housing. We have scoured the disaster agencies. The

Office of Emergency Planning has tentatively agreed to make us a grant that would be equivalent to temporary housing. We do not want to build temporary housing. We want to build permanent housing because we would simply have to turn around and come back to you for a permanent housing program, if we were to build with tents.

So we have talked to the Office of Emergency Planning about a grant equivalent to the cost of moving tents or other temporary housing in. They are considering this at the present time. If they do this we will build a floor and a roof to put over these homeless people, and then we are trying to find some agency that will lend us another $2,500 each to improve these houses, to put sanitary facilities in them, partitions, and other improvements; in other words, to supplement this initial grant.

This would be a loan fund and would be paid back over a reasonable period of time. Now, we do not know whether we are coming back to you for a supplemental on this or not. We have not been able to get any disaster agency to agree to make these kinds of loans.

If we can we won't be back to you. If we can't, the only alternative is to come back and ask for a loan fund.

Reduction of Request for Chief Justice and High Court

Chairman Hayden. I note that your request for funds for the chief justice and high court has been reduced by $11,000. What is the reason for this reduction?

Governor Lee. We had a judge that has been there for a good many years and he has retired within recent months and part of this reduction is due to the fact that previous years' budgets had a provision for his retirement. It was paid off with annual leave, and so on. I will admit though that this budget is short. This budget was cut back to bare bones so to speak.

We think it is going to be tight. I think possibly they can get by, but it is a very tight budget.

Police Protection and Crime Problem

Chairman Hayden. What is your primary crime problem in American Samoa?

Governor Lee. The crime problem we don't think is great by standards elsewhere. We do have problems that are popping up. We continue to have starts of juvenile delinquency. We are relatively free of it, but it keeps popping up when young children come back from other areas and bring new ideas in. We think we have it well under hand, but it is a continuing problem. It is the same type of problem that you have in any area. We are trying to strengthen our police force.

We have a very modest increase in here to strengthen our lawmen, protection officers, and I think we have it in hand, but it continues to be a problem.

Educational TV Channels and Teacher Reductions

Chairman Hayden. Have the full six educational TV channels been placed into operation yet?

Governor Lee. Yes, sir; thanks to the action of this committee and the House committee we were able to get these channels into operation

in time for the opening of school in September. They are operating very successfully. We think this is a very, very outstanding school system and something a little bit unusual.

Chairman HAYDEN. At the time you were requesting authority to install all these education TV channels you indicated that savings in employment of stateside teachers would go far toward paying for the cost of the television. How many years do you expect that your complement of stateside teachers can be reduced?

Governor LEE. We are reducing stateside teachers this year. We released I think it was 30 last year. It was 20 last year and 18 this year. After this year we will not have any further reductions in numbers.

On the other hand, we will not have increases which we would have had because of our increase in school population. I don't have a figure immediately available on how many years it would take to amortize this.

Perhaps Mr. Screen has. If not, I can supply it for the record.

Mr. SCREEN. Yes, Mr. Chairman, the projected figures on the cost of a system under which we were to have stateside teachers there instead of ETV indicate it would cost approximately $400,000 a year more than it is costing with our ETV system.

Governor LEE. Our system cost $2.5 million to install.

Chairman HAYDEN. You indicate that the cost of public safety has increased because of the necessity to reclassify police positions. What is a policeman's pay per year, and how much did you increase it?

POLICEMEN'S PAY

Governor LEE. On policemen's pay we had some that were paid as low as $900. They run from $900 to $1,500 or $1,600. This is much less than the women in these canneries make and we simply have to upgrade them. We have a very, very modest increase this year.

Chairman HAYDEN. How much did you increase it?

Mr. SCREEN. The total budget for public safety is I think increased some $16,000 and we are going to have to make economies elsewhere if we are going to give them the full reclassification that we had programed.

Chairman HAYDEN. A policeman's pay per year is how much?

Governor LEE. Between $900 and $1,500.

MATCHING RESEARCH GRANT BY BUREAU OF COMMERCIAL FISHERIES

Chairman HAYDEN. What program is carried on in Samoa by the Bureau of Commercial Fisheries which you finance to the extent of 25 percent of its cost?

Governor LEE. This is a new program that the Bureau of Commercial Fisheries has offered us. They have set up a matching grant that would permit them to do research in American Samoa in connection with our commercial fishing operations. Since this is one of the largest fishing operations in the world we think this is a good idea.

Part of their operations would not only be in connection with tunafish, but also in connection with shellfish and local fishery sources, and this has not been set up yet. We are trying to find ways and means of financing our share of the matching grant.

Effect on Tourism of New Pago Pago Intercontinental Hotel

Chairman Hayden. Has the availability of the new Pago Pago Intercontinental Hotel increased the number of tourists visiting the island?

Governor Lee. Yes, very substantially, Senator. Our occupancy on that hotel is moving up very rapidly. It is probably up to around 50 percent since its opening.

Chairman Hayden. Is the hotel being used to capacity?

Governor Lee. Not yet. We used it to capacity 2 weeks ago. As a matter of fact, we had more people than we could take care of on one day. It is moving that fast. We have bookings in July and August that will completely fill it. We think the occupancy rate is good considering it has just been opened and this is a new tourist destination.

Efforts To Increase Pan American Airways Flights

Chairman Hayden. What is the latest information from Pan American Airways as to an increase in the number of incoming and outgoing flights.?

Governor Lee. We have been urging Pan American to increase their flights through American Samoa. They have a number of flights to Australia and New Zealand. Up until November they had only one flight that went through American Samoa. This was a flight that stopped at American Samoa, then went on to Sidney and back again.

In late November, at our insistence, they finally added one additional flight. It runs from Honolulu to Pago Pago to Papeete back to Pago Pago and Honolulu. This is a very good flight, very good addition.

We are very anxious though to have them put some additional flights through either on their Sydney or New Zealand routes. If they do that then I think we are moving very rapidly toward self-sufficiency. I think this is one of the keys to the development of this territory, more air flights.

Air New Zealand has recently operated jet service to American Samoa, but it is not a through flight to the United States.

Construction Program

Chairman Hayden. Would you develop for the committee some of the details of your construction program? I know that we gave you no funds last year but did indicate that, with prior funds that remained available, you should proceed with your proposed construction program.

Governor Lee. Senator, we have a complete analysis of all our construction program that I think will be helpful to the committee. I think I would like, if you would like, to submit it for the record.

I think we have given you fairly well a summary on the overall, but this gives the details that I think would be helpful to the committee.

Chairman Hayden. That may be included.

(The document follows:)

59-370—66—pt. 1——9

GOVERNMENT OF AMERICAN SAMOA

Analysis of construction program funding, uncompleted projects, Dec. 31, 1965

Project title	Estimated total program	Appropriated through fisal year 1964 [1]	Approved fiscal year 1965, under-financed	Approved fiscal year 1966, under-financed	Requested, fiscal year 1967	Balance required to complete	Unobligated, Dec. 31, 1965 [2]
Water development	$2,500,000	$1,300,700	$240,000	$180,000	$200,000	$579,300	[3] [4]($164,700)
Road program	2,686,900	2,186,900	500,000				[4](240,500)
Power and electrification program	3,680,615	2,857,615	823,000				[4](18,800)
Sewer and waste disposal	2,100,000	1,500,000	284,000	250,000		66,000	[4] 1,038,400
ETV facilities and equipment	2,686,800	2,686,800					[5] 5,703
High schools	1,655,280	1,160,800		494,480			8,500
Village schools with houses	2,267,000	2,267,000					[6] 128,300
Land reclamation and harbor development	907,500	500,000	140,000	110,000	157,500		[4] 269,500
Telephone extension Tutuila	595,865	341,865	254,000				[4](201,400)
Hospital	3,384,000	2,884,000			500,000		[7] 2,368,600
School of nursing	300,000	300,000					103,300
Communications, construction and equipment	483,670	483,670					[8] 95,200
Marine railway	335,000	123,000	212,000				322,000
Land acquisition	1,100,000	100,000			500,000	500,000	24,700
Customs warehouse and cold storage facility	185,000	185,000					180,000
Equipment for approved facilities	563,900	563,900					390,300
Interisland rescue vessels	150,000	150,000					150,000
Fagatogo Park and market area	136,080	40,000		96,080			(90,500)
Administration building	427,680			31,680		396,000	
Other projects	384,800	230,600	47,000	107,200			113,300
Total	26,530,090	19,861,850	2,500,000	1,269,440	1,357,500	1,541,300	4,481,903

[1] Includes reprograming of funds available from the excess revenues and savings fiscal year 1963 as estimated on pp. 1742–1743 of hearings, subcommittee of the Committee on Appropriations, House of Representatives, 88th Cong., 2d sess., and subsequently approved by letter from the House and Senate committees. Actual amounts required and reprogramed from fiscal year 1963 available funds are: ETV facilities and equipment, $60,000; housing, $325,000; aerial tramway, $65,317; land acquisition, $100,000; high schools, $175,000; village schools, $447,683; total reprogramed $1,173,000.

[2] This column indicates balance of funds unobligated from appropriations through fiscal year 1964 (note 1). Minus balance indicates expenditures for programs approved in fiscal years 1965 and 1966 from cash available due to slippage in other areas.

[3] The contractor that submitted the low bid and received a contract totaling $1,017,750 for the major water construction has submitted numerous claims to the government of American Samoa. These claims are now being evaluated and if some of them should be allowed additional funds will be required.

[4] As economic expansion and the industrial development of the territory progresses beyond the foreseeable future, additional funds may be requested.

[5] Includes reprograming approved in February 1965 by both the House and the Senate committees for the 2d 3 channels of ETV for secondary education ($989,300). Funds were available from savings and excess revenues in fiscal year 1964. This program has been constructed, installed, and is operating.

[6] The amount appropriated to date is for minimum facilities. The funding for the houses for the stateside principals at the village school sites has been combined with the school funding to facilitate cost control and accounting.

[7] Amount estimated is for equipping the new hospital.

[8] An agreement has been entered into with the FAA for consolidation of government of American Samoa communications requirements with those of the FAA for more efficient single agency concept responsibility and saving scarce frequencies.

NOTE.—The following projects have been completed and removed from the schedule: Jet airport, housing (62 basic houses), and aerial tramway. See text of Governor's statement for status of other projects.

MANUA HIGH SCHOOL CONSTRUCTION

Chairman HAYDEN. When do you expect the Manua high school to be completed and placed into operation?

Governor LEE. We are hoping to complete this high school by September. There is some question as to whether we are going to be able to because of the hurricane. We have had to slow up many of our construction projects because of the hurricane. It is possible that we can complete it by September. We are doing everything we can, but we are not sure. It should be completed shortly, however.

Chairman HAYDEN. We thank you for your appearance.

Governor LEE. Thank you, Mr. Chairman. It has been very wonderful appearing before you again and we appreciate all the assistance that this committee has given us.

FRIDAY, FEBRUARY 18, 1966.

GUAM

STATEMENTS OF MANUEL F. L. GUERRERO, GOVERNOR; GEORGE W. INGLING, ASSISTANT SECRETARY; MRS. RUTH G. VAN CLEVE, DIRECTOR, OFFICE OF TERRITORIES; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

PREPARED STATEMENT

Chairman HAYDEN. We will hear now from Governor Guerrero.

With regard to the estimated needs of Guam, amounting to $5,593,000, I shall be glad to have your explanatory statement.

Governor GUERRERO. This is it, sir.

Chairman HAYDEN. We will put that in the record.

(The statement follows:)

I am pleased to have again the privilege of addressing this committee. Guam has experienced another year of high construction activity resulting from the projects approved by Congress under the Guam Rehabilitation Act of 1963, Public Law 88-170. Today, I would like briefly to review what has been accomplished, and to ask your favorable consideration of projects proposed for the coming fiscal year.

Mr. George Ingling, who has accompanied me previously and is known to many of you, is with me today. He has served the Government of Guam for 10 years, as director of finance and in other top positions, and for the past 2 years has been coordinator of all Federal programs. He will assist me in answering your questions.

Since our last appearance here, Guam has completed the construction of its first major facilities financed by rehabilitation appropriations which to date total $28,657,000. These include two public schools, a headquarters for the department of education, a new public works center, a new penitentiary and detention home. During 1966, some 17 other facilities now underway will be completed.

They include a new senior high school, a trade and technical high school, two junior high schools, four elementary schools, two college buildings, a new air terminal, public utilities administration and shop buildings, a supply warehouse, telephone exchange, power substation and a well-water system.

These rehabilitation and capital improvement projects helped Guam reach a record $127 million in value of goods and services for fiscal 1965. They will continue to be a vital ingredient in the health of our economy, not only directly, but as a catalyst to other construction and other activity.

The year 1965 saw important improvements on Guam in many fields. The National Aeronautics and Space Agency constructed its Dandan tracking station—a valuable tool in our Nation's "man in space" efforts—and certainly a valuable asset for Guam.

The Australian cable station was nearly completed—a new supporting communications link with the areas of the Pacific—and a new benefit for our territory and its future as a communications center.

The year brought Guam a morale-building visit from the cruise ship *Himalaya* with her 1,300 passengers—most of whom took a tour of Guam, and liked what they saw. The *Himalaya* will be back with us in March.

Last year brought a big increase in farm production by our own farmers, and the promise of an extensive farm and processing operation by an off-island group.

Local farm produce in calendar year 1965 totaled 1,300,000 pounds—an increase of more than 600,000 pounds over 1964—and was valued at $254,000, almost three times the value of 1964 production. Retail prices, however, remain high.

The year 1965 brought accreditation for our hospital and college. Recently a program of nurse training involving both these institutions was announced. This is a commendable development that reflects Guam's increasing ability to provide for itself in professional areas.

The year brought us our first watch assembly plant and signs of more to come—and the application of tax benefits under the new Guam Economic Development Authority.

A master plan for land use was completed. This plan gives us for the first time a basic guide to the development of zoning and proper land use.

In 1965, after years of frustration, a beginning was made in correcting the problem of fractionalized lots that has prevented redevelopment of our capital city.

Schools remain a major need and you will see this reflected in our proposals for fiscal 1967. Our permanent population is increasing rapidly. Guam's growing role in the military structure of the Nation means new personnel, new families who must be served by the public schools of Guam. We seek for next year appropriations for a new school in Yigo to help serve Andersen Air Force Base and expansion of the Dededo school to help serve civilian needs.

Water and sewer improvements make up a large portion of our requests for 1967. A sewer trunkline for the west-central island, with pumping station and outfall, is now under construction. We seek funds to complete this construction, and to extend it to other villages.

Pollution of our beaches will remain a problem until a central sewage system serves these heavily populated areas of the island.

Our water resources are being developed rapidly. A series of wells tapping underground water supplies have been drilled, and we are requesting funds for 1967 to drill 10 more. These wells will allow us to relieve critical shortage areas and will be an essential supplement to the reservoir system which is under military control. Eventually, we hope, these newly developed water resources will practically free the civilian population from dependence on the reservoir system.

Another important part of the Guam rehabilitation program is a detailed study of the island's economic potential and the creation of a long-range development plan, which will be presented to Congress this year.

Our new air terminal, another rehabilitation project, will be completed in approximately 6 months, giving Guam for the first time a civilian air facility, although the Navy's airstrip will still be used.

Only a few weeks ago staff members of the Civil Aeronautics Board visited Guam to review the need of and potential for additional air service.

For fiscal 1966, some $4.8 million was appropriated for the first increment of construction in a new commercial port, a very vital facility both to aid the territory's economy and to allow the Navy full use of port facilities which we now share.

These funds will be obligated this fiscal year, although funds for completion of only the first increment have been provided.

The 1965 and 1966 budgets contained sizable appropriations for urban renewal and related village development in Yona and Sinajana. Requests for those appropriations had been made with the full concurrence of the Guam Legislature. However, I regret very much having to report to this committee that the final urban renewal plans were not approved by the Guam Legislature. Because of this some $9 million in grants from the Urban Renewal Administration, U.S. Department of Housing and Urban Development, have been lost to us, at least for the present. It is of deep concern to me that we have been unable to utilize these funds, and to provide the homes and village improvements that urban renewal offered. We now hope to go into public housing, and to take steps to provide for low-cost homes by private developers through a sharing of certain costs by the Government.

The $4.89 million for urban renewal appropriated previously by this committee will, with your approval, be reprogramed so as to fund most of the $5.50 million needed for our fiscal year 1967 projects. As a result only $608,000 is being requested to be appropriated as new obligational authority for the forthcoming fiscal year.

The need for steady growth in housing, education, utilities, and other services seems clear. Population projections indicate increases from the present 77,000 to about 85,000 in 1970, to almost 100,000 by 1980 and to 108,000 by 1985.

Total public and private school population is now about 21,500, and is expected to increase to 27,400 by 1975 and to more than 30,000 by 1980.

We realize that meeting the needs of this increasing population will demand the full resources of the territory. I proposed to the Guam Legislature at the opening of its January session an increase in the gross receipts tax—our most important revenue source apart from income taxes—from 2 to 3 percent. I asked that this increase be earmarked for education. I informed the legislature I would present further tax measures in its June session.

I believe that with the continuation of the reconstruction program as proposed in our 1967 requests, Guam can maintain the marked progress that it has witnessed since inception of the Rehabilitation Act. I ask your favorable consideration of these requests.

Thank you.

REPROGRAMING OF URBAN RENEWAL FUNDS

Chairman HAYDEN. Of your request, $5,503,000 is directed to the second increment of your planned sewer system, facilities for water resources and distribution, and schools. I note from your justification statement that you are asking new appropriations amounting to $608,000 and proposing that the balance of $4,895,000 be made available by reprograming previously appropriated funds for urban renewal projects.

This would indicate that your request for new obligational authority is almost $5 million less than you indicate; and therefore the cash approved for Guam can be reduced from the budget estimate by a total of $4,895,000. Is that not correct?

Governor GUERRERO. That is correct, sir. We have been appropriated $4,895,000 for the urban renewal program, but the legislature had decided not to approve the urban renewal program and we are requesting that this money for urban renewal be reprogramed to take up the following projects: The sewer system (second increment); water resources and distribution; and new school buildings. This is with an additional appropriation of $608,000.

Chairman HAYDEN. What urban renewal projects are you deferring or canceling, and what amount is available for each of these projects?

Governor GUERRERO. For the moment we are holding back the urban renewal programs for Yona and Sinajana; $1,815,000 is available for Yona and $3,080,000 for Sinajana. As I have mentioned, the Guam Legislature has decided not to go along with it at this moment and we are asking that this money be reprogramed. All the other projects are progressing well. If you want me to list them I can.

Chairman HAYDEN. Have you any further statement to make?

Governor GUERRERO. Except to say, sir, that the money that has been appropriated for Guam has been very useful in the completion in 1965 of several facilities, that these are continuing programs that we have for public facilities, and they are coming along satisfactorily.

Chairman HAYDEN. We thank you for your appearance and your statement.

TRUST TERRITORY OF THE PACIFIC ISLANDS

STATEMENTS OF M. W. GODING, HIGH COMMISSIONER; JOHN M. PATTON, DIRECTOR OF BUDGET AND FINANCE; JAMES E. HAWKINS, ASSISTANT COMMISSIONER FOR COMMUNITY SERVICES; MRS. RUTH G. VAN CLEVE, DIRECTOR, OFFICE OF TERRITORIES; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

JUSTIFICATION

Chairman HAYDEN. The Trust Territory of the Pacific Islands.

For fiscal year 1967 the budget estimate for the Trust Territory of the Pacific Islands is $17,494,000, an increase of $47,412 over the amount appropriated in fiscal year 1966 plus the expected supplemental appropriation of $102,588 to meet increased pay costs. The justification for this estimate will be placed in the record.

(The justification follows:)

AUTHORITY

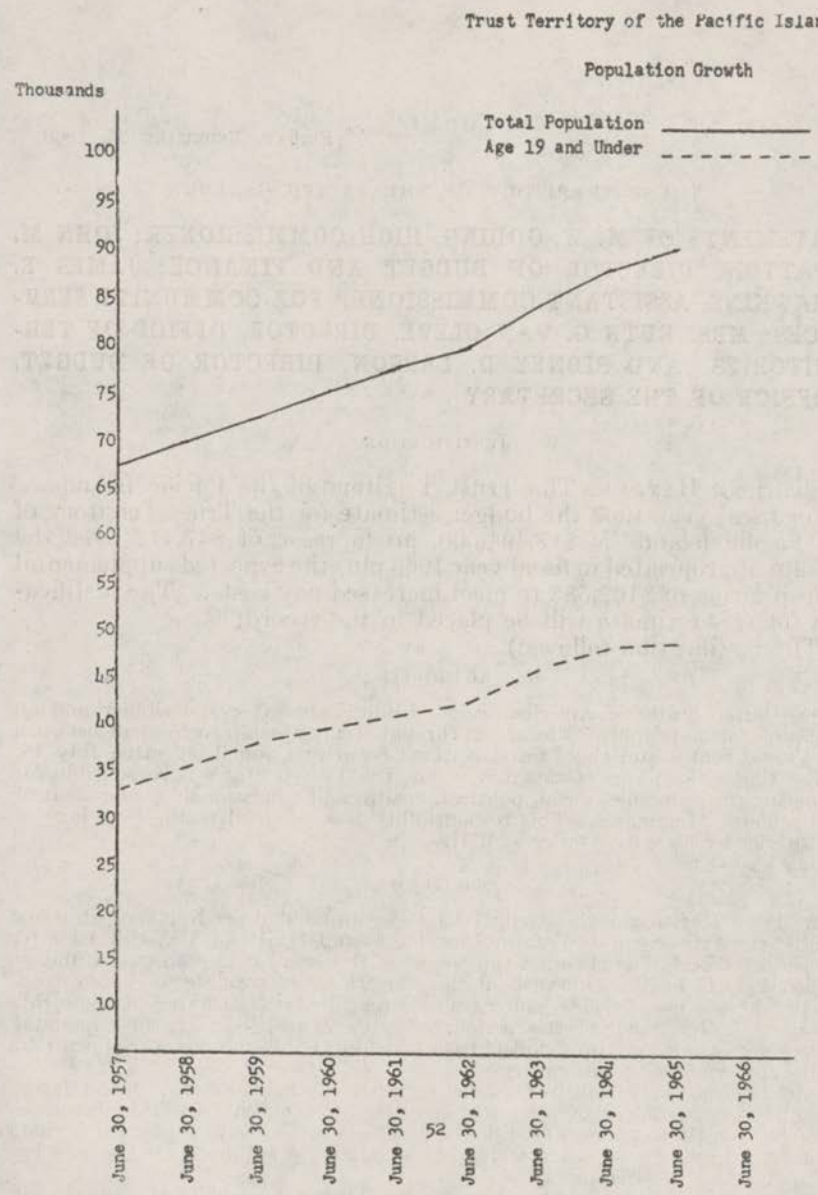
The United States of America accepted administrative responsibility and an obligation to the people of Micronesia through a Trusteeship Agreement between the United States and the United Nations Security Council, effective July 18, 1947. Under the terms of this agreement, the United States is responsible for promoting the economic, social, political, health, and educational development of the people of Micronesia. This responsibility was assigned to the Secretary of the Interior by Executive order in 1951.

PROBLEM

The Trust Territory of the Pacific Islands is composed of the Northern Mariana Islands, the Eastern and Western Caroline Islands and the Marshall Islands. The end of World War II found the people of the area for the most part undernourished, in ill health, and without the education and training to enable them to make the best use of their resources or to enter fully into the 20th century world. However, during much of the period following World War II, governmental services were carried out on a modest basis providing only a minimum in education, health, and economic programs.

In terms of physical facilities the trust territory entered the decade of the sixties with a plant consisting of a few war-damaged facilities inherited from the Japanese period but mostly temporary facilities dating from the immediate postwar period. These facilities could not adequately accommodate the requirements imposed by U.S. obligations to Micronesia.

The population of the trust territory has been increasing rapidly at an unabated rate. The total has risen from about 55,000 at the beginning of Interior Department stewardship in 1951 to its current figure of slightly more than 90,000. More than half of this total is aged 19 or younger with heavy impact on education and health programs. Consolidation of services is difficult or impossible to achieve because of the highly fragmented geography—700 square miles of land divided among 2,000 islands—and notable cultural and linguistic differences among the population. This essentially small community is scattered over an ocean area comparable in size to the continental United States.



ACHIEVEMENTS

The need to upgrade and accelerate the programs for the trust territory has resulted in an increase of appropriations by the U.S. Congress from a 1962 level of $6,304,000 to $15 million each in fiscal years 1963 and 1964, $17,500,000 in fiscal year 1965, and $17,344,000 in fiscal year 1966. To carry out more effectively this accelerated development, the Trust Territory Administration has been reorganized into four major functional groupings: community services, public affairs, resources and development, and administration, each headed by an Assistant Commissioner accountable directly to the High Commissioner.

The massive capital improvement program inaugurated with fiscal year 1963 funds has seen the completion of airports at Yap and Palau and the appropriation of funds for a Ponape field; the construction of new classrooms to serve about half of the elementary students and a substantial start on high schools. New hospitals have been completed at Majuro, Koror, and Saipan. Funds have been made available for critically needed hospital facilities at the Ponape and Truk district centers and some work has been done on utilities and the other facilities required to support the upgraded programs.

Funds for nondeferrable programs, primarily education and health, but more recently the essential economic development work, have been increased. With the fixed appropriation authorization, however, increased financial allocations to the operating programs can be made only at the expense of the capital needs of the territory. Thus, despite urgent requirements for the physical facilities to support these programs, construction funds have declined from 49 percent of the budget in fiscal year 1963, to 12½ percent in the 1967 request.

FISCAL YEAR 1966

Funds available in fiscal year 1966 will permit the completion of more than 333 elementary school classrooms and the provision of qualified staff to help meet a part of the burgeoning elementary enrollment. Investigation is being made of the feasibility of educational television in this farflung territory. With the assistance of U.S. Public Health Service personnel a thoroughgoing analysis is being made of public health needs with positive program recommendations for meeting those needs. The 1966 Public Health funds will permit a start to be made on the design and construction of a hospital at Ponape. In the resources field, the 1966 money provides support for the first year's work of an economic development unit established to identify lines of promising potential, to analyze economic alternatives, and to assist Micronesian enterprise. Transportation improvements have been made in fiscal year 1966, with the reorganization of the shipping services and the delivery of vessels especially designed for territorial shipping. Air transportation is being analyzed to determine the most economical and effective means of providing rapid interdistrict movement of passengers and cargo. A second DC–4 aircraft has been acquired to permit development of more frequent service and to overcome backlogs of passengers and cargo.

FISCAL YEAR 1967

The fiscal year 1967 estimate requests a total amount of $17,494,000 in "Grants and direct appropriations," which amount is almost equal to the appropriation authorization. The full amount of funds requested is needed if the expanding requirements of the trust territory are to be approached and the upgrading of urgently needed services is not to be reversed.

The funds requested for the office of the high commissioner for 1967 remain essentially at their current level. An increase is provided for the judiciary to permit the addition of a second associate justice and certain other court personnel required to allow the courts to cope with the increasing complexity of cases and to overcome a backlog of more than 200 civil cases, some more than 4 years old. The addition of the second associate justice will materially diminish the costly travel time spent on circuit; insure full consideration of the frequently involved substance of cases; and allow each of the high court justices to work more closely and continuously with Micronesian court personnel in achieving higher standards of justice.

PUBLIC HEALTH

The fiscal year 1967 estimate of $2,443,000 for public health programs is an increase of $65,500 over the funds available in the current year. In capital improvement, $90,000 is provided to make a start toward urgently needed improvements in outisland subhospitals and dispensaries. Public health emphasis has been placed on the preventive measure of a continuing mass immunization program and in assigning fully qualified M.D.'s to each of the six districts. Both are required to control epidemics which can and do sweep the territory. Plans to improve further the health services include the addition of needed professional supervision of Micronesian nursing personnel; special public health programs to meet specific diseases such as tuberculosis, leprosy, and filiariasis; and extension of some health improvements to the approximately 40 percent of the total population who live away from the immediate environs of the district center.

EDUCATION

Education goals in the trust territory consist of:

(1) Universal free education through grade 12;
(2) Compulsory education for ages 6 through 15;
(3) Opportunities beyond high school in the technical, professional, and trade areas;
(4) Establishment of English as the language of instruction; and
(5) Practical adult education for those beyond school age.

Measures needed to reach these goals include employment of qualified elementary teachers, provision of a maximum number of scholarships, inservice training and other upgrading programs for Micronesian teachers, development of adult literacy programs and other training in adult education.

The fiscal year 1967 estimate for education programs, $4,007,000 is an increase of $215,500 over the current year. The increase will be used primarily to continue to upgrade the elementary teaching staff, permitting the employment of 25 additional qualified American teachers.

The capital improvement estimate includes $1,126,600 to continue the construction of urgently needed elementary and secondary school facilities.

PUBLIC AFFAIRS

The most significant political development in recent years in the trust territory was the convening of the historic first Congress of Micronesia at Saipan on July 12, 1965. The regular 30-day session of the Congress adjourned on August 10 and was immediately followed by a 1-day special session on August 11. The Congress passed three major revenue bills dealing with import taxes, export taxes, and motor-vehicle-fuel taxes. Most taxes became effective October 1, 1965, except for copra and trochus shell taxes which will become effective on July 1, 1966. The Congress also enacted from local revenues a $145,000 appropriation for its expenses for fiscal year 1967.

Radio broadcasting stations were in operation in all six districts of the trust territory by fiscal year 1966 although stations at Saipan, Yap, and Ponape were on a part-time schedule. The stations play an important educational and political development role.

RESOURCES AND DEVELOPMENT

The trust territory has not yet moved from a basically subsistence economy. The agriculture program, thus, continues its dual emphasis: improvement of production for local consumption, and improvement of cash crops for export. The coconut is the main source of farm income with copra exports valued at $2 million during fiscal year 1965.

An economic development operations unit, under contract with a private development firm, was established late in fiscal year 1965 and began full-fledged operations at the beginning of the current year. The unit is to prepare and maintain an economic plan looking toward increased use of Micronesian resources by the Micronesians themselves, the government, and outside entrepreneurs; to prepare market analyses and feasibility studies of commodity production; and to provide advisory services regarding capital investment and economic development. It is charged with leadership, stimulus, and guidance in the use of Micronesian resources and with pointing up the alternatives for optimum use of those resources.

Transportation and terminal facilities are the key to economic development. Improvements to airstrips in the Marshalls and Truk are slated for fiscal year 1967. In addition, improvements to certain docks, road construction, and the continuation of agricultural facility construction are critical items funded in the capital improvement request.

In sea transportation, a new contract was entered into with the United Tanker Corp. in August 1965 to provide interdistrict shipping. Unlike the previous cost-plus-fixed-fee arrangement with another firm, the new contractor pays all operating and vessel maintenance costs and the government receives 25 percent of the gross receipts from the operation. The trust territory is in the process of contracting with Micronesian-owned enterprises to operate intradistrict shipping services. The new arrangements are designed to encourage efficient operation and the development of trade by the contractor.

MANAGEMENT IMPROVEMENT

In order more effectively to carry out the crucial planning, design, engineering, and construction supervision for capital improvements, an engineering and

construction service, headed by a chief engineer, was established in May 1965. Previously these functions were done on an essentially minimal basis as an adjunct of the public works department operation. This management improvement step will aid in the establishment of relative capital improvement priorities, the scheduling of projects and the coordination of physical plant requirements with the program services.

The department of public works, as a result of the reorganization, has been more clearly defined as a maintenance and operation organization. Its work is carried out through five functional divisions: electrical utilities, water and sewer, facilities maintenance, public roads, and automotive and heavy equipment.

In summary, the 1967 budget estimate of $17,494,000 supports a continuing effort to keep abreast of growing requirements and in an effort to achieve a reasonable balance among programs of social, educational, economic, and political development. The capital improvements include those of most critical need.

Trust territory of the Pacific Islands

Total available, 1965	$17, 500, 000
Appropriation, 1966	17, 344, 000
Pay cost supplemental	102, 588
Total available, 1966	17, 446, 588

SUMMARY OF INCREASES AND DECREASES, 1967

High Commissioner's office: To provide for increased pay costs for fiscal year 1966 positions	+3, 412
Judiciary: To provide for an additional Associate Justice and increased operating costs	+45, 000
Grants: Net decrease due increased requirements in operating programs offset by reduced requirements for construction	−1, 000
Net increase, 1967	47, 412
Budget estimate, 1967	17, 494, 000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers	Amount available
1. High Commissioner's office	$101, 915	$262, 000	$4, 588	----------	$266, 588
2. Judiciary	135, 083	155, 000	2, 000	----------	157, 000
3. Grants	12, 478, 435	16, 927, 000	96, 000	----------	17, 023, 000
Unobligated balance available	4, 784, 567	----------	----------	----------	----------
Total	17, 500, 000	17, 344, 000	102, 588	----------	17, 446, 588

Analysis by activities

	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
1. High Commissioner's Office	$101, 915	$266, 588	$270, 000	+$3, 412	+$3, 412	----------
2. Judiciary	135, 083	157, 000	202, 000	+45, 000	----------	+45, 000
3. Grants	12, 478, 435	17, 023, 000	17, 022, 000	−1, 000	+44, 000	−45, 000
Unobligated balance available	4, 784, 567	----------	----------	----------	----------	----------
Total	17, 500, 000	17, 446, 588	17, 494, 000	+47, 412	+47, 412	----------

Summary by activity—1967 fiscal year with 1965 and 1966 comparative figures [1]

Category	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
I. Direct appropriations:				
A. High Commissioner's Office	$101,915	$266,588	$270,000	$3,412
B. Judiciary	135,071	157,000	202,000	45,000
Total, direct appropriations	236,986	423,588	472,000	48,412
II. Grants, revenue, reimbursements:				
A. Programs, administration, operations:				
1. Community services:				
(a) Medical services	1,760,687	2,377,500	2,443,000	65,500
(b) Education	3,951,903	3,791,500	4,007,000	215,500
(c) Community development	106,862	101,000	101,000	----------
Total, community services	5,819,452	6,270,000	6,551,000	281,000
2. Public affairs	142,669	248,000	215,000	−33,000
3. Resources and development	964,584	1,441,000	1,465,000	24,000
4. Protection to persons and property	402,247	434,000	454,000	20,000
5. Administration	1,864,492	2,457,000	2,543,400	86,400
6. Operation, maintenance, transportation and communications	5,445,402	4,656,000	4,662,000	6,000
7. Other program activities	908,952	85,000	----------	−85,000
Total, programs, administration and operation	15,547,798	15,591,000	15,890,400	299,400
B. Congress of Micronesia expenses	----------	96,562	145,000	48,438
C. Capital improvements	3,329,098	5,295,355	2,536,600	−2,758,755
D. Unappropriated revenues	----------	70,838	----------	−70,838
Total grants, revenues, and reimbursements	18,876,896	21,053,755	18,572,000	−2,481,755
Less—				
Estimated revenues	392,441	585,500	528,000	−57,500
Reimbursements and operating income	801,804	781,900	1,022,000	240,100
Total income	1,194,245	1,367,400	1,550,000	182,600
Less carryover from prior years	----------	2,663,355	----------	−2,663,355
Net grants required	17,682,651	17,023,000	17,022,000	−1,000
Add direct appropriations	236,986	423,588	472,000	48,412
Total—including direct appropriations	17,919,637	17,446,588	17,494,000	47,412

[1] Amounts shown in the 1966 and 1967 columns differ from the President's budget due to the approval of a reprograming request by the Bureau of the Budget subsequent to the printing of the President's budget.

Analysis of revenue distribution (recommended for appropriation by Congress of Micronesia), fiscal year 1967

II. GRANTS

	Total estimate 1967	Estimated revenues included	Net grant available
A. Programs, administration and operations:			
1. Public health	$2,443,000	$34,790	$2,408,210
2. Education	4,007,000	103,810	3,903,190
3. Community development	101,000	24,400	76,600
4. Public affairs	215,000	24,600	190,400
5. Resources and development	1,465,000	54,800	1,410,200
6. Protection to persons and property	454,000	62,000	392,000
7. Administration	2,543,400	38,000	2,505,400
8. Operations, maintenance, transportation, and communications	4,662,000	40,600	4,621,400
Total program, operations and administration	15,890,400	383,000	15,507,400

As described in the narrative of the section titled "Statement of Estimated Revenues by Source," the Congress of Micronesia did not appropriate the full $528,000 in estimated revenues for 1967, having appropriated only $145,000 for operational expenses of the Congress.

In order that a complete picture of estimated total program requirements may be presented for fiscal year 1967, the unappropriated revenues for fiscal year

1967, in the amount of $383,000, have been included in the budget and distributed programs and activities of the trust territory government.

Since the actual appropriation had not been made, this distribution anticipates an appropriation action that may not take place in the manner indicated. For this reason, this analysis of revenues distribution is here presented, showing the distribution of the revenues as proposed by the General Assembly Appropriations Committee.

No revenues distribution is proposed for the Office of the High Commissioner or Judiciary nor for the capital improvement program.

I. DIRECT APPROPRIATIONS

A. Office of the High Commissioner

Fiscal year 1966	$266,588
Fiscal year 1967	270,000
Increase	3,412

The estimate for this office is broken down as follows:

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Personnel compensation and benefits	$206,588	$242,613	$36,025
Travel and other transportation	44,450	23,035	−21,415
Supplies, material, and equipment	15,550	4,352	−11,198
Total	266,588	270,000	3,412

The amount requested covers salaries of the High Commissioner, the Deputy High Commissioner, the four Assistant Commissioners, the Special Assistant to the High Commissioner, their secretarial assistance and essential administrative and logistics expenses for operation of the executive office of the High Commissioner.

An increase of $3,412 is provided in fiscal year 1967 as compared to fiscal year 1966 to fund estimated increased pay costs on a full year basis. It was necessary to increase the "personnel compensation and benefits category" by $36,025 to reflect more properly funding experience. To provide this funding in "personnel compensation," travel and other transportation have been reduced by $21,415 and supplies, material, and equipment have been reduced by $11,198. A reassessment of "travel and transportation" requirements in fiscal year 1967 indicate that the $44,450 level will not be fully required. For material, supplies, and equipment, the major furnishing and equipping will be completed with the available funds in fiscal year 1966, and the funding requirement can be reduced in 1967 as indicated.

The Assistant Commissioners are: Assistant Commissioner for (1) Community Services, (2) Resources and Development, (3) Public Affairs, and (4) Administration. These are the four major program groupings of the trust territory government. Secretarial assistance is made up of secretaries for the High Commissioner, the Deputy High Commissioner, each of the Assistant Commissioners and the special assistant, for a total of seven U.S. secretaries.

B. Judiciary

Fiscal year 1966	$157,000
Fiscal year 1967	202,000
Increase	45,000

The estimate for this office is broken down as follows:

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Personnel compensation and benefits	$77,000	$110,000	$33,000
Micronesian judges and clerk of courts (including part-time per diem employee)	60,000	75,000	15,000
Travel and transportation	15,000	8,000	−7,000
Supplies, materials, and equipment	5,000	9,000	4,000
Total	157,000	202,000	45,000

A chief justice, responsible to the Secretary of the Interior, administers the judicial program for the trust territory. There are three levels of courts: the high court—operating in two divisions, the appellate division and the trial division—each with territorywide jurisdiction; a district court for each of the six administrative districts of the trust territory; and a community court or courts for each municipality, except where the work can be satisfactorily handled by the district court or where conditions are so primitive that it has not appeared practical to establish such courts. All of these courts are staffed entirely by Micronesians, except the high court and the Kwajalein Community Court which serves the U.S. Army's Kwajalein Test Site. A courthouse with a clerk of courts' office and two or more resident district court judges, is maintained at each district center, and a resident district court judge, with an assistant clerk of courts, is maintained at each of four outlying points of subcenters.

The increase of $45,000 requested is to provide for one additional American associate justice, one American administrative assistant well qualified in the work of clerks of courts, one additional reporter-secretary to assist the additional justice, and two Micronesian probation officers—one for the Truk district and one for the Palau district. This will bring the full U.S. judiciary staff to one chief justice, two associate justices, one administrative assistant, and three court reporter-secretaries (exclusive of the judges of the Kwajalein Community Court who perform their judicial duties without extra compensation). It will bring the Micronesian judiciary staff to 7 full-time district court judges, 15 part-time district court judges, 114 part-time community court judges (the number being subject to slight variation from time to time), one full-time administrative assistant, six full-time clerks of courts, six full-time assistant clerks, two full-time probation officers, and four part-time assistant clerks of courts. Three of these part-time personnel work on a fixed fractional time basis and the rest are paid on a per diem basis only when on duty.

The purpose of the requested additional personnel is to provide a much-needed improvement in judicial services, making a high court judge available in each of the six districts for a greater portion of the year. The trial division of the high court holds sittings regularly on a circuit-riding basis at the six district centers, and with a fair degree of regularity at three of the subcenters referred to above, in addition to sittings at outlying islands when special need arises, in order to serve 90-odd inhabited atolls or separate islands spread over an area of water approximately equal to that of the continental United States. Under present airplane schedules, with three flights a week between Guam and the trust territory headquarters in Saipan and only one flight a week regularly from Guam to the three easternmost districts of the trust territory, and one flight a week from Guam to the two westernmost districts, it takes from Monday afternoon to Wednesday afternoon to go from Saipan to Majuro, the district center of the easternmost district and from Thursday afternoon to Friday afternoon to go from Saipan to Koror, the district center of the westernmost district. For a judge to go from the easternmost district to the westernmost takes from Wednesday afternoon to Friday afternoon, and for the reverse trip takes from Friday afternoon to Wednesday afternoon. The high court judges also supervise the work of, and endeavor to train so far as time permits, the district and community court judges referred to above, and the clerks of courts and their assistants, who have had either very little or no legal training prior to their appointments. As a result, there are extended periods between high court sittings in any particular district and it is difficult, or often impossible, to coordinate sittings with field trips by boat to islands where cases have long been awaiting trial or from which witnesses are needed. An unfortunate backlog of civil actions has accumulated, totaling 235 at the end of July 1965, some of them over 4 years old and requiring special study of the

intricacies of traditional land law varying markedly in different parts of the trust territory, and it has not been possible to give the Micronesian personnal a satisfactory amount of the training they much desire.

To rectify this situation, it is proposed to station one associate justice at the district center of the easternmost district, i.e., the Marshall Islands District (which is 1,902 miles from headquarters by the shortest usually traveled air route); station the other associate justice at the district center in the westernmost district, i.e., the Palau District (which is 834 miles from headquarters by the shortest usually traveled air route); and leave the chief justice stationed in Saipan.

The American administrative assistant, also to be stationed in Saipan, would endeavor to relieve all the justices of as much administrative detail as possible, act as clerk of the appellate division of the high court, and as librarian for the central law library, supervise and train the six Micronesian clerks of courts and their assistants, prepare statistical reports, handle routine correspondence, and take charge of the judiciary office at headquarters during periods when the chief justice is away.

One reporter-secretary would be stationed with each justice. This arrangement would be in place of the employment of a law teacher-trainer, as approved for fiscal year 1965, and will more effectively meet the urgent problem of training of Micronesian personnel.

The two Micronesian probation officers are to supervise persons adjudged juvenile delinquents and those under suspended sentence, and make presentence investigations in the two districts (Truk and Palau) where the need for such assistance is greatest, one of them being stationed in each of these districts.

II. GRANT FUNDS

A. Programs, administration, and operations	$14,485,400
B. Capital improvement (construction)	2,536,600
Total	17,022,000

A grant of $17,022,000 is required for fiscal year 1967. Supplemented by local revenues and reimbursements and operating income, this grant will enable the administration to continue toward the fulfillment of the U.S. obligation to meet the responsibility for development of the people and resources of the trust territory with accelerated social, political, and economic programs.

The requested funds will carry forward the education program, it will permit some improvements to public health, it will provide for certain essential economic development programs, it will permit political and social growth, and it will support administrative and logistic activities essential for administration of the area.

Beginning with the estimate for fiscal year 1967, revenues and reimbursements and operating income are shown as separate items. The budget estimates for the Congress of Micronesia, for appropriation by the Congress of Micronesia, are also shown as a separate item.

A. Programs Administration and Operations

1. Community services

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(a) Public health	$2,377,500	$2,443,000	$65,500
(b) Education	3,791,500	4,007,000	215,500
(c) Community development	101,000	101,000	
Total	6,270,000	6,551,000	281,000

The community services area of the trust territory government represents the major program activity of the administration. The departments of health, education, and community development have been organized under the general direction of the Assistant Commissioner for Community Services who represents the High Commissioner in giving leadership to these departments. The Assistant Commissioner for Community Services also provides coordination and liaison with other Assistant Commissioners and departments as well as keeping contact with public and private agencies outside the boundaries of the trust territory.

(a) *Public health*

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(1) Medical administration	$365,000	$428,000	$63,000
(2) Hospitals	1,327,332	1,329,632	2,300
(3) Outisland services	291,558	291,558	
(4) Sanitation services	93,952	93,952	
(5) Dental services	141,658	141,658	
(6) Medical education and training	107,000	107,000	
(7) Trust territory school of nursing	51,000	51,200	200
Total	2,377,500	2,443,000	65,500

The trust territory department of public health has responsibility for the total health care program of the entire population of Micronesia. The 6 district hospitals and 3 field hospitals with about 120 field dispensaries, with their limited facilities and personnel, are essentially the only sources of medical services throughout the trust territory. During fiscal year 1965, the department of public health was placed under the administrative direction of the Assistant Commissioner for Community Services. This, plus additional medical staff, will further aid in the efforts to discharge more fully responsibilities to prevent disease and to give medical care to the approximately 90,000 people of the territory.

Emphasis has been placed in assigning fully qualified M.D.'s in each of the six districts, and also on the preventive measure of continuing a mass immunization program. Plans for upgrading the existing facilities will continue, which will include the addition of R.N. nursing supervision, as well as special public health programs in the specific areas of certain diseases such as tuberculosis, leprosy, and filariasis.

(1) Medical administration:

Fiscal year 1966	$365,000
Fiscal year 1967	428,000
Increase	63,000

This fund provides for the services of the Director of Public Health and his staff in the divisions of Administration, Preventive Medicine, Nursing, Sanitation, Dentistry, Statistics, Pharmacy, and Health Education.

The increase includes $2,500 for pay costs. The $60,500 balance will be placed in the contingency fund to augment the $60,000 budgeted in 1966 for use in epidemics and medical emergencies in the districts. This fund will have to cover the ordinary increases of personnel payroll, rising costs of medical supplies and materials, population increases, and increased utilization of services within the territory. It does not allow for increased cost of referral of patients to the Guam Naval Hospital, and in actuality there will be a reduction of general hospital services.

In fiscal year 1965 patients referred to the U.S. Naval Hospital, Guam, spent a total of 1,327 days in the hospital at $5 per day; a total of $6,635. Outpatient visits totaled 139 at $1 per visit. This same service based on an increase to $42 per day for inpatients and $8 per visit for outpatients, effective July 1, 1965, will cost $56,846. Although fully qualified M.D.'s will be stationed in each district the number of referrals is not expected to decrease but rather increase because of better diagnostic knowledge and technique.

(2) Hospitals:

Fiscal year 1966	$1,327,332
Fiscal year 1967	1,329,632
Increase	2,300

The increase of $2,300 is for pay costs. Funds include provision for one qualified M.D. in each of six districts. None of the 35 Micronesian medical officers have as yet obtained an M.D. degree. The polio rehabilitation center is budgeted as part of the Marshall Islands general hospital. An additional staff of 16 nurses and nurse aids is necessary to service the 60-bed institution. Approximately 30 patients will occupy the center in 1966 and it is anticipated that by 1967 the center will be fully occupied. Patients from other districts with diseases

or conditions requiring physical therapy and rehabilitation will be referred to this center.

In fiscal year 1965 an estimated 10,230 inpatients were treated in hospitals as compared with an estimated 9,600 in 1964; an increase of 630 over the previous year. This does not include newborn. An estimated 53 percent of all newborn were delivered in hospitals. Hospitals in fiscal year 1965 reported an average daily census of 370 or about 80 percent occupancy—238,128 were treated in outpatient clinics. One of the most costly services provided by hospitals is the feeding program. Costs vary greatly among the six districts because of the transportation charges in imported goods. Since very little produce or meat is available locally, most items must be imported.

It is estimated that 500,000 meals will be served in all hospitals in fiscal year 1967 at an average cost of $0.30 per meal for a total food cost of $150,000.

(3) Outisland services:

Fiscal year 1966	$291,558
Fiscal year 1967	291,558
No change	

The outisland budget includes $60,000 for continuing the mass immunization program. It is anticipated that the continuing immunization program will stabilize at about this figure or slightly less. Approximately 62,000 persons or an estimated 60 percent of the population have been immunized according to the basic plan for the mass immunization program. It was planned that 1966 would complete the final phase of this program except for continuing booster inoculations and immunization of newborn. However, because of the difficulty in transportation and logistic support to some of the outer islands this has not been possible. Therefore, it is necessary that this program continue to be funded for the purchase of portable refrigerators and in some instances even small boats and motors, in addition to the purchase of vaccine and supplies.

The remaining $231,558 is to provide supplies, assistance, and medical personnel to approximately 120 dispensaries. In fiscal year 1966 about 30 health aids previously paid by local municipalities were placed on the trust territory payroll in order to control working hours, standardize salaries, and to select the best qualified dispensary worker rather than have him appointed by the municipal head. There remain several dispensary workers on the municipal payrolls and it is planned that they will become full-time trust territory employees in fiscal year 1967.

(4) Sanitation services:

Fiscal year 1966	$93,952
Fiscal year 1967	93,952
No change	

This allows only for continuation and maintenance of existing essential programs in sanitation; i.e., pest control, health education, purchase of equipment and supplies.

(5) Dental services:

Fiscal year 1966	$141,658
Fiscal year 1967	141,658
No change	

In fiscal year 1965, 15,000 children under age 16 and 12,500 persons age 16 and over were examined and treated. It is anticipated that in fiscal year 1966 a new director for the division of dental services will be recruited on Headquarters Public Health staff. His salary will come out of headquarters administration fund. Filling this position will improve the general and stimulate added interest in continuation of dental preventive programs, particularly in schoolchildren.

(6) Medical education and training:

Fiscal year 1966	$107,000
Fiscal year 1967	107,000
No change	

No increase will occur. However, this fund will permit the Department to continue to enroll approximately 40 students at various colleges in the United States, the Philippines, Guam, and Fiji in medical and paramedical programs.

It will also allow the Department to send medical officers to East-West Center sponsored refresher and special training courses, and allow the Department to carry out limited inservice training efforts. One or two medical officers will be enrolled in a special training program at Georgetown University, Washington, D.C., to study toward the M.D. degree.

Consultant fees, their transportation and per diem are charged to this account. It is expected that in fiscal year 1967 more consultants from the U.S. Public Health Service and other agencies will be called upon to assist in training doctors and nurses in their own locale, particularly in the public health field, as well as to cope with specific health problems.

(7) Trust Territory Nursing School:

Fiscal year 1966	$51,000
Fiscal year 1967	51,200
Increase	$200

The Trust Territory Nursing School will be able to continue its present enrollment of approximately 30 students without further increase in staff or facilities. The $200 increase is for pay costs.

(*b*) *Education*

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(1) Education administration	$333,533	$338,533	$5,000
(2) Secondary education	1,063,958	1,064,958	1,000
(3) Elementary education	1,866,218	2,074,718	208,500
(4) Scholarship and special training	434,744	434,744	
(5) Adult education	93,047	94,057	1,000
Total	3,791,500	4,007,000	215,500

A thorough study of education in the trust territory between 1960 and 1962 demonstrated conclusively that much upgrading was needed. This study indicated, among other factors, the following:

1. The elementary school program was supported by the local municipalities which were completely unable to provide adequate buildings, equipment, instructional supplies, or teachers' salaries.
2. The 566 elementary teachers who were the product of this school program averaged 9 years of this local schooling.
3. Although the inadequate 6-year village schools were fairly well distributed throughout the territory, there were only 6 trust territory intermediate schools which offered programs for the seventh through ninth years, and enrollment in these schools averaged no more than 1,100 and 1,200 students. Teachers in these schools had from 9 to 12 years of schooling. School buildings were extremely poor, equipment was almost nonexistent, and instruction was either in the local languages or in very poor English.
4. One high school offering the 10th through the 12th years was provided, and this accepted a total enrollment of approximately 165 students from the entire territory. This school was properly housed, equipped, and staffed.

As a result of the study, new goals were established. In brief, they are as follows:

1. Universal free education through grade 12.
2. Compulsory education for ages 6 through 15.
3. Opportunities beyond high school in technical, professional, and trade areas for all interested and capable persons.
4. Establishment of English as the language of instruction in all schools.
5. Practical adult education for those beyond school age.

To best accomplish these objectives, the department of education is placing its major emphasis in the following areas:

1. Employment of the maximum number of elementary teachers who are qualified by training and experience, and in the use of English.
2. Provision for the maximum number of scholarships in the technical trade, and college areas.
3. Inservice training and other upgrading programs for Micronesian teachers who lack adequate education and/or who need training in English.

4. Development of high schools which are properly housed, equipped, and staffed.

5. Development of adult literacy programs and other training in the field of adult education.

By fiscal year 1966, it is anticipated that the following circumstances will prevail:

1. Approximately 200 of our total of approximately 900 classroom teachers in grades 1 through 12 will be fully qualified, as compared with approximately 10 qualified teachers in 1962.

2. English will be taught in all classes where Americans are assigned, and to an increasing degree in those classes being taught by Micronesians.

3. Enrollment will have increased to approximately 23,500 of which approximately 2,500 are expected to be in the secondary schools, of which 6 now extend through the 12th grade, and 2 extend through the 10th grade.

4. Full scholarships to colleges and to trade and technical schools will be provided for approximately 125 students and partial scholarships for approximately 60 additional students.

5. Approximately 165 Micronesian teachers will have received 1 year of additional education and training at a below-college level, and approximately 45 more will receive this training during the year.

6. Adult education is being extended throughout the territory by radio, and by special classes in populated areas.

7. Inservice training is being provided for all Micronesian teachers by special institutes during the summer months.

8. More than 333 modern elementary classrooms will have been constructed and equipped.

(1) Education administration:

Fiscal year 1966	$333,533
Fiscal year 1967	338,533
Increase	5,000

The $5,000 increase is for pay costs.

At the headquarters level, staff consists of the director and a deputy director; three coordinators in the elementary, secondary, and adult education and scholarship areas; two specialists in library services and in the teaching of English as a second language; plus the necessary clerical and secretarial assistance. At the district level, the staff generally consists of a qualified educational administrator, plus a small staff of Micronesians to assist in reference to local culture and in clerical and routine matters.

As the education program develops and as enrollment of students increases, additional professional leadership and technical assistance will be needed at both the headquarters and the district levels.

(2) Secondary education:

Fiscal year 1966	$1,063,958
Fiscal year 1967	1,064,958
Increase	1,000

The $1,000 increase is for pay costs.

During the past 4 years, enrollment has increased from 165 students in 1 high school to approximately 2,500 in fiscal year 1966 in 8 high schools. In fiscal year 1967, it is anticipated that the number of students who wish to enroll in the secondary schools will again increase. The extent to which the additional potential can be accommodated in the future will be determined by the extent to which additional facilities, staff, and other support can be provided.

(3) Elementary education:

Fiscal year 1966	$1,866,218
Fiscal year 1967	2,074,718
Increase	208,500

The increase would provide for the employment of approximately 25 additional qualified American teachers. In September 1965 approximately 1 of every 6 elementary teachers was qualified (approximately 126 of a total of 750). The increase in American personnel will allow additional emphasis on the program of teaching English as a second language, and will provide additional staff to help accommodate increased enrollment. Again, note should be taken of the fact that

considerably greater increases must be made in qualified staff in the years ahead if the rapidly increasing enrollment is to be suitably instructed. Along with this increase in staff must also be the increase in the support of the program—buildings, maintenance, equipment, supplies, and other instructional materials.

(4) Scholarship and special training:

Fiscal year 1966	$434,744
Fiscal year 1967	434,744
No change	

No change is anticipated in this program.

Under scholarship and special training are included the following: Full scholarships for college, technical, and trade training; partial scholarships to the College of Guam; transportation scholarships to various schools; operation of the trust territory dormitory at the College of Guam; and operation of the Micronesian Teachers Education Center in Ponape, under a contract with the University of Hawaii.

In fiscal year 1966, it is estimated that the program will provide for the following assistance:

1. Full scholarships—approximately 125.
2. Partial scholarships, Guam—approximately 60.
3. Transportation scholarships—approximately 46.
4. Trust territory dormitory—for all scholarship students on Guam. (It is anticipated that between 89 and 100 students will be housed at the dormitory.)
5. Micronesian Teacher Education Center—approximately 45.

Note should be taken of the fact that as the number of high school graduates increases each year, more students will qualify for advanced education and should be provided scholarships. Further, it is hoped that the Micronesian Teacher Education Center program can be doubled in enrollment.

(5) Adult education:

Fiscal year 1966	$93,047
Fiscal year 1967	94,047
Increase	1,000

The $1,000 is for pay costs.

The primary objectives of the program are to (1) bridge the educational gap that is developing between the older generation of Micronesians and the young people who are benefiting from the improving elementary and secondary school programs; (2) to provide the older persons instruction in many practical skills needed to improve their standard of living, including increased literacy in English; and (3) to provide education and training opportunities which will enable those of postschool age to improve their employability.

(c) Community development

Fiscal year 1966	$101,000
Fiscal year 1967	101,000
No change	

The community development department coordinates the activities of the trust territory government as they concern the needs of specific communities in the territory. These communities, ranging in size from single villages to entire atolls, are typically rural but many activities of community development also focus on more advanced and populous sites. The various technical knowledge and material resources of the government that may be available are brought to bear upon specific needs of designated communities. The people are ecouraged to define their needs with the help of the district community development staff.

Headquarters expenditures include salaries and allowances of staff and financial support of special district activities. These special activities are onsite training for community leaders in such areas as home management, fishing, operation and maintenance of mechanical equipment, and environmental sanitation. Financial assistance may also be provided the districts in meeting contingencies, usually during the planning and initial stages of district community development projects.

Headquarters community development supervises the trust territory film library, a depository of U.S. Government, United Nations, and nongovernmental films. It has an inventory in excess of 150 movie and still films.

In the various districts, rural area programs include diversified programs ranging from rural electrification in the Marshalls to village beautification in Yap. Rural area programs emphasize health and environmental sanitation at first, with later expansion into economic betterment, and improved communication and transportation. Other district activities are: Women's interest programs, such as women's clubs, family, and home management; girl scouting; museum and parks, which includes preservation of historical sites; urban affairs; and youth activities, such as youth corps; organized recreation.

Staffing arrangement at present is as follows:

Headquarters:	
United States	2
Micronesian	4
District:	
United States	0
Micronesian (includes 3 part-time trainees)	19

No major deviation from this staffing plan is envisaged.

2. Public affairs

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(*a*) Political affairs	$55,000	$65,000	$10,000
(*b*) Legislative expenses	50,000		−50,000
(*c*) Public information	42,000	42,000	
(*d*) Broadcasting	50,000	60,000	10,000
(*e*) Literature producing office	51,000	48,000	−3,000
Total	248,000	215,000	−33,000

Public affairs covers the areas of political development; public informational services, including broadcasting services; the literature production (publications) center; and for research coordination and international agency coordination.

(*a*) Political affairs:

Fiscal year 1966	$55,000
Fiscal year 1967	65,000
Increase	10,000

The increase of $10,000 will permit a small increase of the work of the headquarters political affairs office. The formation of the Congress of Micronesia has imposed a greater workload at the territorial level. The funds requested will provide for the headquarters staff consisting of a Micronesian political affairs officer, an American assistant political affairs officer, a Micronesian assistant political affairs officer, a secretary, and a Micronesian clerk-typist. The increase will support an increase in training programs for the six district political affairs staffs, the staff of the district legislatures, staff and members of municipal council, and the staff members of the new Congress of Micronesia. The total funds requested also include approximately $5,000 per district to support the small political affairs staffs in each district.

(*b*) Legislative expenses:

Fiscal year 1966	$50,000
Fiscal year 1967	
Decrease	50,000

The decrease of $50,000 has resulted from the transfer of the item of legislative expenses to the budget of the Congress of Micronesia.

(*c*) Public information:

Fiscal year 1966	$42,000
Fiscal year 1967	42,000

The public information office is responsible for the distribution of information on the trust territory and for preparation of official reports for submission to government and international agencies. In addition to these official reports, which include the High Commissioner's annual report to the Secretary of the

Interior and the annual report to the United Nations, the information office is responsible for the issuance of the trust territory magazine, the Micronesian Reporter (eight issues per year), for periodic reports of various types, and for press releases for internal and external use. Since no specific district information offices exist, the headquarters information office provides technical aid and other assistance to the districts with respect to information and photographic requirements.

The $42,000 needed will defray the expenses of an American chief public information officer, a Micronesian information officer, an American information and research specialist, a secretary-information aid, a Micronesian clerk, and a part-time junior photographer. Included in the allocation are travel and related expenses; photographic costs; equipment, materials, and costs of printing of the Micronesian Reporter; and costs of purchases or printing of other public relations informational material, such as the annual handbook of information on the trust territory.

(*d*) Broadcasting services:

Fiscal year 1966	$50,000
Fiscal year 1967	60,000
Increase	10,000

Fiscal year 1966 saw the establishment of radio broadcast stations in all six districts of the territory but three of these new broadcast stations—i.e., those in Saipan, Ponape, and Yap—operated only on a part-time schedule as a result of lack of trained personnel as well as limited funds.

The $60,000 requested will permit a small increase in time on the air and in headquarters support of the six district broadcast stations. The daily broadcast schedule provides about 20 percent news and 40 percent educational programs of various types. The headquarters broadcast center is staffed by an American broadcast and program manager and two Micronesian assistants. The center provides original program material for all district broadcast stations, maintains a central library of tapes and records, and operates a duplicating service for all district stations. It is planned that each district radio station will ultimately broadcast on a full 12- to 14-hour day.

(*e*) Literature production:

Fiscal year 1966	$51,000
Fiscal year 1967	48,000
Decrease	3,000

Up to the end of fiscal year 1965 all territorial printing was obtained from outside the territory, there being no facilities within the territory. The fiscal year 1966 budget included provision for a territorial printing establishment which is scheduled to be fully operational by fiscal year 1967.

A decrease of $3,000 between fiscal years 1967 and 1966 is anticipated and results largely from realinement of expenses from those of acquiring specialized equipment and other initial expenses to the more normal expenses of operating a printing plant. The plant will include offset printing facilities and facilities for camera work and platemaking. Equipment expenses will decrease while supplies, material, and staff requirements will increase.

The total estimate for the fully operational plant if $48,000. This covers salaries for a superintendent of printing, a secretary-proofreader, and nine Micronesian technicians—i.e., camera technician, printer, machine specialist, as well as clerical, binding, and storeroom staff—all supplies and materials, travel and related expenses of staff to districts in connection with the Micronesian training programs, and acquisition of necessary specialized bindery room equipment.

3. Resources and development

	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
(*a*) Agriculture division	$756,000	$760,000	$4,000
(*b*) Economic development division	403,000	500,000	97,000
(*c*) Economic development loan fund			
(*d*) Office of land management	177,000	178,000	1,000
(*e*) Transportation administration office	25,000	27,000	2,000
(*f*) Roi Namur land claims	80,000		−80,000
Total	1,441,000	1,465,000	24,000

The activities within the department of resources and development, through its program divisions, are directly concerned with increasing the potential resources and economic opportunity for Micronesians. The functional efforts of the department include the broad areas of conservation and development of fisheries and agricultural resources from an almost totally subsistence economy to one having strong elements of an income-producing nature.

The department has as a part of its mission the encouragement of developing local enterprises as well as providing incentives for larger scale industrial development; continued growth of cooperatives and credit unions to encourage savings and local participation in the economy.

Highest and best uses of private and government lands, the promotion of increased homesteading activity, and development of larger tracts of lands for public and private use, fall within the responsibilities of the department.

The division of transportation is responsible for the development of sea, air, and land transportation services; for their coordination with other governmental activities and the private sector of the economy; and for insuring that full capabilities of the transportation system are available for development of the Trust Territory.

(a) Agriculture division:

Fiscal year 1966	$756,000
Fiscal year 1967	760,000
Increase	4,000

The fiscal year 1967 agriculture division budget will be distributed as follows:

Headquarters	$85,480
District agriculture stations	374,000
Development and promotional programs	300,520
Total	760,000

The fiscal year 1967 budget provides for continuation of the agriculture program at essentially the 1966 level; the $4,000 is for pay costs. The agriculture division program goal continues twofold emphasis on crop development for local consumption and for export to develop cash income.

The coconut is the main source of farm income and copra exports of 26-million-plus pounds with a value of $2 million during fiscal year 1965 remain as the major export product of the territory. The 10-year coconut rehabilitation and subsidy program started 6 years ago continues with annual distribution of 200,000 selected seednuts, a systematic replacement of senile palms and thinning of overcrowded groves throughout the territory. Cacao continues to be developed as a secondary cash crop; an export tonnage of 60,000 pounds is estimated for fiscal year 1967 from Ponape and Truk. Black pepper is being promoted as a commercial crop at Ponape with 30 farm contracts established with an estimated output of 5,000 pounds for fiscal year 1966 and double that in fiscal year 1967. Rice production is also being developed at Ponape to help meet territorywide needs; an estimated 60,000 pounds production is expected in fiscal year 1967. Vegetable and fruit crop production is being emphasized in the Marianas Islands with an estimated farmer cash income of $150,000 expected for fiscal year 1967. Beef production is also being expanded in the Marianas to cover Trust Territory needs and export to the Guam market; slaughter of 500 head for local consumption is estimated for fiscal year 1967. Coconut fiber production development continues in Truk.

In addition to the development and promotional programs, the agriculture division carries on an extension program in all six districts of the territory. Agricultural extension bulletins, circulars, and leaflets are written by division staff. Twelve extension publications were issued in fiscal year 1966 and an estimated 20 is expected for fiscal year 1967. The Trust Territory Farm Institute at Ponape continues to train 24 agriculture trainees in basic practical tropical agricultural techniques each year. The physical plant is expected to be enlarged so that enrollment can be increased to 36 and the course extended to a 2-year program.

The agriculture division also maintains six agricultural development stations and several substations and demonstrational farms throughout the territory for support of the extension program. District agriculture departments carry on quarantine inspection on all ships and aircraft entering the trust territory. A program of plant disease control by the staff plant pathologist headquartered on Ponape is part of the division program for all districts; work on coconut, cacao, rice, pepper, citrus, breadfruit, and other crop disease investigation and control is carried on. Insect and plant pest control is also carried on by the staff entomologist headquartered in Palau. The entomology program includes controls for coconut rhinoceros beetles, other coconut beetles, fruitflies, scale insects, giant african snail, lantana, plus control of minor pests. The plant disease and entomology investigation and control programs are vital to sustained agricultural production.

Forestry and conservation program development for the territory was initiated in fiscal year 1966 with a forestry resources survey currently underway. The program is supervised by the staff forestry-conservation officer whose headquarters is in Palau. A broad development program for forestry and conservation will be developed during fiscal year 1967. Forestry-conservation fieldwork was started in Palau district and will be extended to other districts as funds and trained personnel are available.

(*b*) Economic development division:

Fiscal year 1966	$403,000
Fiscal year 1967	500,000
Increase	97,000

The fiscal year 1967 economic development budget will be distributed as follows:

1. Economic development operations unit	$225,000
2. Economic development and cooperative development	107,200
3. District economic development offices	69,500
4. Fisheries program	83,300
5. Boatbuilding	15,000
Total	500,000

The $97,000 increase for the economic development division includes $30,500 in additional funds for economic development and cooperative development operations and $66,500 for district development offices. Funds for district economic development offices were provided in prior years in the office of the district administrator; inclusion of the request in the resources and economic development portion of the budget will provide better budget and cost control.

(1) The economic development operations unit was established in fiscal year 1965 to provide essential leadership, stimulus, and guidance in the overall economic development program. The establishment of this unit followed recommendations made by various visiting missions and survey groups that had analyzed economic problems of the territory. The unit is to prepare and maintain an economic plan based upon increasing use of Micronesian resources; prepare market analyses and feasibility studies of commodity production; provide advisory services regarding capital improvement with economic impact; provide advisory services to Micronesian and other investors; and provide technical and managerial assistance to Micronesian businessmen. A 2-year contract has been entered into with an American economic development firm that began operations in early 1965 combining project planning with implementation. The contract provides for a three-man field staff and makes available a wide range of expert assistance needed for making the economic analyses that will be used in formulating and implementing policies and programs designed to encourage maximum exonomic development of the Trust Territory.

(2) (3) The $107,200 requested for economic development administration will provide funds for a staff economist and secretary, a Micronesian economic develop-

ment officer, a headquarters cooperative officer, and three district cooperative officers (in Ponape, Truk, and Palau districts), and will provide their logistic support. There is an increasing pace of economic and cooperative activity throughout the Trust Territory and this governmental support is urgently needed.

The $69,500 for district economic development offices covers local level economic development activities including cooperatives, credit unions, and advisory and research services related to business, and other mercantile developments.

(4) (5) The territory's fishing and boat building program is presently centralized in Palau. A leading American seafood and fishing company began operations in Palau at the end of fiscal year 1964 with a fleet of 6 tuna boats, later increased to 12. In addition, seven Micronesian-owned vessels are fishing tuna out of Palau for this company. Indigenous fishermen are employed on the boats learning the trade from professional tuna fishermen. As proficiency is attained they will replace the alien fishermen who will be repatriated upon expiration of their contracts without replacement. At least one additional commercial tuna fishing operation is indicated for Truk in the first part of fiscal 1966, and considerable interest has been shown by some foremost American fishing and packing companies in other districts. The Government has employed an American boatbuilder to assist a local group in Palau in designing and building small craft utilizing modern materials and construction techniques. Boatbuilding trainees from other districts are receiving training at this yard, which is under government supervision. Boats are built here to order for private buyers and for departments of the Trust Territory Government. Plans for fiscal year 1967 call for the construction of eight government boats for all districts and for the active extension of the fishing program to Truk and Ponape. Sixty fisheries trainees are presently at Palau and twenty at Honolulu; most of these trainees will require return transportation to their home districts in fiscal year 1967.

(c) Economic development loan fund:

Fiscal year 1966	0
Fiscal year 1967	0

No change.

This fund has been financed during the past 3 years by annual appropriations of $100,000 each year. It operates through district loan review committees and a Headquarters Loan Review Board to assist individuals and groups in the establishment of new industries and commercial ventures, and to provide capital for expansion of existing business. Loans have been made to transportation companies (both land and marine), livestock and poultry raisers, commercial and trading companies, furniture makers and boatbuilders, and a variety of small entrepreneurs. Loans are made directly, or through commercial banks with the fund a guarantor for the loan. Public Law 88-487, approved August 22, 1964, authorized the transfer to the fund of the $369,000 in assets of the former "Loans to trading companies" fund. The total amount currently available for loans is $319,467. Pending analysis of economic development potentials and further experience with the fund, no additional increment is requested in 1967. It is expected that the fund should ultimately amount to $1 million.

(d) Division of land management:

Fiscal year 1966	$177,000
Fiscal year 1967	178,000
Increase	1,000

The increase is attributable to pay costs. Program emphasis of a high order will be placed on land tenure problems and land utilization. Since approximately 60 percent of all land in the trust territory is owned by the Government, skilled land management and development is vital to the economic well-being of Micronesia. The Division of Land Management carries out title determinations, surveying and boundary verification, homesteading programs and work with district land advisory boards on the uses of public lands. The division also works with districts and local people on resettlement problems involving housing and agriculture. The staff of the division includes the land management officer, the chief surveyor, 3 surveyors, 2 land title officers, and 66 Micronesian personnel.

(e) Transportation administration office:

Fiscal year 1966	$25,000
Fiscal year 1967	27,000
Increase	2,000

The additional $2,000 requested covers increased travel and per diem costs of the transportation officer, including the administrative and clerical costs of his office. The transportation office has the responsibility of coordinating air, land, and water transportation activities and related facilities such as terminal operations, aids to navigation, rates, routes, marine inspection and licensing procedures, tariffs, schedules, and compilation of statistical data. Particular emphasis is put on Government contractual and private (commercial) carriers with increased attention being given to the development of Micronesian participation.

The operational costs of sea and air transportation services are covered in "Administration and operations for transportation services" elsewhere in this budget estimate. Only the salary, travel requirements, and office equipment and supplies of the American transportation officer and clerical assistance are included within the $27,000 figure.

(*f*) Roi Namur land claims:

Fiscal year 1966	$80,000
Fiscal year 1967	0
Decrease	80,000

Nonrecurring item.

4. Protection to persons and property

	Estimate 1966	Estimate 1967	Increase (+) or decrease (−)
(*a*) Office of the attorney general	$90,000	$90,000	
(*b*) Public safety	310,000	310,000	
(*c*) Public defender	34,000	54,000	$20,000
Total	434,000	454,000	20,000

(*a*) Office of the attorney general:

Fiscal year 1966	$90,000
Fiscal year 1967	90,000
No change	

There is no increase in the estimate for the office of the attorney general in fiscal year 1967. Headed by the attorney general of the trust territory, this office provides comprehensive legal services and assistance to the high commissioner and his staff at headquarters and throughout the trust territory. The attorney general is assisted by two assistant attorney generals, an administrative assistant and two American secretaries and two Micronesian clerical assistants.

The expenses of the district attorney are also included in this estimate because he functions under the direction of the attorney general. The district attorney represents the Government in all matters, civil and criminal, in which the Government is a party. A significant portion of the district attorney's expenses is travel and per diem since the district attorney must attend court in all six districts, which requires that he travel approximately 75 percent of the time.

(*b*) Public safety:

Fiscal year 1966	$310,000
Fiscal year 1967	310,000
No change	

There is no increase in the estimate for the department of public safety. During fiscal year 1965, a Micronesian assistant director of public safety was hired to assist the director of public safety. The department provides protection to persons and property in a literal sense because the unit is responsible for both police and fire protection throughout the trust territory. The district constabulary and fire departments and the office of the director of public safety at headquarters make up this department. Supervising and training of 167 employees throughout the trust territory requires the director of public safety and/or his assistant to be away from headquarters at least 50 percent of the time. Travel expenses, therefore, provide a significant portion of the budget.

It is still necessary to maintain a special guard complement to patrol the area known as Marpi on the island of Saipan because of the high incidence of unexploded World War II explosives in the area. In connection with this it has been necessary occasionally to employ the services of the U.S. naval explosive ordnance teams. Travel and per diem for these teams is paid from the funds of the department of public safety. In addition, replacement of uniforms and equipment is a constant expense.

(c) Public defender:

Fiscal year 1966	$34,000
Fiscal year 1967	54,000
Increase	20,000

The increase of $20,000 in this office is to provide for the employment of an attorney, assistant to the public defender (American), (approximately $11,000) plus necessary travel ($3,000), equipment ($2,000) and supplies and miscellaneous ($1,000) requirements for this new position. The remaining $3,000 will meet normal salary increments and modest equipment and supplies improvements in the regular program.

Planned improvements in the judiciary to meet the increasing number and complexity of cases will require comparable improvements in the legal services provided by the office of the public defender. The employment of the attorney-assistant described above will facilitate coverage of cases in the wide geographic area of the trust territory and will permit an increased level of training to be given Micronesian trial personnel.

The trust territory makes available to its citizenry the services of a public defender to insure that no person shall be deprived of legal counsel and representation because of race, creed or economic factors. In addition to the American public defender and the newly provided for American attorney-assistant, there are 12 Micronesian assistant public defenders and counselors. None of the latter has received a law degree. The 1967 funds will provide, in addition to the service of the new attorney-assistant, an improved training and upgrading program for these assistant public defenders and counselors to the betterment of public defense in the trust territory.

5. Administration

	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
(a) Office of district administrators	$333,227	$340,000	$6,773
(b) Administrative services	287,300	308,000	20,700
(c) Budget and finance	356,373	335,000	−21,373
(d) Audit division	34,200	34,400	200
(e) Headquarters personnel office	68,700	79,000	10,300
(f) Property and supply	397,000	390,000	−7,000
(g) Guam liaison office	79,000	53,000	−26,000
(h) Management improvement unit	44,200	21,000	−23,200
(i) Engineering and construction services	67,000	83,000	16,000
(j) Initial and home leave transportation	700,000	800,000	100,000
(k) Personnel benefits	90,000	100,000	10,000
Total	2,457,000	2,543,400	86,400

(a) Office of the district administrator:

Fiscal year 1966	$333,227
Fiscal year 1967	340,000
Increase	6,773

Of the increase of $6,773, pay costs account for $2,000. The remaining $4,773 will provide further support for administrative requirements at Ebeye in the Marshall Islands and Kusaie, in the Ponape District. Ebeye is an important substation in that it is within the Kwajalein Atoll, and with the proximity of the missile program at Kwajalein conducted by the U.S. Government, it has become a congested area with inherent problems arising from slumlike conditions. Kusaie is a major population center in the Ponape District, and in fiscal year 1965, was established as a specific "subdistrict," in recognition of the unique and more complicated administrative and other requirements of this island. The increase

will also cover salary increment requirements and equipment and supply replacements.

The office of the district administrator is the central administrative and executive activity for each of the six districts of the trust territory. Headed by the district administrator, each district has one or two assistant district administrators (both United States and Micronesian), secretarial, clerical and administrative staffs. In addition to provision for salary costs, this estimate provides for travel costs incurred by the district administrator, his assistants, and other members of this activity, and necessary equipment such as typewriters, adding machine, file cabinets, desks, etc., as well as other material and supplies to carry out the functions of this office.

(*b*) Administrative services:	
Fiscal year 1966	$287,300
Fiscal year 1967	308,000
Increase	20,700

An increase of $20,700 has been provided this activity to defray more adequately the costs of operation, as well as to provide for salary increments and modest replacement of wear and tear to equipment. There is an administrative services section in each of the six districts, as well as an administrative services office at headquarters. The distribution is as follows:

(1) Headquarters administrative services	$104,000
(2) District administrative services	204,000
Total	308,000

The major increase over the level of funding for 1966 is $17,600 in headquarters, with the district increase of $3,100 primarily to defray salary increments and to provide modestly for equipment replacement and better stocking of necessary supplies.

At headquarters, this activity serves as a supplier to most headquarters offices on common-use office supplies, provides the voluminous mimeographing and other duplication services, operates the mail and files services, and provides employee housing assignments, immigration and consular services, and various other service functions. In addition, most official cablegrams sent through commercial cable services (not through the regular trust territory communication network), necessitated by dealings with private individuals and concerns, are charged to this activity. The increase to headquarters administrative services will primarily be used to stock more adequately common-use office items, the cupboard inventory of which has dwindled to an unsatisfactory level, to make ncesssary equipment replacements, and to fund the costs of commercial cables.

District administrative services provide basically the same service to the various districts as the headquarters office. The personnel office functions of the district are also included here, as separate personnel offices are not presently maintained at the district level. The salaries of the district administrative officers, who supervise finance, supply, personnel, and other housekeeping functions, are also included in this category.

(*c*) Budget and finance:	
Fiscal year 1966	$356,373
Fiscal year 1967	335,000
Decrease	21,373

This activity is made up a headquarters budget and finance department and a district finance office in each of the six districts. The activity is headed by a director of budget and finance, located at headquarters, who provides direction, supervision, and management over the entire budgetary, allotment, accounting, collection, and treasury functions of the trust territory, including technical direction and supervision over district finance offices, working through the district administrators.

The major divisions established in fiscal year 1966 at headquarters are: (1) the office of the director, (2) the budget division, headed by the budget officer, (3) the finance division (including accounting, payroll, accounts payable, and accounts receivable) headed by the finance officer, (4) the treasury division, headed by the treasurer, and (5) the revenues division, headed by the revenue officer. The need for the revenue division results from the fact that the Congress of Micronesia dur-

ing the first session in July 1965 enacted new tax revenue measures which imposed new tax collection and accounting responsibilities upon the department of budget and finance.

The accelerated development program launched in fiscal year 1963 was the beginning of an accelerating rate of growth and development in trust territory construction, programs, and operations. The budget and finance functions were inadequately staffed to cope with the added workload. In fiscal year 1966 steps were taken to cope adequately with the work volume, to provide useful management information for the direction of this expanded program, to meet the need for a major upgrading in the quality and quantity of budgetary and financial management.

The funds requested will be utilized in continuing the upgrading of organization and staffing begun in fiscal year 1966.

(*d*) Audit division:	
Fiscal year 1966	$34,200
Fiscal year 1967	34,400
Increase	200

The office of the internal auditor performs comprehensive audit services for the High Commissioner, and for other departments, such as budget and finance, upon approved requests. Although this office is budgeted under this grouping of "Administration," the internal auditor is directly accountable to the High Commissioner.

Audits are performed on governmental accounts, special and trust funds, including typhoon rehabilitation accounts involving Office of Emergency Planning (OEP) grants and reimbursements.

The audit division is staffed by an internal auditor (United States), an assistant internal auditor (United States), plus Micronesian audit trainees.

(*e*) Headquarters personnel office:	
Fiscal year 1966	$68,700
Fiscal year 1967	79,000
Increase	10,300

This office is headed by the personnel officer, who is assisted by personnel specialists in staffing and placement, training, classification as well as secretarial and clerical employees. This estimate is for the headquarters costs of the personnel program only; district personnel programs expenses are included in the category "Administrative services."

The personnel office administers a comprehensive personnel program involving approximately 500 off-island hires, the majority of which are U.S. civil service personnel, and approximately 3,000 Micronesian employees, in various professions, trades, and skills. In addition to the usual personnel functions of recruitment, placement, termination, promotion, etc., the personnel office administers the home and annual leave programs, travel arrangements for employment, termination, and leaves, the incentive award program, workmen's compensation, and other personnel benefits programs.

The $10,300 increase will primarily be utilized to improve the staffing and organization of the personnel office. The volume of business and demands upon the personnel office has increased greatly since the inauguration of the accelerated program of the trust territory, and the staffing and equipping of the personnel office has not properly kept apace with this. Off-island employment more than doubled, from 222 in fiscal year 1963 to approximately 500 in fiscal year 1966, with further increases anticipated.

(*f*) Property and supply:	
Fiscal year 1966	$397,000
Fiscal year 1967	390,000
Decrease	7,000

The property and supply department is headed by a U.S. director of property and supply, with a headquarters office and operation at Saipan, as well as district supply offices in each of the six districts. This department handles all procurement of material, supplies and equipment of all classes for the trust territory government including procurement of material for the construction program. Included in this function are processing of requisitions and purchase orders, main-

tenance of inventories, packaging, packing and crating for deliveries and household effects, management of warehouses, etc. In addition, the Property and Supply Department administers the property accountability program, the survey and disposal program and the U. S. Department of Agriculture (USDA) surplus commodity program for the trust territory.

Procurement of equipment, material and supplies involves considerable planning, coordination and delivery and leadtime allowances, because the major source of goods is the United States. Furthermore, intratrust territory supply involves long delivery lines of over 2,500 miles from the eastern to the western ends of the territory.

In addition to warehouses and other storage facilities at the districts, a central supply depot is maintained at headquarters in Saipan, storing a fairly large inventory of common-use items, as well as end-use commodities awaiting delivery. To finance this inventory of common-use items, a supply stock fund is maintained, from which is funded, on a revolving-fund basis, inventories of medical supplies, spare parts and general stores, as well as packaged and bulk fuel and other petroleum products. Fuel deliveries and storage, in all districts, remain under the title and custody of the supply department until withdrawn for usage by end-use activities. At the present time, most fuels used by private citizens of Micronesia are initially imported by the Government, for sale to bona fide dealers.

For fiscal year 1967, the property and supply budget has been decreased by $7,000 compared to fiscal year 1966. This reduction has been made possible by realinement of certain costs to end-use activities and by relinquishing of transportation agency function to private contractors. The $7,000 reduction has primarily been made at the district level. The fiscal year 1967 distribution has been estimated as:

(1) Headquarters property and supply	$235,000
(2) District property and supply offices	155,000
Total	390,000

(g) The Guam liaison office:

Fiscal year 1966	$79,000
Fiscal year 1967	53,000
Decrease	26,000

The Guam liaison office of the trust territory government is located at Agana, Guam. The primary function of this office is to perform coordinative and logistic support services on Guam for the Office of the High Commissioner, the headquarters departments and the district administrators in the areas of transportation, communications, procurement and supply, finance, and education; and to contact on their behalf, other government (including military) and nongovernment activities, agencies and commercial firms on the island of Guam.

In September 1965 (fiscal year 1966), the liaison office was moved from its former location in what was known as the trust territory compound, to a more suitable location in Agana. Simultaneously the liaison office operation was reorganized, both actions permitting a $26,000 reduction in the estimated requirement of this office. Supply activities and funding at Guam has been placed under the director of property and supply at headquarters (in Saipan) and education functions and funding at Guam, including student affairs and dormitory operation, under the director of education, also located at headquarters in Saipan. The trust territory hotel operation at Guam has been transferred to a private operator.

The Guam liaison office estimate covers the remaining vital functions of the liaison office, including the office of the liaison officer, and the liaison office transportation, finance, and communication functions.

(h) Management improvement unit (formerly titled special project office):

Fiscal year 1966	$44,200
Fiscal year 1967	21,000
Decrease	23,200

The decrease of $23,200 results from the reassignment of the former special projects officer to special assistant to the High Commissioner, and absorption of this cost in the Office of the High Commissioner.

The management improvement unit, headed by the management improvement officer, bears responsibility for organization and management policy and

procedural analysis and improvement. It administers, compiles, disseminates, and polices implementation of the trust territory manual of administration.

(*i*) Engineering and construction services:

Fiscal year 1966	$67,000
Fiscal year 1967	83,000
Increase	16,000

Prior to May 1965 (fiscal year 1965), the engineering and construction services was conducted as a collateral function of the director of public works. On May 12, 1965, the High Commissioner established the engineering and construction service, headed by a newly employed chief engineer, in recognition of the need for a clearly defined, well-organized engineering and planning division for the greatly accelerated and expanded construction program of the trust territory. This service has been established as a separate, but coordinated, body from the reorganized department of public works (maintenance and operations) headed by the director of public works.

The $83,000 requested in fiscal year 1967 provides funds for the staffing and administrative expenses of this recently established engineering and construction services.

Under the direction of the chief engineer, this service is responsible for the planning, administration and implementation of the authorized trust territory government capital improvement program. This includes master planning of physical features; the preparation of adequate engineering designs and specifications; the organization of construction activities, and the provision of necessary supervision and inspection; and, with respect to construction performed by contract, the administration of such contracts. The service provides engineering services and related technical assistance to insure the adequacy of structures and facilities constructed and maintained by the government.

(*j*) Initial and home leave transportation expenses:

Fiscal year 1966	$700,000
Fiscal year 1967	800,000
Increase	100,000

The funds here requested will defray the transportation costs of newly recruited employees to the territory; round trip home leave travel expenses; and return transportation for terminated employees. The increase in the estimate is based upon experience in the accelerated programs gained over the last 3 years. Allocated to the several program areas, the estimated initial and home leave transportation expenses are as follows:

Medical services	$45,100
Education	394,500
Community development	13,400
Public affairs	9,600
Resources and development	79,300
Protection to persons and property	16,300
Public works and communication	149,400
Administration	92,400
Total	800,000

These transportation funds cover the transportation costs of off-island employees and their dependents from their point of recruitment, including allowable household effects shipment, and return to point of recruitment on termination of employment. Employees renewing their 2-year employment agreements are allowed round trip travel by the most direct route to and from their recruitment points. In computing these costs an average of $2,900 one-way recruitment and termination estimate was used and a $3,800 two-way renewal estimate. An allowance for the costs of shipping household effects is used in the recruitment and termination travel estimates.

(*k*) Personnel benefits:

Fiscal year 1966	$90,000
Fiscal year 1967	100,000
Increase	10,000

The $100,000 estimate represents the personnel benefits requirements for all trust territory programs. Included here are payments of educational allowances to eligibile employees, unemployment compensation and workmen compensation and other governmental insurance costs, incentive awards payments, and other personnel benefits type costs.

6. Operations, maintenance, transportation, and communication

	Estimate, 1966	Estimate, 1967	Increase or decrease
(a) Air transportation services	$500,000	$500,000	
(b) Sea transportation services	1,000,000	1,000,000	
(c) Communication services	302,000	303,000	$1,000
(d) Operations and maintenance of physical facilities	1,814,000	1,819,000	5,000
(e) Operations and maintenance of utilities	890,000	890,000	
(f) Heavy equipment purchases	150,000	150,000	
(g) Cargo handling			
Total	4,656,000	4,662,000	6,000

(a) Air transportation service:

Fiscal year 1966	$500,000
Fiscal year 1967	500,000
No change	

The $500,000 estimated for fiscal year 1967 will defray the costs of the trust territory air service. The air service contract with Pan American World Airways specifies payment on a mileage basis. For fiscal year 1965, the total mileage-based costs came to $806,555, against which revenues of $323,169 were realized. This left the government's net cost at $483,386. "Net cost" largely represents the cost of the carriage of government personnel on official business and shipment of government cargo. For both fiscal year 1966 and 1967, it is felt that the $500,000 level of funding for "government costs" will be required.

The air fleet is made up of one 4-engine DC–4 aircraft and two amphibious SA–16 aircrafts.

During the period of July 1, 1964 to June 30, 1965, over 20,000 passengers were carried on the trust territory air routes. Transportation of mail and air cargo during the same period amounted to 462,870 pounds. A thoroughgoing analysis of air service to insure maximum use of aircraft and facilities was begun in the first half of the 1966 fiscal year.

The aircraft are home-based at Guam, due to the availability of maintenance and operational facilities and central location, and provide weekly service to all districts, except to Saipan where a three-times-a-week service is provided. Numerous special flights are also required and provided. All districts have land airfields and receive servicing by the larger DC–4, except Ponape, where a land field is still under construction and water landing by the smaller SA–16's is still required.

(b) Sea transportation services:

Fiscal year 1966	$1,000,000
Fiscal year 1967	1,000,000
No change	

The previous sea transportation service which was handled on a cost-plus-fixed fee arrangement with Pacific Micronesian Line, Inc., was terminated on August 30, 1965. New proposals had been published and following careful evaluation, the contract was awarded to the United Tanker Corp. operating as the "Micronesian Line." The new contract is a complete new concept from the previous arrangement in that the contractor pays all operating and vessel maintenance costs (rather than the government) and the government receives 25 percent of the gross receipts from the operations. The Micronesian Line contract involves the main logistic service utilizing three vessels; namely the MV *Gunners Knot*, MV *Pacific Islander* (both C1–MAV1-type vessels of 3,518 and 4,218 gross tons, respectively) and the MV *Palau Islander*, the latter an elongated AKL-type vessel.

For field trip services within the districts, the trust territory government is now in the process of entering into contracts with local Micronesian shipping organizations to operate the service, utilizing one AKL-type vessel, the *Ran*

Annim, and four commercial-type cargo passenger vessels from 200 to 500 gross tons, the *Militobi*, *Kasalelhia*, *Yap Islander*, and *Truk Islander*.

The estimate of $1 million for fiscal year 1967 represents the amount that will be required for official government cargo and passenger services on the three logistic vessels (Micronesian Line), operating between district centers, Guam and Japan, and on field trip vessels, operating on established routes to outer islands within each district, and for freight charges on cargo shipped from the United States and other ports into the trust territory. For fiscal year 1967, it is estimated that costs will be broken down as follows:

Freight on cargo from outside trust territory	$400, 000
Freight and Pax costs for official cargo and passengers within the trust territory	500, 000
Other transportation requirements	100, 000
Total estimated	1, 000, 000

The $1 million estimate does not include the freight and passenger burden for the construction program, the supply inventory fund or the POL fund (petroleum, oil and lubricants), since these funds defray their own freight expenses.

The "receipts income" to the trust territory generated by the Micronesian Line and with the several field trip service operators will be to the credit of the trust territory transportation fund, and will serve as a source of funds with which to defray the total costs of transportation requirements.

(c) Communication services

Fiscal year 1966	$302, 000
Fiscal year 1967	303, 000
Increase	−1, 000

The increase of $1,000 is attributable to pay costs. Headed by a director of communications, this activity has two basic functions, the operational aspects involving operations and administration of the district and headquarters communications stations; and the repairs and equipment aspects under the electronics maintenance depot.

A major communication station is located in each of the six district centers forming a closely integrated network communicating with each other through common radiotelegraph and radiotelephone networks. Each station is equipped with facilities for communications with aircraft, shipping, outer islands and point to point. The Truk station relays traffic destined for outside points through a direct radioteletype circuit to the Naval Communication Station, Guam. Radio beacons are a part of each station and furnish navigational assistance to ships and aircraft. All maintain a 24-hour guard on a number of frequencies including international distress frequencies. District communication stations also provide commercial radiogram service on a revenue basis and provide the considerable volume of service for U.S. Weather Bureau stations.

A number of secondary stations are located in remote islands in each district. These are small radiotelephone stations using 100-watt single-side-band equipment on common frequencies. Additional stations are required in order to meet population requirements.

Government broadcast stations are in operation in each of the six district centers. In addition to educational and entertainment programs, these stations disseminate items of interest to outer islands, including storm warnings, ship movement reports and personal messages of an urgent nature.

The operations section is responsible for the manning and operation of all the above facilities except the broadcast stations. This activity employs two U.S. specialists and 60 Micronesians.

The maintenance section is responsible for all electronic equipment maintenance for the above facilities. This includes procurement of equipment and engineering of new installations. This activity employs 7 U.S. specialists and 16 Micronesians.

The $303,000 budget request for this department will permit the operation and maintenance of existing facilities as well as the purchase of a very limited amount of replacement equipment. It will not provide the major rebuilding required for substantial communication improvements, or the two-way radio installations required for the numerous isolated out-island populations presently without communications.

(d) Operation and maintenance of physical facilities

	Estimate, 1966	Estimate, 1967	Increase or decrease
(1) Headquarters, public works administration	$114,000	$160,143	$46,143
(2) Headquarters, area public works, operation and maintenance	179,000	250,000	71,000
(3) District public works, operations and maintenance	1,471,000	1,372,857	−98,143
(4) Central repair shop (Saipan)	50,000	36,000	−14,000
Total	1,814,000	1,819,000	5,000

The "Operation and maintenance of physical facilities" grouping of activities, more commonly termed "Public works" is responsible for the maintenance and operations of the physical facilities of the trust territory administration, including items such as roads, public buildings, dwellings, harbors and docks, refrigeration facilities, powerplants and distribution facilities, water systems, heavy equipment, rolling stock, small boats, etc. In addition to maintenance and operations, certain classes of construction are carried out by this department when feasible under local supervision and force account. Utilities costs (water, power, and telephone) are budgeted and justified as a separate item (see item e, "Operation and maintenance of utilities"), although supervision and administration of the utilities program is under the jurisdiction of this department.

The estimate of $5,000 is expected to provide minimum maintenance standards for a physical plant valued at more than $40 million. The public works area is also one of the major producers of operating income in the trust territory. In fiscal year 1967 public works activities, exclusive of utilities proceeds, will provide about $533,000 of the estimated $1,022,000 total in reimbursements and operating income, an increase of about $145,000 over the 1966 estimate.

(1) Headquarters, public works administration:

Fiscal year 1966	$114,000
Fiscal year 1967	160,143
Increase	46,143

Headed by the director of public works, the department of public works at headquarters, develops technical standards relating to all aspects of the operation and maintenance of physical plant and public work facilities within the districts; provides technical supervision of electric utility services, water and sewer services, building and facility maintenance, public road program, and the assignment, maintenance, and operation of automotive and heavy equipment (including marine facilities and small boat services).

The department at headquarters include the following functional divisions:

1. Electric utilities division.
2. Water and sewer division.
3. Division of facilities maintenance.
4. Division of public roads.
5. Division of automotive and heavy equipment

Of the $46,143 increase provided for the headquarters public works administration, $29,000 will be used for employment of additional qualified personnel to meet increased workload caused by additional physical plant added to the operations and maintenance requirement; $10,000 will provide for the necessary increased travel of headquarters staff advisers and technicians to properly carry out their territorywide functions and the remaining $7,143 will purchase the necessary equipment and supplies to carry out these functions. The foregoing organization was approved on May 12, 1965, together with the establishment of the engineering and construction service.

(2) Headquarters area public works operations and maintenance:

Fiscal year 1966	$179,000
Fiscal year 1967	250,000
Increase	71,000

The actual expenditure in fiscal year 1965 for headquarters operations and maintenance came to approximately $255,000, with rental income amounting to $72,000. For fiscal year 1967, an estimated $250,000 will be required with rental income expected to be about $85,000.

Headquarters area public works operations and maintenance involves the maintenance and upkeep of 91 employee dwellings on Capitol Hill, at trust territory headquarters in Saipan, 8 administration area public buildings, including the administration building, a complex of buildings in the headquarters central supply and central equipment repair shop area, and 5 buildings in the central communication center, and surrounding grounds.

(3) District public works, operations and maintenance:

Fiscal year 1966	$1,471,000
Fiscal year 1967	1,372,857
Decrease	98,143

Each of the six districts of the trust territory has a district public works department, headed by a district public works officer assisted by a leadingman and senior general mechanics, and employing electricians, plumbers, carpenters, equipment operators, clerical employees, etc. The primary function of the department is that of operating and maintaining government-owned physical facilities, public utilities, and related public works facilities. This program includes the maintenance of public buildings and quarters, airport and terminals, rehabilitation and construction of public roads and highways, operation and maintenance of refrigeration plants, automotive and heavy equipment repair shops, operation of vehicular and small boat transportation services and the many other "public works" type functions necessary in the administration, development and well-being of the district centers and the many communities making up Micronesia.

Utilities operation and maintenance (power, water, and telephone) is a major function of the district public works departments. For budget purposes, utilities have been separately funded (see item e below), but constitutes a major and integrated function of the public works department.

The total $1,372,857 requested in fiscal year 1967 is minimal to sustain the current level of maintenance and operations; and studies, analyses, and development of standards are being pushed on a "crash" basis to provide management with better information to develop more comprehensive and accurate estimates of requirements in the future. The administration, programs and facilities of the trust territory have increased at an accelerated pace which has, in some cases, outstripped the necessary planning, accounting, development of statistical information, and development of standards of maintenance and operation necessary to develop fully realistic estimates of actual requirements in this public works area.

(4) Central repair shop (Saipan):

Fiscal year 1966	$50,000
Fiscal year 1967	36,000
Decrease	14,000

The central repair shop is located at Saipan, in the Mariana district, and performs major overhaul of automotive and other heavy equipment for the entire trust territory. Under the general supervision of the director of public works, the shop is headed by a quarterman, who is assisted by two leadingmen and a staff of Micronesian mechanics, machinists, welders, clerical, and other employees.

The central repair shop provides a territorywide service, since the necessary skill and tooling for the more complex overhauls and repairs are not available at the various districts. In addition to providing specialized major overhaul and repair services, the central repair shop serves as a central coordinating and supervisory organization for the territory in control, maintenance, and operation of the equipment needed as a vital tool for the various operations and construction programs of the trust territory.

Work is performed by the central repair shop on a reimbursable basis, with the district, activity, or project charged with the cost of repairs and overhauls. Initial materials and supplies are obtained through utilization of the spare-parts inventory stock. For this reason, the $36,000 required can be termed "net," and represents only overhead, staffing, and tooling costs of the shop.

(e) Operations and maintenance of utilities

Fiscal year 1966	$890,000
Fiscal year 1967	890,000
No change	

Beginning with the fiscal year 1966 estimates, the estimated costs for operation and maintenance of utilities, power, water, and telephone, were shown as a separate item within the general heading of "Operations and maintenance of phsyical facilities." The cost of operations and maintenance of these services constitute a major program within the public works area.

All government activities at district centers and headquarters are provided with full utilities services, consisting of electricity, water, and telephones, except for Yap and the Marshalls, where telephone service is not yet fully developed. In addition to administrative facilities and off-island employee dwellings, most of the major commercial establishments and many residences and private institutions within the district center and immediate perimeter are serviced by water, power, and telephone services. In areas with sparse natural water storage features, such as the coral atolls of the Marshalls, storage and conservation of water is a major problem. Expansion of utilities services to areas more remote from the district center is in demand and is being pushed as rapidly as practicable.

The Mariana district, particularly the island of Saipan is the most extensively developed with respect to utilities availability and consumption; and the expense of utilities production and distribution, as well as the level of operating income, is the highest. For this reason, and to serve as a prototype for future development of utilities agency funding in other districts, the Saipan Utilities Agency was established in fiscal year 1966 as a distinct entity within the Mariana district public works framework. It is estimated, in fiscal year 1966, that the income to the Saipan Utilities Agency, including a $330,000 contribution by the Government for its own utilities consumption, will come to $464,000, with anticipated cash income from sale to private individuals coming to $134,000. Against this $464,000, a like amount in expenditure is estimated for a break-even operation.

In the $890,000 provided in this fiscal year 1967 estimate for utilities requirements, which is the same as for fiscal year 1966, $330,000 is therefore to defray the cost of payment to the Saipan Utilities Agency for utilities consumption by the Government on Saipan Island, and the remaining $560,000 is for distribution throughout the rest of the trust territory for utilities operation and maintenance. The income from private sources for district utilities services other than Saipan, is included in the income estimate titled "Reimbursements and operating income." The $134,000 in income to the Saipan Utilities Agency is included as part of the operating fund of the agency and is not included in the territorywide reimbursements and operating income total.

(*f*) Heavy equipment purchases:

Fiscal year 1966	$150,000
Fiscal year 1967	150,000
No change	

This estimate provides for the purchase of heavy equipment and rolling stock required in the operations and maintenance (public works) program for the trust territory, as well as in the construction program. Included for purchase within this category would be such items as trucks, bulldozers, cranes, forklifts, etc.

The estimate of $150,000 in fiscal year 1967 is the same as was provided in fiscal year 1966. There is a continuing need for replacement of worn and outdated heavy equipment and rolling stock, and the $150,000 each for fiscal year 1966 and 1967 is part of a gradual program of replacement and improvement of the heavy equipment and rolling stock inventory of the trust territory.

Consolidated activities breakdown of 1967 estimates between nonconstruction and construction items

	Nonconstruction	Construction	Total estimate, 1967
I. Direct appropriation:			
A. High commissioner's office	$270,000		$270,000
B. Judiciary	202,000		202,000
Subtotal	472,000		472,000
II. Grants:			
A. Programs, administration, and operations:			
1. Community services:			
(a) Medical services	2,443,000	$90,000	2,533,000
(b) Education	4,007,000	1,126,600	5,133,600
(c) Other community services	101,000		101,000
Subtotal	6,551,000	1,216,600	7,767,600
2. Political development public information, and other public affairs	215,000		215,000
3. Resources management and development	1,465,000	50,000	1,515,000
4. Protection to persons and property	454,000		454,000
5. Administration	2,543,400	395,000	2,938,400
6. Operations, maintenance, transportation, and communications	4,662,000	875,000	5,537,000
Subtotal	15,890,400	2,536,600	18,427,000
B. Congress of Micronesia	145,000		145,000
Subtotal	16,035,400	2,536,600	18,572,000
Less:			
Estimated revenue	528,000		528,000
Estimated reimbursements	1,022,000		1,022,000
Net grants required	14,485,400	2,536,600	17,022,000
Add: Direct appropriations	472,000		472,000
Total estimate, fiscal year 1967	14,957,400	2,536,600	17,494,000

Statement of estimated revenues by source

	Actual, 1965	Estimate, 1966 (adjusted)[1]	Estimate, 1967	Increase or decrease (−)
Cosmetics, perfumery, and toiletries tax	$7,011	$9,500	$10,000	500
Cigarette tax	[2] 64,284	[2] 101,250	120,000	18,750
Other tobacco products tax	[3]	[2] 10,000	14,000	4,000
Beer and malt beverage tax	[3]	31,000	50,000	19,000
Distilled alcoholic beverage tax	[3]	32,000	60,000	28,000
Wine tax	[3]	2,000	5,000	3,000
Nonalcoholic beverage and soft drinks tax	[3]	5,000	7,500	2,500
General imports tax	[3]	61,500	100,000	38,500
Copra export tax	290,469	300,000	120,000	−180,000
Trochus shell export tax	1,193	1,250	1,000	−250
Scrap metal export tax	14,705	12,500	12,500	
Motor vehicle fuel tax	[3]	8,400	12,000	3,600
Licenses and permits	5,912	2,600	5,000	2,400
Fines, forfeits, and penalties	4,282	3,000	4,000	1,000
Court fees	4,585	5,550	7,000	1,500
Total	392,441	585,500	528,000	−57,500

[1] The fiscal year 1966 revenues have been adjusted from the original submission to take into account tax legislations passed by the First Congress of Micronesia which take effect Oct. 1, 1965 (except for the copra and trochus shell taxes, which starts July 1, 1966).
[2] Other tobacco product tax income combined with cigarette tax in fiscal year 1965 and 1966.
[3] These taxes not collectible at trust territory wide level in fiscal year 1965.

Revenues

Secretarial Order 2882, dated September 18, 1964, with an amendment, dated June 10, 1965, promulgated by the Secretary of the Interior, established the First Congress of Micronesia, effective July 12, 1965. Amendment No. 1 states that: "Money bills enacted by the Congress of Micronesia shall not provide for the appropriation of funds in excess of such amounts as are available from revenues raised pursuant to the tax laws and other revenue laws of the Trust Territory * * *."

In prior year submissions (including fiscal year 1966), all "revenues," as defined above, as well as reimbursements and operating incomes of the government had been combined and titled "Estimated local revenues." For fiscal year 1967, tax and related revenues are shown separately from "Reimbursements and other operating income."

The Congress of Micronesia, in its first regular session of 1965 (July 12, 1965–Aug. 11, 1965) passed the following revenue and appropriation acts.

1. Public Law 1–9, dated August 25, 1965.—"Providing for the levy of an excise tax on the use, distribution or sale of motor vehicle fuel, and for other purposes." (Five cents per gallon, effective Oct. 1, 1965.)

2. Public Law 1–10, dated August 25, 1965.—"Providing for the levy of an export tax on copra, trochus shell, and scrap metal, and for other purposes." (Copra and trochus shell, 10 percent on export, effective July 1, 1966; scrap metal, various rates, effective Oct. 1, 1965.)

3. Public Law 1–11, dated August 26, 1965.—"Making an appropriation of funds necessary for the operational costs of the Congress of Micronesia for fiscal year 1966" ($96,562 to supplement $50,000 appropriated by the U.S. Congress for fiscal year 1966 for this purpose).

4. Public Law 1–12, dated August 26, 1965.—"Making an appropriation of funds for the operational costs of the Congress of Micronesia for fiscal year 1967" ($145,000).

5. Public Law 1–13, dated September 3, 1965.—"Providing for taxes on imports into the Trust Territory of the Pacific Islands, and for other purposes." (Rates vary, depending on commodity imported. Effective Oct. 1, 1965.)

The estimated revenues for fiscal year 1967 has been based on the foregoing tax measures. For fiscal year 1966, the revenues estimates have been adjusted to take into account the effect of the tax measures, most of them effective October 1, 1965.

For fiscal year 1967, of the $528,000 in revenues estimated for fiscal year 1967, the Congress of Micronesia appropriated $145,000 for its own expenses. (Public Law 1–12, dated Aug. 26, 1965.) It did not, however, act on the remaining $383,000 that the administration had requested be appropriated to the various government programs and operations. On the premise that such funds will be made available to the government by the Congress of Micronesia in subsequent sessions, the $383,000 "unappropriated revenues" have been distributed to various program activities in accordance with the report of the appropriations committee of the General Assembly of the Congress of Micronesia.

For fiscal year 1966, the revenue yield prior to passage of the new tax measures was estimated at $418,000. The new tax measures have raised the estimate to $585,500 or an additional estimated yield of $167,400. Of this additional yield, the Congress of Micronesia appropriated $96,562 as a supplemental appropriation to help defray expenses of the 1965 session. (Public Law 1–11, dated Aug. 26, 1965.) The Congress did not appropriate the remaining $70,838 in "additional revenues." Since this $70,838 was not included in the expenditure estimates of the trust territory government in its original budget estimates for fiscal year 1966, this amount has been set aside as "unappropriated revenues" in the fiscal year 1966 column, pending further action by the Congress of Micronesia.

Statement of reimbursements and other operating income

Source of income	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (—)
Building, land and dwelling rental	$229,928	$225,000	$282,000	$57,000
Equipment rental	26,586	25,000	50,000	25,000
Medical and dental fees	65,575	75,000	80,000	5,000
Public works sales and services	109,049	138,000	201,000	63,000
Agricultural products sales	10,039	6,500	8,000	1,500
Utilities, sales of power	208,206	167,400	210,000	42,600
Utilities, sales of water	46,037	50,000	75,000	25,000
Utilities, telephone	9,785	10,000	15,000	5,000
Commercial cable income	68,578	70,000	85,000	15,000
Other reimbursements	[1] 28,021	15,000	16,000	1,000
Totals	801,804	781,900	1,022,000	240,100

[1] Other reimbursements for 1965:

Interest income (not applicable after 1st quarter. Fiscal year 1965 due change in treasury cash withdrawal system)	$6,000
Typhoon donation and contribution	734
Miscellaneous sales and services (mimeo service, Trust Territory passport, etc.)	3,416
General government, all others	2,780
Public safety, all others	54
Guam dormitory revenues	10,189
School, all others	2,157
Land management	299
Unclassified	2,322
Sale of alien property	25
Laundry charges	45
Total	28,021

Reimbursement and other operating income

These items of income to the trust territory government are considered as reimbursements of expenditure made by the government, and/or income generated by virtue of business-type operations of the government. These funds are not considered to be subject to appropriation by the Congress of Micronesia.

B. Capital Improvement Program

Type of improvement	Available, 1966	Estimate, 1967
I. General government:		
(a) Administrative	$24,905	
(b) Judicial buildings	172,445	$100,000
(c) Legislative buildings	30,000	
(d) Employee housing	276,055	295,000
Total	503,405	395,000
II. Roads and streets:		
(a) Primary roads	290,891	150,000
(b) Secondary roads		
Total	290,891	150,000
III. Health:		
(a) Hospitals	2,260,017	
(b) Clinics		90,000
Total	2,260,017	90,000
IV. Schools:		
(a) Elementary	521,000	400,000
(b) Secondary	539,000	726,600
Total	1,060,000	1,126,600
V. Agriculture facilities	125,000	50,000
VI. Radio and electronic	28,042	
VII. Airfields	300,000	200,000
VIII. Public utilities:		
(a) Water	125,000	225,000
(b) Power	278,000	250,000
Total	403,000	475,000
IX. Docks, piers, and port facilities		50,000
X. Aircraft	225,000	
XI. Planning, design, and A. & E	100,000	
Total capital improvements	5,295,355	2,536,600

B. Capital improvement program

Fiscal year 1966	$5,295,355
Fiscal year 1967	2,536,600
Decrease	2,758,755

The fiscal year 1967 construction request has been developed in an effort to continue to place top emphasis on education and health facilities but with attention given to necessary supporting facilities such as roads, transportation, communications, and to those urgently needed facilities contributing to the social and economic development of the trust territory.

Projects requested in fiscal year 1967

I. General government facilities, $395,000

Judicial—Courthouses, $100,000.—These funds will permit the continuation of the program to construct new and adequate courthouses in each of the district centers. The 1967 program calls for $27,445 to complete the dilapidated Ponape Courthouse and the construction of a new courthouse on Majuro in the Marshall Islands.

Employee housing, $295,000.—This is part of a continuing program to construct new quarters in each of the districts to meet staffing needs or to replace the inadequate World War II quonsets which continued to be utilized. The 1967 plan includes five houses on Saipan for both headquarters and Mariana Islands district personnel, and two additional houses in the centers of each of the five remaining districts. Estimated cost is approximately $19,500 per house which includes $2,000 for appliances and furnishings.

II. Roads and streets, $150,000

These funds are required for a continuation of the trust-territory-wide roads and highway rehabilitation and extension program. With a constantly increasing population and an increase in the economic development program of the territory,

additional and improved roads are required to permit further access into the larger islands, particularly in the Palau, Ponape, and Truk districts, to serve isolated communities and areas of actual or potential economic development. These programs are coordinated with the plans of the various district legislatures and the municipal councils.

III. Health, $90,000

Fifty thousand dollars is requested for the improvement of the subhospitals at Kusaie and Ebeye leaving approximately $10,000 each for four dispensaries urgently needed at Woleai in the Yap district, Tol and the Mortlocks in the Truk district, and Ngarrard in the Palau district. The construction will entail the remodeling and enlargement of existing facilities or the addition of new where required.

IV. Schools, $1,126,600

Elementary, $400,000.—Plans for the budget year call for the construction of 6 permanent classrooms on Saipan and 30 emergency classrooms to meet rapidly expanding enrollment as present facilities are inadequate in all districts. Material currently on hand will be used for these classrooms. The estimate also includes A. & E. planning for future construction.

Secondary, $726,600.—The estimate provides $30,000 each for improvement of school kitchens at Majuro and Truk; $345,000 for emergency classroom additions at Majuro, Ponape, Kusaie, and Yap; and $321,600 for teachers quarters and A. & E. planning for future construction.

V. Agriculture facilities, $50,000

The distribution of these funds to district projects will permit a continuation of the expanding agriculture program throughout the territory on a limited scale. Plans call for a new irrigation system on the island of Tinian (in the Mariana district); a crops processing building in Palau; a new substation building in Yap; a cacao receiving and fermentary in Truk; increased facilities at the farm institute in Ponape; and improved facilities at the various substations within the Marshall district.

VI. Airfields, $200,000

The Majuro strip, constructed shortly after the war, is deteriorating rapidly. It serves as not only a landing field, but is needed for rain catchment; $125,000 has been planned to remove buried rotting logs from the base of the strip and to provide for crowning and resurfacing it; $75,000 will crown and resurface the Truk airstrip.

VII. Public utilities, $475,000

Water storage and distribution, $225,000.—Fifty thousand dollars of these funds are planned for expansion of the present facilities on the island of Saipan to meet the needs of a growing population and the new economic development projects of the island, $75,000 is required for additional catchments and services at Majuro, and $100,000 is allocated for supporting water services for the new administrative and educational construction projects in remaining districts.

Powerplants and distribution, $250,000.—Of these funds, $150,000 will be utilized at Saipan, Yap, and the Marshalls to extend power services to outlying areas where population increases and the growth of local industries have placed greater demands on the present facilities; $100,000 will be used to provide necessary power services to the new administrative and education projects in the remaining districts.

VIII. Docks, piers, and related facilities, $50,000

These funds are required for limited improvements and additions to present harbor and dock facilities throughout the trust territory to meet the increased transportation needs of the district centers. The estimate will permit a start on improvements planned at Rota, Ponape, and Yap.

Summary of capital improvements by districts (1967 fiscal year)

Type of improvement	Marianas	Palau	Yap	Truk	Ponape	Marshalls	Trust territory wide	Total
I. General government:								
(a) Courthouses						$100,000		$100,000
(b) Employee housing	$100,000	$39,000	$39,000	$39,000	$39,000	39,000		295,000
Subtotal	100,000	39,000	39,000	39,000	39,000	139,000		395,000
II. Roads and streets							$150,000	150,000
III. Health clinics		10,000	10,000	20,000	25,000	25,000		90,000
IV. Schools:								
(a) Elementary							400,000	400,000
(b) Secondary							726,600	726,600
Subtotal							1,126,600	1,126,600
V. Agricultural facilities	12,500	7,500	5,000	7,500	10,000	7,500		50,000
VI. Airfields				75,000		125,000		200,000
VII. Public utilities:								
(a) Water	50,000					75,000	100,000	225,000
(b) Power	50,000		50,000			50,000	100,000	250,000
Subtotal	100,000		50,000			125,000	200,000	475,000
VIII. Docks and piers							50,000	50,000
Total capital improvements	212,500	56,500	104,000	141,500	74,000	421,500	1,526,600	2,536,600

III. CONGRESS OF MICRONESIA APPROPRIATION

These acts are:

Public Law No. 1–11, dated August 26, 1965, pertaining to a supplemental appropriation in the amount of $96,562 for the operational costs of the Congress of Micronesia for fiscal year 1966.

Public Law No. 1–12, dated August 26, 1965, pertaining to an appropriation of funds for the operational costs of the Congress of Micronesia for fiscal year 1967.

For fiscal year 1966, the total estimated expenses of the congress came to $146,562 as indicated in Public Law No. 1–11. Of this amount, $50,000 had been included in the trust territory administration estimate in public affairs, titled "Legislative Expenses." The $96,562 appropriated by the Congress of Micronesia is a supplemental amount to bring the total available funds to the required $146,562.

For fiscal year 1967, the Congress of Micronesia has appropriated $145,000 for the operational expenses of the congress. The two appropriation acts, Public Law 1–11 and Public Law 1–12 follow:

IV. SPECIAL AND TRUST FUNDS

The Trust Territory Government Financial Administration involves administration and management of several trust, special and administrative funds, as follows:

1. Copra stabilization fund.
2. Saipan trust fund.
3. Land use and occupancy fund.
4. Supply stock fund.
5. Literature production revolving fund.
6. Hotel operations income statement.
7. Sea transportation revolving fund—income statement.
8. Economic development loan fund.
9. Typhoon emergency rehabilitation fund—operating statement.

Itemization of estimate

	Actual 1965	Estimate 1966	Estimate 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$12,715,433	$22,231,155	$17,494,000	−$4,737,155
Unobligated balance available, start of year		−4,784,567		+4,784,567
Unobligated balance available, end of year	+4,784,567			
Appropriation	17,500,000	17,446,588	17,494,000	+47,412
Obligations by objects:				
11 Personnel compensation	188,984	321,000	367,000	+46,000
12 Personnel benefits	9,016	23,000	25,000	+2,000
21 Travel and transportation of persons	20,015	37,000	36,000	−1,000
22 Transportation of things		10,000	10,000	
23 Rent, communications, and utilities		1,000	2,000	+1,000
24 Printing and reproduction		2,000	2,000	
25 Other services	12,533	16,000	16,000	
26 Supplies and materials	4,100	9,000	9,000	
31 Equipment	2,350	5,000	5,000	
41 Grants, subsidies, and contributions	12,478,435	21,807,155	17,022,000	−4,785,155
Total obligations	12,715,433	22,231,155	17,494,000	−4,737,155

MAJOR UPGRADING OF PROGRAMS AND CAPITAL IMPROVEMENT PROGRAM

Chairman HAYDEN. Commissioner Goding, would you please present your statement to the committee?

Commissioner GODING. Mr. Chairman, it is a real pleasure to be back with you again. I would like to introduce the two gentlemen at my right, Mr. Hawkins, assistant commissioner for community services; and Mr. Patton, the director of budget and finance.

I think it would be expeditious if I read into the record a very brief statement that I have here.

Chairman HAYDEN. Very well.

Commissioner GODING. As the committee knows, significant increases in the levels of expenditures have been granted over the past 4 years to enable us to initiate a major upgrading of our programs and to institute a capital improvement program designed to replace and rehabilitate the physical plant needed to carry out our mission in the territory.

Appreciable progress has been made in all areas but it is recognized also that this progress represents only the initial phase of a long-range effort to bring our program activities and physical plant up to the standard required to accomplish our mission in the trust territory.

EDUCATION AND HEALTH

Primary emphasis in the first stage of acceleration has been in the fields of education and health. The expansion in these areas, particularly in education, has resulted in a larger portion of our budget being required for operating programs leaving less for construction in comparison with previous years.

OPERATIONS AND CONSTRUCTION ALLOCATIONS

Eighty-six percent of this year's request is for operations and 14 percent for construction. Our essential construction needs are by no means met but this ratio is required this year in order to keep program growth and development abreast with capital improvement.

EDUCATION AND MEDICAL CARE

The $4,007,000 requested for public school education this coming year will permit us to provide better schooling for some 21,000 elementary pupils, 2,800 secondary pupils, full college scholarships for 125 students, 60 partial scholarships, and special training for an estimated 185 Micronesian personnel, as well as a limited adult education program.

Increased expenditures have improved medical care programs in district hospitals. They have also provided for the first phase of a massive immunization program to immunize the entire population of the territory against smallpox, diptheria, tetanus, pertussis, typhoid, and paratyphoid, and poliomyelitis.

Larger quantities of medicine are being purchased and medical equipment has been increased and improved. Hospital facilities at Palau and the Marshalls have been improved and funds are available for the first increments of new hospital facilities at Truk and Ponape.

It is well recognized that our public health program needs much more improvement and the achievement of suitable and adequate health services is one of our major aims. We are concerned particularly with providing more adequate public health facilities to the population of our outlying areas. The $2,443,000 requested here for public health operations will enable us to provide hospital care for an estimated 10,230 patients, outpatient treatment for 238,128 visits by patients and dental services for an estimated 27,500 patients.

In addition, this sum will provide medical education and training for 40 students and operate the nursing school for 30 nurses.

Economic Development Team

The remaining $9.3 million requested for operating funds will provide for continuation of the work of the economic development team, presently under contract to study the economic potential of Micronesia, and will continue programs in agriculture, fisheries, economic development, public affairs, and administration at about the same level as in fiscal year 1966.

It will also provide for transportation, communications, and operation and maintenance of the physical plant.

Convening of First Session of Congress of Micronesia in July 1965

The first session of the Congress of Micronesia which convened in Saipan on July 12, 1965, was a significant event in political development in recent years. It demonstrated conclusively that freely elected representatives of the people of the trust territory are exceedingly capable and are ready to assume the responsibilities as well as privileges of the leadership roles in the legislative area.

The Congress of Micronesia got off to a most auspicious start.

I expect the second session of the Congress of Micronesia, which is slated to convene this coming July, to be an even more fruitful one.

The Congress has served notice to the world that the spirit of political growth in the territory has deep and sound roots. The members of the Congress are demonstrating a keen and active interest in the affairs of Micronesia including, I might say, an increasing understanding and appropriate concern with the financial and budget programs of the government.

It must be expected that a more effective role in the control and direction of expenditures of the trust territory government will be sought.

Capital Improvement Program

As noted elsewhere in the documents before you, the major capital improvement program initiated in fiscal year 1963 has resulted in the completion of airports at Yap and Palau; an appropriation of funds for an airfield in Ponape; the construction of 330 new elementary classrooms serving approximately half of our present elementary school pupils; and a substantial start on the construction of adequate secondary school facilities.

For the coming fiscal year 1967, of the $2,536,600 requested for continuation of capital improvement requirements, $1.1 million is needed to provide additional classrooms, dormitories, and teachers' quarters in order that we may meet our obligations in providing adequate schooling for the children of Micronesia.

One-half million dollars urgently is needed to improve and expand basic power and water facilities. Although this will enable us to provide safe water and minimum power only to a relatively small portion of the expanding population, it is nonetheless a most crucial and significant initial phase of a long-range program to meet basic obligations in this area.

The remaining amount requested for construction funds will be used for continuation of airfield construction and improvement, for needed employee housing, for improving public roads, and to provide adequate and appropriate court buildings.

Health, Education, and Community Improvement

The task still facing us to achieve even minimum acceptable standards in health, education, in community improvement, and in public affairs is formidable. With the past help of this committee we have made significant advances. The appropriation requested this year, together with the revenues to be appropriated by the Congress of Micronesia, will enable us to continue the advance.

That is the general statement. I would be very happy to answer questions.

Population and Land Area of Micronesia

Chairman Hayden. For my own information I would like to know what is the total population in Micronesia?

Commissioner Goding. About 93,000.

Chairman Hayden. Do you have any idea of the total area of the islands?

Commissioner Goding. The land area of the 2,000 islands is about 700 square miles.

Reprograming of Unobligated Funds to Cover Cumulated Overruns

Chairman Hayden. Within the last 2 or 3 weeks your request to reprogram unobligated funds to meet overuns in certain of your activities has been approved. Would you please explain to the committee what occurred to require you to make this reprograming request, and indicate what steps have been taken to assure that such a situation will not again develop?

Commissioner Goding. In brief, I think that I could summarize by saying that our overruns were a cumulative matter over a few years' time, resulted in part from business-type operations that were difficult to predict within any given annual period, such as shipping operations that we would not know until the end of the fiscal year within a range of $200,000 what the financial outcome would be.

We had a number of this type of activities that made our budget and our funds control process very difficult. We also had a very inadequate financial organization and I might ask Mr. Patton, the new Director of Budget and Finance, to elaborate in terms of the controls that we now expect to have to improve it.

Institution of Expenditure Controls

Mr. Patton. Mr. Chairman, we have strengthened our organization by bringing in a modest amount of additional professional talent and we are in the process of revamping our accounting system to make certain that we have accumulated both timely and accurate information that can be reported promptly to management for use in management decisions in controlling expenditures.

That is a very brief summation. I will be glad to go into greater detail if you like.

Chairman Hayden. Why was no request made to the committee for reprograming funds as it became necessary?

Commissioner Goding. I don't believe, to answer that question, that we really knew where we stood until about a year ago. I say there were cumulative overruns on which our financial reporting system simply didn't give us any information.

Chairman HAYDEN. You have corrected that?
Commissioner GODING. We hope and we think we have corrected it.
Mr. PATTON. Yes, sir; we believe we have.

REORGANIZATION OF TRUST TERRITORY ADMINISTRATION

Chairman HAYDEN. Your statement indicates that the trust territory administration has been reorganized into four functional groupings. When did this reorganization occur?

Commissioner GODING. This reorganization has been completed largely in the past year. We now have four areas, the major area being community services which covers health, education, and community development; an area that we call public affairs which takes care of political development, reports, statistics, public information; another area called resources and development; and the fourth area being administration, the general breakdown being quite comparable to the Bureau of Indian Affairs.

PURCHASE OF SECOND DC–4 AIRCRAFT

Chairman HAYDEN. Recently you have received authority to purchase a second DC–4 aircraft to be used while your first one is down for repairs. Has this aircraft been acquired, and when did you get it?

Commissioner GODING. The aircraft has been purchased and it will be delivered in the area, hopefully, by the end of next week.

EDUCATIONAL GOALS AND PROGRESS

Chairman HAYDEN. I find listed in the material which was furnished to me five educational goals in the trust territory. Would you indicate to the committee the progress being made toward achievement of those goals?

Commissioner GODING. The educational goals are not being accomplished overnight. We have now nearly achieved the opportunity for universal education through the secondary level, although this year we were not able to accommodate quite all the high school students that applied.

The age level has not yet been established at 6 throughout the territory, although in most of the territory they are now enrolling at 6 in the elementary grades.

We have increased a great deal the opportunities for professional and academic training beyond the high school level. We now have 156 students out in college or specialized training programs. The establishment of English as the language of instruction has been partially accomplished although in most of our elementary schools in the lower grades it is still necessary to use vernacular, the teachers themselves not being well enough qualified in English to handle all of the training in English, and we now have the beginning of an adult education program, one that will be further expanded.

ADDITIONAL JUDGE REQUIREMENT

Chairman HAYDEN. You are asking for $45,000 more in fiscal year 1967 for the judiciary than was provided to you in fiscal vear 1966. Would you discuss for the committee the situation demanding this

increase, and indicate the purpose to which the $45,000 will be put, and the results for which you hope?

Commissioner GODING. The request for additional funds for the judiciary is one that we have had need for which we have been conscious of for 2 or 3 years past. We have two American judges on the high court, and with the geographical area that we have to cover, the increase in caseload that has been building up, it has become almost impossible for two judges to handle the courtwork.

Our plan is that there will be a third judge and that between the three judges they can split the territory up and reduce the very large amount of travel that has been required.

Each judge would normally handle two districts.

TRUST TERRITORY GRANTS SUMMARY

Chairman HAYDEN. Describe to the committee the requirement for $17,022,000 in grant funds during the coming fiscal year.

Commissioner GODING. The $17,022,000 is the amount of our appropriation that is not covered in the two lesser items, one for the Office of the High Commissioner and one for the judiciary, which are labeled "Appropriated funds." This is the backbone of our whole operating program, the figures being broken down into these various functional activities—community services: Medical, at $2,443,000; education, at $4,007,000; community development, $101,000; public affairs, $215,000; resources and development, $1,465,000; protection to persons and property, $454,000; administration, $2,543,400; and transportation, communications, operation, and maintenance, $4,662,000.

There are some additional expenses that fall into that, the Congress of Micronesia, $145,000, and a total of $2,536,600 for the capital improvements program.

Chairman HAYDEN. That makes this total?

Commissioner GODING. That makes the total with the additional local revenues added to it. The total there is $18,572,000.

SCATTERED POPULATION AND PREVALENCE OF TUBERCULOSIS

Chairman HAYDEN. What is your primary medical problem?

Commissioner GODING. The principal single disease problem is undoubtedly still tuberculosis. In terms of getting medical services to the people, of course, it is the scattered population, just how do you get adequate medical care to people on outer islands that are away from district centers where we do have hospital facilities?

We operate something like 90 dispensaries, most of them very makeshift and operated by a partially trained health aid; in terms of the disease problem, tuberculosis; in terms of a geographical problem, just reaching the people.

IMMUNIZATION PROGRAM

Chairman HAYDEN. With regard to your mass immunization program, against what afflictions is the program carried on?

Commissioner GODING. I believe that the list included poliomyelitis, typhoid, diphtheria, smallpox, and tetanus, a rather comprehensive inoculation program.

TV EDUCATION FEASIBILITY STUDY

Chairman HAYDEN. Has any thought been given to use of educational TV in the trust territory? If so, what is the conclusion?

Commissioner GODING. Yes. We have given a great deal of thought during the past year and are in the process now of having a technical study made. We hope to reach agreement with the Stanford Communications Institute for the conduct of a survey as it relates to the technical feasibility.

We have a very scattered problem, unlike Samoa, with six separate districts with nine languages, and again the geographic and physical problem of reaching people who are spread out over such an enormous area. We are looking into it.

FOREST RESOURCES SURVEY

Chairman HAYDEN. I note that a forest resources survey in now underway. What kind of forests do you have in the trust territory, and where are they located?

Commissioner GODING. We have certain forest lands in two of the districts. It could be three districts. In Palau, Babelthuap Island, our largest single island, is a rolling, hilly island with a considerable amount of local timber and there is a very obvious need for a further forest planting program.

Chairman HAYDEN. Is it sawtimber?

Commissioner GODING. Yes, they cut some local varieties for furniture, for housing, but not nearly as much as we could if we developed those resources properly.

Chairman HAYDEN. Probably portable sawmills, something of that kind?

Commissioner GODING. I think there are three or four in the Palau district, small portable sawmills to cut some timber with.

SEA TRANSPORTATION SERVICE CONTRACT

Chairman HAYDEN. I believe that you have a new sea transportation service arrangement. Would you describe this to the committee and indicate the advantages of it over the contract which it is replacing?

Commissioner GODING. The new contract is a commercial contract in contrast to the one that we had for many years which was simply a cost-plus-fixed-fee arrangement.

I alluded to this when I said that we did not know at the end of a year what our costs were going to be often within a range of $200,000 or $300,000. On the new contract the operator collects the revenues and pays the Government at 25 percent of the gross. We are not sure yet of the outcome.

The contract became effective on September 1. The indications are that the compensation to the Government will range between $400,000 and $500,000 for the 10 months of this year, but it is in terms of an operating contract more satisfactory simply because the operator has his own resources involved and if this operator is to make a profit he has to make a profit out of the transportation.

Budget Request for Transportation Service

Chairman Hayden. Will these receipts be added to the $1 million proposed for sea transportation services in fiscal year 1967, or will they act as an offset against that $1 million?

Commissioner Goding. I think it would be technically an offset, if I am using the word correctly. The $1 million will pay a part of our freight bill to the new company and it will also cover some of the operating subsidy that is involved in running the smaller vessels.

Under the old contract the one contractor operated all of the vessels. At the present time it only covers the main logistic vessels and we have separate contracts for six station vessels.

Chairman Hayden. I have no further questions.

Thank you for your appearance.

Commissioner Goding. Thank you very much.

Proposed Legislation To Increase Trust Territory Ceiling

Mrs. Van Cleve. Mr. Chairman, if I may, I would like to make a brief statement with respect to the trust territory appropriation.

It is simply to mention to you that the High Commissioner of the trust territory and the Department of the Interior have reached the conclusion, which we have not yet formulated as proposed legislation, that the current statutory ceiling of $17.5 million is insufficient to permit us to carry out the kinds of programs which we think essential in the trust territory, most particularly in the education and health fields. Accordingly, we are currently working within the executive branch on legislation to amend the existing ceiling statute.

When that legislation is prepared, we propose to send it to the Congress and we shall do what we can to obtain both prompt and sympathetic consideration of it by the Interior Committees of each House.

If we receive that consideration, we may be back within the upcoming fiscal year to seek further funds for the trust territory.

Chairman Hayden. Do you have any idea what the increase will be?

Mrs. Van Cleve. We have developed our own proposals, but until they are further cleared within the executive branch we are not at liberty to say anything in detail.

Chairman Hayden. Senator McGee has some questions regarding health and medical priorities in the Trust Territory of the Pacific Islands. I shall place these in the record and request that you supply responses.

(The questions and answers follow:)

Question. It is my understanding that a United Nations inspection team after making a study of health and medical facilities available in the Trust Territory of the Pacific Islands made a report that was quite critical of the United States in this regard.

Would you care to comment on that report and indicate what is being done to overcome the deficiencies which were reported by this World Health Organization team of investigators?

Answer. The World Health Organization survey was the result of a petition signed by a number of Micronesian medical personnel on April 30, 1965, and sent to the Trusteeship Council. The petition stated that the United States had not fulfilled its obligations to the people of the trust territory; that the reports to the United Nations, specifically the 1963 report, contain untrue or misleading statements; that attempts to point out such discrepancies led to the dismissal of the Director of Medical Services; and that petitions sent to the Secretary of the

Interior had been "neither acknowledged nor acted upon." The WHO team noted that many health facilities, items of equipment, and services are deficient. This we recognized several years ago when we sought additional funds from the Congress to help overcome those deficiencies. With the additional money that the Congress has provided we have opened two new hospitals, made improvements to others, purchased some new equipment and supplies, and provided for eight fully qualified medical doctors, rather than the one available to us in early 1963. By letter dated February 1, 1966, the Secretary of the Interior sent to the Secretary of State, a copy of which follows, further comments on the several elements of the WHO report and the current medical program in the trust territory.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY.
Washington, D.C., February 1, 1966.

Hon. DEAN RUSK,
Secretary of State, Department of State,
Washington, D.C.

DEAR MR. SECRETARY: This is a partial response to Acting Secretary Ball's letter of January 12, transmitting to us the report of the World Health Organization team which recently investigated complaints concerning deficiencies in the health and medical program of the Trust Territory of the Pacific Islands. We shall, as soon as we have assembled the detailed information, respond on a point-by-point basis to the WHO report. My purpose at this time is to offer a general appraisal of the report, to provide you with some information concerning our plans to meet these deficiencies, and to comment upon one specific in the report.

In our judgment the report is not overstated. We will take issue, in due course, with a considerable number of statements and findings which we regard as incorrect or misleading, but on balance the report seems to us a fair reflection of the state of medical affairs in the trust territory. That we are and have been conscious of this state of affairs is attested to by a variety of recent efforts which I will set forth.

We can say again, as we have often said before and as the WHO team recognizes, that we have made progress in recent years. You know that we have more and better hospitals today than we had in 1962; that we have many qualified doctors instead of the one of 1962; that health appropriations have increased by 269 percent in these recent years; that Micronesians are being now groomed for medical schools, to become qualified M.D.'s, rather than being sent to a school which we regard as inadequate to meet today's needs in the trust territory. Our goal was and is, as the report states, a health and medical program for the trust territory which will meet at least the minimum acceptable standards of a U.S. community. We are quite aware that we have not met this standard, and we will not belabor the point that we are moving toward it. It is quite true that we must move there more rapidly.

Let me set forth some of the things we are doing to meet the deficiencies described by the WHO team. I think it would be fair to say that these deficiencies arise from two basic causes: insufficient funds and insufficiently trained personnel. As to these:

1. Current Federal law precludes our obtaining Federal funds for the trust territory in excess of $17,500,000 per year. We could not be more aware that this sum is too little. For many months we have been collecting and analyzing data needed to support legislation to raise that ceiling. We have obtained agreement in principle from the Executive Office of the President that a bill to raise the ceiling will be approved. We do not know at this time precisely what the new figure that we will urge will be, but we will know this soon. I can tell you, however, that the sum will represent a very considerable increase, and that the two areas which we have stipulated are to receive top and equal priority are health and education.

Our timetable is a very tight one, and it may prove impossible of achievement. It is our hope the ceiling bill will be sent forward to the Congress no later than March 1; that early hearings in each House will be scheduled and early enactment the result; that such enactment will be a fact soon enough in this session of the Congress to permit us to obtain, again in this session, a supplemental appropriation for the maximum amount the law will allow for the fiscal year 1967. Because the foregoing involves at all stages the vagaries of the bureaucratic and legislative process, we cannot guarantee the results we seek within the timetable we have set. But we can guarantee that we will make the most strenuous possible efforts to achieve these results.

2. Our efforts to obtain sufficiently trained medical personnel in sufficient numbers will be greatly advanced by further funds. In passing, I would note that the report states that we have "finally" decided to discontinue the training of medical officers in Fiji. We are unclear as to the meaning to be ascribed to that word, inasmuch as the decision was made some years ago and without any great struggle, but we are quite clear that the Micronesians deserve to have available to them fully trained M.D.'s to the fullest extent possible. This cannot, however, quickly be achieved. The team notes that one Fiji Central Medical School graduate was, when they wrote, enrolled in a special premedical course at Georgetown University.

To expand somewhat on that point, because it is an indication of the kind of effort we have made and will continue to make, I would point out that the trust territory government some time ago sought from a considerable number of mainland medical schools information as to whether such schools would be willing to cooperate in the training, leading to an M.D. degree, of trust territory medical practitioners. Only Georgetown responded affirmatively, following which its dean and associate dean traveled in the spring of 1965 to the trust territory to investigate closely the prospects and candidates for such further training. Their conclusions were generally pessimistic, on the ground that the practitioners faced both a language problem of great dimensions and possessed limited basic training. Nonetheless, they believed the candidate, who ultimately did enter Georgetown in the fall of 1965, might be able to achieve a medical degree. Regrettably the results seem to prove otherwise. The student in question returned to the trust territory late in 1965, having himself concluded that his basic education was not sufficient to enable him to compete successfully.

In part in light of this experience, we have turned to a different approach to upgrading the quality of our Micronesian medical personnel. We are considering, in effect, bringing the training to them. We are now conferring with the Public Health Service and with the School of Public Health of the University of Hawaii, looking toward the latter's providing to us qualified medical specialists who will travel throughout the trust territory giving in-service, short-term, but continuing training in pertinent medical fields to native medical personnel. We are undertaking to move on this subject as rapidly as we can, and we shall advise you when arrangements have been consummated.

We have, however, met with success in our efforts to recruit qualified doctors from the United States. We are, accordingly, somewhat baffled by the statement that "no clear decision has been taken about where and how the medical officers * * * will be found." We have no qualms about finding medical officers outside the trust territory. We shall, of course, use all resources that are available, but as noted, direct recruitment has been sufficient to date and we have no reason to suppose that it will not continue to be. But we have also arranged to obtain commissioned officers of the U.S. Public Health Service, on a temporary basis, should our own efforts fail.

3. The report adverts to uncertainty and imperfections in the administrative arrangements between headquarters medical personnel, district medical personnel, and district administrators. Any uncertainty that may exist will promptly be removed, and the result will be that which the WHO team apparently approves; i.e., direct communication between district and headquarters medical personnel on professional matters, with coordination on all administrative and other aspects at the district level being reposed in the district administrators. This arrangement is consistent with the recommendations of the organization and management experts from this Department who visited in the trust territory in 1964. They advised us:

"We have considered the idea of creating so-called direct line organization from headquarters to districts in each of the several major functional areas and have concluded that this would not be a desirable arrangement for the following reasons: (*a*) The distances from headquarters to the many islands of the trust territory make it impossible for headquarters staff to exercise day-to-day supervision over field operations and to resolve the many problems that arise at the local level; (*b*) for effective operations at the local level it is necessary to coordinate very closely the various programs and supporting services involved; and (*c*) to be effective it is also necessary at the local level to work closely with the Micronesian communities and obtain their understanding and support for activities of the Government. For these reasons we believe that the district administrator, working with the program supervisors in his district, plays a key role in the execution of the programs of the government, assuring that activities are coordinated, that operating problems which can be resolved locally are resolved, that government programs are interpreted properly to the Micronesian community,

and in general working toward the most effective overall government program in the whole district. Without the support and assistance of the district administrator on the scene close to operations, it is difficult to see how the heads of departments at headquarters could under present circumstances hope to accomplish the program goals they should be working towards."

Medical arrangements and personnel were, I am assured, most particularly within the scope of the foregoing recommendation.

4. The report states that administrators at the district level in the trust territory, be they medical or others, have not been sufficiently informed on their budgetary situation, and specifically, that they have not known with clarity what funds were available to them for what purposes. This is true. The finance, accounting, and budgetary techniques of the trust territory have not kept pace with the large injections of funds and the vastly increased program responsibilities of recent years. In recognition of this fact, the trust territory has within the last 12 months recruited employees who are expert in the pertinent areas, and this Department has dispatched a team of finance experts to give advice on correcting the trust territory's techniques in this area. Its recommendations, which we have asked be implemented forthwith, will unquestionably result in substantial improvements in this area.

5. We share the team's concern with the care and treatment of the mentally ill of the trust territory. Accordingly, we arranged in 1965 for a survey by the National Institute of Mental Health. We have just received its report and find it to be a useful document with helpful recommendations. We will make copies available, should you wish. Within whatever fund limitations are upon us, we shall implement the recommendations of the report as quickly as we can.

6. The WHO team's findings that portions of our annual reports have been misleading is extremely troublesome to us, and I know they will be to you. The best that I can do is to assure you that every possible precaution is being taken to insure that this will not again occur I would note that those medical personnel who particularly precipitated the petitions and letters which, among other things, led to the WHO investigation, are the same individuals who failed to discharge their bureaucratic duty by effecting corections in drafts of annual reports when they were afforded opportunities to do so. Nevertheless the fact remains that the reports have, as found, contained overstatements. We cannot, at this time, do more than state that we will do everything within reason to assure that this will not again happen.

At this time, I must turn to a portion of the WHO report which we in turn find at a minimum, misleading. It is, in fact, a gross misstatement of reality. Part 8 implies that this Department is indifferent to medical deficiencies in the trust territory, to the point of virtually ignoring those letters and petitions on the subject which were directed to us. This is nonsense, and I hope you will do what you can to persuade those concerned that it is nonsense. Of course each and every petition and letter on this subject received from us a substantive response. Additionally, our Deputy Under Secretary visited the trust territory in the spring of 1965 with the express purpose of investigating many of the administrative matters adverted to in the WHO report.

Subsequent to his visit, an Assistant Surgeon General of the U.S. Public Health Service also traveled to Saipan in late April 1965, there to confer with several of the petitioners and letterwriters. This visit gave rise to very close and continuing cooperation between the Public Health Service and this Department concerning trust territory medical matters, one of the results of which has been the detail since last June to the office of the High Commissioner of a PHS doctor who has acted as a medical adviser to the High Commissioner. If it is alleged that we could have done more, we can concede the point instantly, but let it be very clear that we are deeply concerned about these matters and have done something about them.

You will hear from us further in greater detail at an early date.

Sincerely yours,

STEWART L. UDALL,
Secretary of the Interior.

Question. It is also my understanding that in this same report this team was somewhat critical of the dismissal of the former director of health for the trust territory last year. Am I correct that this report indicated that this medical director's work and program did indicate a high degree of professional competence and that his medical staff was quite encouraged by the approach he was taking to the medical and health problems of the territories? I would like to have your comments on this report particularly as it relates to the activities and competence of the director of health and his subsequent dismissal last year.

Answer. The former director of medical services was dismissed on administrative grounds, because of his unwillingness or inability to accept the administrative supervision of the High Commissioner. His professional competence was never questioned. The WHO team specifically stated with respect to this point:

"We were able to examine the proposal which he made for the establishment of a functioning department of health in which clear and direct relationships would be established between headquarters and the districts. We saw his comments on the annual report of health activities in the territory. We also examined a carefully prepared projection of needs of the department of public health in 1966 through 1970. To the team these plans of the director reflected adequate professional competence."

We are not certain what organizational proposals the WHO team had reference to, but in the first 3 months of fiscal year 1964 the Department of the Interior dispatched an organization and management team to the trust territory. The recommendations of this team of administrative experts were at variance with the proposals advanced at that time by the then director of medical services. The letter to the State Department comments more fully on this point. We do not know when Dr. Sampson first prepared his comments on the 1963 annual report, but they were not sent to the Department of the Interior until February 23, 1965. The projection of needs from 1966 through 1970 was sent to the Department in late April 1965 and was apparently prepared after Dr. Sampson's dismissal during a period he was retained as a consultant.

With respect to the accuracy of the reports, the basic responsibility for the content must lie with the professional and technical personnel carrying out the function being reported. Having noted several instances in which the actual situation reflected an inaccuracy in the report, the WHO team merely stated: "* * * it would appear to the team that the director of the department of public health was perhaps remiss in not paying sufficient attention to the wording of the report."

Question. Under date of November 4, 1963, President Kennedy issued a memorandum to the Secretary of the Interior in reference to the spread of polio in the trust territories. The President asked specifically that an investigation be conducted and that he be advised "why the U.S. Government did not meet its responsibility in this area." I would like to know if the conditions in the trust territories of the Pacific at that time and which gave rise to the Presidential memorandum were the same or similar conditions on which the critical report of the World Health Organization team to which I made reference are based.

Answer. In early 1963 polio was brought into the trust territory by a carrier from Texas; it rapidly spread from Kwajalein through several of the islands of the Marshalls district. In 1958 a poliolike outbreak had occurred on Majuro but the disease was not confirmed by laboratory tests. The persons exposed at Majuro in 1958 received the Salk polio vaccination then available. It had also been believed that the relative isolation of the Micronesians was a preventive factor in polio. No cases prior to the unconfirmed 1958 outbreak had been confirmed. Following the outbreak of polio in 1963, an immunization program was launched to cover 100 percent of the Micronesian population. This is now being followed up to make certain that all of the population has been reached. In 1963 an immunization program for typhoid, paratyphoid, pertussis, tetanus, and diptheria was also launched. This is a 3-year program and approximately 60 percent of the population has been reached in this program to date.

Prior to our accelerated program, which was begun in fiscal year 1963 in the trust territory, preventive health had held a fairly low priority. However, in company with improvements in other aspects of the health program, we have sought to make major improvements in the preventative health program. The medical conditions which were the particular concern of President Kennedy in 1963 are on the way to solution, but we have by no means reached the standards of medical care which we have set for ourselves.

Question. What was done in this area following this memorandum in November of 1963 to improve health and medical facilities in the territories and what is being done at this time to further improve them and bring them up to acceptable standards?

Answer. The current budget request provides in the operations area a total of $2,443,000 for health programs. This compares to $575,000 requested in the fiscal year 1962 appropriation request. Since that time we have opened new hospitals at Palau and the Marshall Islands; a rehabilitation facility has just been completed in the Marshalls (formerly it operated in temporary quarters); funds have been appropriated for a start on new hospitals at Truk and Ponape, and, in fiscal year 1967 we are seeking $90,000 to rebuild some of the more inadequate outlying dispensaries. During the past year we have been working closely with the U.S. Public Health Service in an effort to find solutions to some of our major outstanding health problems in the territory. We are making progress although we have a long way to go.

SUBCOMMITTEE RECESS

Chairman HAYDEN. We thank you all.

Commissioner GODING. Thank you very much.

Chairman HAYDEN. We shall recess until 10 a.m., Monday, February 21, at which time we shall hear the Public Land Law Revision Commission and the Bureau of Land Management.

(Whereupon, at 11:25 a.m., Friday, January 18, 1966, the hearing was recessed, to reconvene at 10 a.m., Monday, February 21,1966).

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

MONDAY, FEBRUARY 21, 1966

U. S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senator Young.

PUBLIC LAND LAW REVIEW COMMISSION

SALARIES AND EXPENSES

STATEMENTS OF HON. WAYNE N. ASPINALL, A U.S. REPRESENTATIVE FROM THE STATE OF COLORADO AND CHAIRMAN OF THE PUBLIC LAND LAW REVIEW COMMISSION; MILTON A. PEARL, STAFF DIRECTOR; AND ROBERT B. FOSTER, JR., ASSOCIATE DIRECTOR, PUBLIC LAND LAW REVIEW COMMISSION

Chairman HAYDEN. The subcommittee will be in order.

We will now hear the Chairman of the Public Land Law Review Commission.

For the fiscal year 1967 the budget estimate for the Public Land Law Review Commission is $907,000, an increase of $157,000 over the appropriation for fiscal year 1966. The justification for this estimate will be placed in the record.

(The justification follows:)

Fiscal year 1965	$350,000
Fiscal year 1966	750,000
Fiscal year 1967	907,000
Increase	157,000

PROGRAM AND PERFORMANCE

The Public Land Law Review Commission was created by Public Law 88-606 (78 Stat. 982) and charged by the Congress with—

1. Studying existing statutes and regulations governing the retention, management, and disposition of public lands;
2. Reviewing policies and practices of Federal agencies charged with administrative jurisdiction over such lands insofar as such policies and practices relate to the retention, management, and disposition of those lands;
3. Compiling data necessary to understand and determine the various demands on the public lands which now exist and which are likely to exist within the future; and

4. Recommending such modification in existing laws and regulations, practices, and policies as will, in the judgment of the Commission, best serve the maximum good to the maximum number of people.

In establishing the Commission, the Congress declared its policy to be such that public lands are to be retained and managed or disposed of, whichever is better for the general public. The prime function of the Public Land Law Review Commission is the isolation of facts and summation and recommendations likely to enhance the attainment of this policy.

The Commission is chaired by Congressman Wayne N. Aspinall of Colorado and is composed, in addition, of six Senators appointed by the President of the Senate, six Representatives appointed by the Speaker of the House and six members appointed by the President from outside the Federal Government; its organization meeting was held in early fiscal 1966.

One of the first acts of the Commission was the selection, from among those interested in the public lands, of 25 "public" members of the Advisory Council established under the provisions of section 6, Public Law 88-606. In addition to the "public" members, the Advisory Council includes eight liaison officers representing those Federal agencies which the executive branch agreed were most interested in the public land problem.

The enabling act defines "public lands" for purposes of this study as including all the public domain, including reservations therefrom (except Indian reservations), national forests, wildlife refuges and ranges, and the surface and subsurface resources of all such land, including mineral interests retained by the United States on lands heretofore disposed of and mineral resources under the control of the United States in the Outer Continental Shelf.

Office space for the Commission staff was obtained through GSA leasehold in Washington, D.C. During fiscal year 1966 reimbursement to GSA for the rental of this space was accomplished by transfer at the local level. In fiscal year 1967 reimbursement will be by appropriation transfer. Thereafter, the space will be nonreimburseable and GSA will budget for rental costs.

The early months of the life of the Commission were taken up by necessary staff recruiting, establishment of accommodations, establishment of reference resources, and other preparatory chores. This work is not wholly completed but it is not expected that the Commission staff will ever be so static as to term its composition as stable and complete.

Plan of Work

The work of the Commission may be divided into three broad categories or areas of primary concern:

1. Legal research and analysis:
2. Inventory and evaluation of resources on and under public lands; and
3. The economic impact of these resources on each other and on the region and the Nation.

None of these broad fields of research is without some overlap or implication for the others. It is imperative that there be continuing and intimate coordination among these three fields of study.

The major portion of the study work of the Commission will be accomplished on a contract or consultant basis. It would not be practical or economic to retain on the Commission's staff the various disciplines and skills needed for thorough basic research nor would it be practical to assemble in Washington or any other one place all of the reference material needed.

Contract work in this sense is intended to include work by other Federal agencies. Maximum reliance is placed upon existing statistics and other data with minimum effort being expended to make these data comparable. Special professional problem areas may be dealt with by individual consultants.

The studies described in the paragraphs which follow are projected on the basis of judgment as the Commission initiated its work. They are subject to change and modification as work progresses.

Study Program for Fiscal Year 1966

During the last half of fiscal year 1966 it is anticipated that the following studies will be in process:

1. *Legal: A history of public land laws in the United States.*—This will be an examination of the development of public land law in the social, economic, and political context of a United States expanding westward from the Alleghenies. There is need at the outset for a concise statement of the historical development

of public land laws showing how we got where we are. This study will envision both legal and incidental historic detail. A contract will be sought with a university where the law school and hisotry department could complement each other in the task. It is estimated that this work will require at least 18 months to complete and estimated to cost between $90,00 and $135,000.

2. *Legal: Indexing and digesting public land statutes.*—It is necessary that the Commission have available as a basic working tool an index and digest of all statutes bearing on lands within the scope of the study. There is no accurate estimate of the number of individual laws that have been enacted, but the figure is somewhere between 5,000 and 15,000. Not all of these are "living" statutes; some have become obsolete in fact if not in name. Nonetheless, failure to compile a comprehensive index would leave the Commission without certainty as to the completeness of its research. The index and digest envisioned will be accomplished by a contract estimated to cost between $100,000 and $125,000 and is estimated for completion in between 8 to 12 months.

3. *Legal: Digesting and review of significant regulations, opinions and decisions applying statutes currently active.*—Of primary importance in the development and application of the public land laws have been the administrative regulations, legal opinions, and judicial decisions growing out of these laws. As rapidly as the principal statutes are identified, work will proceed on the analytical review of the related administrative and judicial determinations. It is not anticipated that this work can be done wholly by contract although some may be so accomplished. Nor is it possible at this time to estimate the total manpower and dollar cost of completing this phase of the Commission's study. It is estimated, however, that during fiscal year 1966, approximately $50,000 will be obligated toward this objective.

4. *Resources: A study of existing revenue sharing and payments to State and local governments in lieu of taxes.*—This study will be applicable to all the classes of public lands defined by the act creating the Commission. Payment provisions and formulas vary widely from law to law. In 1965 more than $80 million was paid by the Federal Government to States and local governmental units from receipts generated by the sale of commodities from public lands or from the sale of land itself. The study will provide the Commission with a factual basis for evaluating existing systems and determining the direction and emphasis of further studies that may be required before conclusions can be drawn as to the adequacy and fairness of the existing systems. The study is expected to be completed in about 8 months and will cost approximately $40,000 to $50,000.

5. *Resources: Basic inventory of public lands.*—This will be a compilation and summation of pertinent statistics on lands and the resources defined in the act. While primary reliance will be placed on data available in the executive departments, it is expected that augmentation will be required and would be obtained from State governments, professional societies, or public associations. It is estimated that this compilation will require 6 months and will cost about $30,000.

6. *Economic: Projections pertinent to demands on the public land.*—The Commission will initiate economic and other projections which will enable it to apprise the demands which may be placed on the public lands and their productive capacity in future decades. These studies will be performed largely under contract with one or more universities or consulting firms capable of broad and objective forecasting. It is estimated that an adequate body of data can be obtained for an initial expenditure of between $30,000 and $50,000. It may be necessary to augment these projections after the initial phase is available.

7. *Legal: Studies will be initiated of practices and procedures in the administration of the public lands, as required by the statute establishing the Commission.*—However, it is not anticipated that significant sums will be spent on this effort during fiscal yera 1966.

8. *Individual cases are being reviewed to permit selection of a group typical of various phases of land use.*—These will be analyzed in depth; but, it is probable that the analysis cannot be started until fiscal year 1967.

Program for Fiscal Year 1967

During the first 6 months of fiscal year 1967, it will be necessary to expand the Commission's staff by at least five positions. This augmentation is required because the level of activity conducted in-house during fiscal year 1967 will increase over fiscal year 1966 and probably reach a maximum rate.

During fiscal year 1967, it is anticipated that public hearings will be held by the Commission or subcommittees thereof.

The formal study program of the Commission will continue along the following lines:

1. Legal: Review of regulations, opinions and decisions initiated in fiscal year 1966 will continue throughout fiscal year 1967. The major portion of this work will probably be done by Commission staff personnel but an estimated $50,000 may be spent for contract work on specific segments of the problem. There will be a need for correlating this digest with that of the statutes which should be completed under the contract initiated in fiscal year 1966.

2. Legal: Study of administrative practices and procedures in the various Federal agencies responsible for administration of public lands and their resources will be continued during fiscal year 1967. This study will concentrate on, but not be limited to, the Bureau of Land Management, the Forest Service, the Geological Survey, Bureau of Reclamation, Fish and Wildlife Service, and the military departments. It is anticipated that a substantial portion of this work can be done under contract. It is estimated that these contracts will cost between $100,000 and $150,000 and will take about 1 year to complete.

3. Resources: The major study effort during fiscal year 1967 will be directed toward the major resources groups—minerals, timber, livestock, wildlife, recreation, etc.—setting forth the history of their development, their current status in regional and national economies, future demands for these resources, and potential growth rates on the public lands. It will not be possible to undertake this sort of detailed study on some of the minor uses or resources but it is intended that these resources studies cover at least 90 percent of the activity involved on the public land. These contracts will be among the major efforts of the Commission's work and will form the backbone of the documentation of the Commission report. It is estimated that $250,000 will be obligated during fiscal year 1967 for these resource studies. There will be, in addition, certain minor parallel studies done in-house by the resources group personnel of the staff.

4. Case studies in public land use: The typical cases of diverse uses of public lands selected in fiscal year 1966 outlining both common and unusual problems, highlighting disputes, illustrating inequities, if any, and detailing actions taken by executive departments both in the field and in Washington will be studied thoroughly. It is believed that these case studies should be assembled in-house no later than midyear 1967. They will serve as a guide to the Commission and its contractors in researching both law and administrative practices. Approximately 50 to 75 case studies are envisioned at an in-house production cost of about $25,000.

TERMINATION

The statutory life of the Public Land Law Review Commission is 6 months following submission of its report to the President and the Congress (Dec. 31, 1968) and, in any event, no later than June 30, 1969. Constant vigilance will be exercised to avoid assembling extraneous, unnecessary, information as part of the effort to accomplish the Commission work by the date established in the enabling act.

Financing

[In thousands of dollars]

	Fiscal year 1965	Fiscal year 1966	Fiscal year 1967
Appropriation	350	750	907
Unobligated balance brought forward		350	323
Total obligational authority	350	1,100	1,230
Obligations		777	1,230
Unobligated balance	350	323	

Personnel compensation and staffing, $542,000

For 45 permanent positions and intermittent employment, distributed as follows:

	1965	1966	1967
Permanent positions		40	45
Average employment (including w.a.e.'s)		24	43

Summary statement on "Other objects" for 1967, $688,000

12 Personnel benefits, $38,000.—Includes contributions to retirement fund, health benefits, group insurance and F.I.C.A.

21 Travel and transportation of persons, $40,000.—For travel of Commission members, Advisory Council members, consultants and staff members for attending meetings of the Commission or the Advisory Council, or for other official business.

22 Transportation of things, $3,000.—For shipment of household goods of staff members transferred from one location to another, and for shipment of books, reports, and other study material to and from consultants.

23 Rent, communications, and utilities, $58,000.—For space rental, $47,200, representing 9,460 square feet at $4.98 per square foot, to be transferred to General Services Administration at the national appropriation level; for telephones, telegraph and postage, $10,800.

24 Printing and reproduction, $25,000.—For printing of work papers, study reports, maps and charts, and other study material.

25 Other services, $464,000.—For contractual studies in the fields of existing laws and regulations, economic projections, resource inventories, and the like; transcripts of hearings; and other services of a contractual nature. Services of other agencies, $25,000: Reimbursement to General Services Administration for administrative support.

26 Supplies and materials, $10,000.—For office supplies and other work materials such as legislative bills, reports, enacted legislation, books and periodicals.

31 Equipment, $25.000.—For purchase of furniture, for staff, $20,000; for purchase of office machines, $5,000.

Salaries and Expenses

Program and financing

[In thousands of dollars]

		1965 actual	1966 estimate	1967 estimate
	Program by activities:			
10	Study of existing public land laws and procedures (costs—obligations) [1]		777	1,230
	Financing:			
21	Unobligated balance available, start of year		−350	−323
24	Unobligated balance available, end of year	350	323	
40	New obligational authority (appropriation)	350	750	907
	Relation of obligations to expenditures:			
71	Total obligations (affecting expenditures)		777	1,230
72	Obligated balance, start of year			164
74	Obligated balance, end of year		−164	−112
90	Expenditures		613	1,282

[1] Includes capital outlay as follows: 1966, $23 thousand; 1967, $25 thousand.

Object classification

[In thousands of dollars]

		1965 actual	1966 estimate	1967 estimate
	Personnel compensation:			
11.1	Permanent positions		282	520
11.3	Positions other than permanent		21	21
11.5	Other personnel compensation		1	1
	Total personnel compensation		304	542
12.0	Personnel benefits		21	38
21.0	Travel and transportation of persons		30	40
22.0	Transportation of things		3	3
23.0	Rent, communications, and utilities		51	58
24.0	Printing and reproduction		10	25
25.1	Other services		300	464
25.2	Services of other agencies		25	25
26.0	Supplies and materials		10	10
31.0	Equipment		23	25
99.0	Total obligations		777	1,230

Detail of personnel compensation

	1965 actual		1966 estimate		1967 estimate	
	Number	Total salary	Number	Total salary	Number	Total salary
Grades and ranges:						
Special positions at rates equal to or in excess of $25,382: Staff director			1	$27,500	1	$27,500
GS-18. $25,382: Associate director			1	25,382	1	25,382
GS-17. $22,217 to $25,325:						
General counsel and Chief of legal group			1	22,994	1	22,994
Chief, resources group			1	22,217	1	22,217
Chief, evaluation and editorial group					1	22,217
GS-16. $19,619 to $25,043:						
Research specialist			3	59,535	3	59,535
Chief, evaluation and editorial group			1	19,619		
GS-15. $17,055 to $22,365: Research specialist			4	68,220	6	102,330
GS-14. $14,680 to $19,252: Research specialist			6	90,620	6	90,620
GS-13. $12,510 to $16,425			4	52,215	4	52,215
GS-12. $10,619 to $13,931			1	10,987	1	10,987
GS-11. $8,961 to $11,715			3	28,719	3	28,719
GS-10. $8,184 to $10,704			1	8,744	1	8,744
GS-9. $7,479 to $9,765			2	16,228	4	31,246
GS-8. $6,869 to $8,921			2	14,194		
GS-7. $6,269 to $8,132			3	20,877	4	27,146
GS-6. $5,702 to $7,430			2	12,556	2	12,556
GS-5. $5,181 to $6,720			1	5,181	2	10,362
GS-4. $4,641 to $6,045			1	4,641	2	9,282
GS-3. $4,149 to $5,409			1	4,849	2	9,698
GS-2. $3,814 to $4,975			1	4,072		
Total permanent			40	519,350	45	573,750
Pay above stated annual rate						1,927
Lapses			−18.3	−237,350	−4.4	−55,677
Net permanent (average number, net salary)			21.7	282,000	40.6	520,000
Positions other than permanent: Intermittent employment				21,000		21,000
Other personnel compensation: Overtime and holiday pay				1,000		1,000
Total personnel compensation				304,000		542,000

PREPARED STATEMENT

Chairman HAYDEN. Congressman Aspinall, we are glad to have you here this morning to speak in support of this appropriation. If you have a statement which you would like to place in the record, that may be done. The committee would like for you to summarize the activities of the Commission and the need for the appropriation which you request.

Representative ASPINALL. Mr. Chairman, members of the committee, with your permission, Mr. Chairman, I would like to have my statement placed in the record and then I shall talk to the statement.

Chairman HAYDEN. Your prepared statement will be printed in full in the record.

(The statement follows:)

It is a pleasure to appear before your committee this morning in support of the Public Land Law Review Commission appropriation request, and present a brief progress report on the work of the Commission of which I have the privilege to be Chairman.

Since this is my first appearance before your committee in my capacity as Commission Chairman, I would like to review briefly the origin and composition of the Public Land Law Review Commission as well as its operating procedures.

Commission

After much thought and discussion and full debate in the Congress, we passed the bill which was approved by the President as Public Law 88-606 establishing the Public Land Law Review Commission. This act is a notable example of bipartisan statesmanship and had the full support of the executive branch and the major citizen groups interested in the use of the public lands. This broad based agreement affirms the need for our endeavors; it gives us courage to embark on such a formidable task.

The Commission is comprised of 6 Senators from the Committee on Interior and Insular Affairs appointed by the President of the Senate, divided equally between the 2 major parties, 6 Representatives from the House Committee on Interior and Insular Affairs, also equally divided between the majority and minority parties, appointed by the Speaker, 6 members appointed by the President, and a 19th member, elected by the 18 appointed members, to serve as Chairman.

At the organization meeting of the Commission in July 1965, I had the honor of being elected Chairman. At the same time, the Commission chose a Presidential appointee, H. Byron Mock of Salt Lake City, as Vice Chairman, and Milton A. Pearl as its Staff Director. Mr. Pearl and his associate, Mr. Foster, are with me this morning.

The roster of the Commission membership is before you and I request that it be included in the record at the conclusion of my statement.

Advisory Council

The law which authorized the Commission also directed the establishment of an Advisory Council composed of 25 members from outside the Federal Government and liaison officers appointed from those Federal departments and agencies having an interest in or responsibility with respect to public land matters. In addition, the Governor of each of the 50 States, in response to my invitation, designated a representative to work with the Commission, the Advisory Council, and the staff.

All of these persons have been named. Collectively, they represent a significant cross-section of all those interested in the public lands. I suggest that to complete the record, Mr. Chairman, you include in the record at the conclusion of my statement, following the membership of the Commission, a list of the Advisory Council and of the 50 Governors' representatives.

The Task

I have described the task facing the Commission as "formidable." The deeper we get into it the more complex we find it to be. We are asked to examine all of the laws and regulations pertaining to public lands as defined in the act as well as the resources on and under those lands.[1] We are asked to assess the way in which laws have been implemented and regulations enforced. We will have to look to the historical development of these laws, going back to the early days of the Republic and consider whether or not laws still alive on the statute books are adequate for the current and future needs of the American people. We are required to project the current and future demands on the public lands and their resources, which includes an analysis of national and regional growth and changes in technology and the economy.

The Commission's report is to be submitted to the Congress and the President by December 31, 1968. The Commission will go out of existence 6 months after submission of its report. The committee should know that, because of a delay in getting started, it may be necessary when we have laid out our full program to seek additional time for completion of our work; but we are not yet prepared to make such a request. To the contrary, we are planning our work on the basis of submitting the final report within the allotted period.

It is our intention to pursue two parallel lines of research: legal and resources. These we will do in large part by contract with either Federal agencies or private

[1] Public Law 88-606 defines "public lands" to include "(a) the public domain of the United States, (b) reservations, other than Indian reservations, created from the public domain, (c) lands permanently or temporarily withdrawn, reserved, or withheld from private appropriation and disposal under the public land laws, including the mining laws, (d) outstanding interests of the United States in lands patented, conveyed in fee or otherwise, under the public land laws, (e) national forests, (f) wildlife refuges and ranges, and (g) the surface and subsurface resources of all such lands, including the disposition or restriction on disposition of the mineral resources in lands defined by appropriate statute, treaty, or judicial determination as being under the control of the United States in the Outer Continental Shelf."

groups and individuals. A major portion of our obligations, therefore, will be in the area of contract services. We are estimating $764,000 to be obligated for these contract services during fiscal years 1966 and 1967. The justification statement submitted to the committee discusses those studies or research projects which we plan to initiate during this period. At this time, I will touch briefly on a few of the more significant studies being planned.

We will negotiate a contract this spring for the preparation of a history of the development of public land laws in the context of the social, economic, and political expansion of the United States. We need to know "where we have been" before we can seek an answer to the question of "where we are going." Concurrently, we have started a review of all public land statutes and a digesting of those that are still applicable.

We are now planning a study or studies of the impact of Federal ownership of land on local governments and studies of existing revenue-sharing and payments-in lieu-of-taxes systems.

We will, of course, be involved in summarizing and collating available pertinent statistics on lands and the principal resources thereon under the purview of the Commission. While our main effort will rely on the correlation of existing data, we will, as necessary, develop new data.

These are brief examples of the studies that we will pursue within the frame of a master plan that is undergoing refinement. Others will be designed as they are identified and agreed upon.

We recognize that we cannot examine the whole spectrum; it is far too large. We must therefore insure that we study the most significant factors. We therefore believe that the selection of topics and subtopics to be studied in depth is the most crucial action which we will take in the immediate future. Our success in reaching sound conclusions from which we can approach the ultimate question of whether the present law is adequate will depend in large measure on the care with which we select our study topics.

In order to assure maximum participation in topic and subtopic selection, we have requested suggestions from any and all interested parties and have specifically solicited the views of the members of the Advisory Council and of the Governors' representatives in addition to the Commission members themselves.

Staff

Although we intend to use the services of consultants and contractors as the primary means of accomplishing our studies, we require an in-house capability to design study projects and supervise and review the work of the consultants and contractors. This staff will be divided about equally among legal, other professional, and administrative personnel. In addition to attorneys, our other professionals will include foresters, economists, geologists, and other resource specialists. For fiscal year 1966, we projected a maximum manpower level of 40 persons, 23 in the executive and professional category and 17 administrative and clerical. We concentrated on recruiting our legal research staff first because, among other things, the legal research will aid in identifying problem areas. As of today, overall, 28 employees have been hired and all but one are present for duty. Between now and the end of the fiscal year, we will round out the staff to 40 persons.

While we are doing our best to recruit personnel at or below the salaries for equivalent GS grades listed in the schedules we submitted, it may not always be possible to do so. In this connection, the committee's attention is called to the fact that the Commission is authorized to employ personnel without regard to the civil service laws and without regard to the Classification Act.

If it is possible to complete the Commission work and submit a report by December 31, 1968, we will reach a peak during fiscal years 1967 and 1968 requiring a proportionate increase in the staff. However, if the studies we are planning cannot be completed on a schedule that will permit submission of a final report by that date, there will be a more gradual buildup, leveling off, and ultimate reduction in staff.

Regardless of how the ultimate schedule will be worked out, we will require an increase of five personnel; i.e., from the 40 programed for fiscal year 1966 to a total of 45 in fiscal year 1967, in order to provide the minimum staff required to perform inhouse work, supervise contracts, and the preparation of study reports. If, however, we find it necessary to accomplish more research inhouse than we presently anticipate, we may need five additional staff personnel or a total of 50 during fiscal year 1967.

Naturally, I will advise the respective Appropriations Committees if we determine it to be necessary to exceed 45 personnel during the fiscal year. In connection with such advice, we would furnish you with new schedules indicating how the appropriation would be reallocated within the total amount that Congress sees fit to give us for our current operations.

Appropriation Request

The authorizing act establishes a limit of $4 million within which the Commission is to discharge its duties. The Congress appropriated $350,000 for fiscal year 1965 and $750,000 for fiscal year 1966, both amounts to remain available until expended, as provided by Public Law 88-606. We have been somewhat deliberate in starting and appropriately cautious in obligating money available to us. As of the end of December 1965, we had obligated only $85,981. We project that we will obligate a total of $777,000 by the end of this fiscal year and $1,230,000 during fiscal year 1967. This leads us to request approval of new obligational authority in an amount of $907,000. This is the request before the committee today.

A small but significant item in our budget is for $25,000 to reimburse General Services Administration for administrative support. In order to permit us to concentrate on our program, I entered into a contract with the General Services Administration under which General Services performs normal housekeeping functions such as payroll and travel voucher auditing and payment. The amount that we pay to General Services Administration for these services is under review and will be subject to periodic review to make certain that proper reimbursement is made for services actually rendered.

Aside from the $542,000 proposed for personnel compensation and the $464,000 estimated for contract services, both of which I have touched on, major objects of expenditure include $40,000 for travel and transportation, $58,000 for rent communications and utilities, $25,000 for printing and reproduction, and $25,000 for equipment. In these amounts $47,000 is included for transfer to General Services Administration for rent on the Commission offices at 1730 K Street, NW. here in Washington, D.C. After fiscal year 1967, General Services Administration will budget for this expense and it will no longer be chargeable to Commission funds.

Amendment

Without increasing the amount of our budget request, I request modification of the language in the appropriation to indicate that of the amount appropriated not to exceed $750 shall be available to the Chairman for official reception and representation expenses. The Bureau of the Budget has been advised of this proposed amendment.

Mr. Chairman, we were unaware when we prepared our budget that it is necessary to have specific language in the appropriation in order to permit use of funds for this purpose. I became aware of it when, in planning for the joint meeting of the Commission with the Advisory Council next month, I was advised that none of the money appropriated could be utilized for official reception and representation expenditures. Although it is too late for the March 24, 1966, meeting and while I do not know what, if any, requirements there may be in the future for such funds, your approval is requested for an amendment of the appropriation language to permit the use of the nominal sum of $750 for such purpose in the event I find myself in the position where it is necessary to make such expenditures. A revised "language page," to be substituted for page 1 of our budget justification has been furnished to the committee staff.

This completes my prepared statement, Mr. Chairman. We will be happy, of course, to answer any questions the committee may have.

59-370—66—pt. 1——13

PUBLIC LAND LAW REVIEW COMMISSION, WASHINGTON, D.C.

Chairman: Hon. Wayne N. Aspinall.
Appointed by the President of the United States:
Laurance S. Rockefeller, of New York City, N.Y.
Gov. Philip Hoff, of the State of Vermont.
H. Byron Mock, of Salt Lake City, Utah—Vice Chairman.
Dr. Robert Emmet Clark, of Albuquerque, N. Mex.
Dr. Maurice Goddard, of Harrisburg, Pa.
Mrs. Nancy E. Smith, of San Bernardino, Calif.
Appointed by the President of the Senate:
Henry M. Jackson, Senator from Washington.
Clinton P. Anderson, Senator from New Mexico.
Alan Bible, Senator from Nevada.
Thomas H. Kuchel, Senator from California.
Gordon Allott, Senator from Colorado.
Len B. Jordan, Senator from Idaho.
Appointed by the Speaker of the House of Representatives:
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Walter Rogers, Representative from Texas.
Compton I. White, Jr., Representative from Idaho.
John P. Saylor, Representative from Pennsylvania.
Laurence J. Burton, Representative from Utah.
Rogers C. B. Morton, Representative from Maryland.
Staff Director: Milton A. Pearl.

Advisory Council

FEDERAL LIAISON MEMBERS

Baker, John A., Assistant Secretary, Department of Agriculture, Washington, D.C.
Carver, John A., Jr., Under Secretary, Department of the Interior, Washington, D.C.
Fischer, Victor, Assistant Administrator, Housing and Home Finance Agency, Washington, D.C.
Mason, John C., Deputy General Counsel, Federal Power Commission, Washington, D.C.
Moody, Joe E., Deputy Administrator, General Services Administration, Washington, D.C.
Niederlehner, Leonard, Acting General Counsel, Department of Defense, Washington, D.C.
Ramey, James T., Commissioner, Atomic Energy Commission, Washington, D.C.
Weisl, Edwin L., Jr., Assistant Attorney General, Department of Justice, Washington, D.C.

NON-FEDERAL GOVERNMENT MEMBERS

Biggs, John A., director, Department of Game, State of Washington, 600 North Capitol Way, Olympia, Wash.
Burby, William E., professor of law, California Western University, San Diego, Calif.
Childs, Orlo E. (Dr.), president, Colorado School of Mines, Golden, Colo.
Cole, Bert L., land commissioner, State of Washington, Olympia, Wash.
Curtis, A. B., chief fire warden, Clearwater & Potlatch Timber Protective Associations, Post Office Box 546, Orofino, Idaho.
Davis, E. Kendall, general counsel, Sacramento Municipal Utility District, 6201 S Street, Box 2391, Sacramento, Calif.
Etchart, Gene, Glasgow, Mont.
Fisher, Sherry R., vice president, Central National Bank & Trust Co., Des Moines, Iowa.
Foster, Charles H. W., commissioner, Department of Natural Resources, State of Massachusetts, 15 Ashburton Place, Boston, Mass.
Gray W. Howard, attorney, 105 North Sierra Street, Reno, Nev.
Gutermuth, C. R., vice president, Wildlife Management Institute, Wire Building, Washington, D.C.
Haight, Lloyd E., vice president and general counsel, J. R. Simplot Co., 805 Idaho Street, Boise, Idaho.
Hall, Robert E. Lee, vice president and government relations director, National Coal Association, 1130 17th Street, NW., Washington, D.C.
Hinkle, Clarence E., attorney, Hinkle Building, Roswell, N.Mex.

Johnson, Samuel S., president, Jefferson Plywood Co., Post Office Box 356, Redmond, Oreg.
Kelliher, Thomas G., vice president and general manager, Southern Division, Tidewater Oil Co., Post Office Box 1404, Houston, Tex.
Kirgis, Frederic L., attorney, 1900 Security Life Building, Denver, Colo.
Marvel, John, Battle Mountain, Nev.
Orell, Bernard L., vice president, Weyerhaeuser Co., Tacoma, Wash.
Renwick, Bruce, vice president and senior counsel, Southern California Edison Co., Post Office Box 351, Los Angeles, Calif.
Requa, Earl F., vice president and general counsel, Northern Pacific Railway Co., 1018 Northern Pacific Building, St. Paul, Minn.
Smith, Fred, Room 5600, 30 Rockefeller Plaza, New York, N.Y.
True, H. A. "Dave," Jr., chief executive officer, True Oil Co., River Cross Road, Casper, Wyo.
Widman, Michael F., Jr., director, research and marketing department, United Mine Workers of America, 900 15th Street, N.W., Washington, D.C.
Wilm, Harold G., commissioner, Conservation Department, State of New York, Albany, N.Y.

GOVERNORS' REPRESENTATIVES

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Alaska:
Warren C. Colver
Arizona:
Floyd N. Smith
Arkansas:
H. Y. Rowe, Esq.
California:
Hugo Fisher
Colorado:
Stephen H. Hart, Esq.
Connecticut:
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Wyoming:
Frank C. Mockler, Esq.

MEMBERSHIP OF THE COMMISSION

Representative ASPINALL. Mr. Chairman, it is always a pleasure to appear before this committee with the dean of all congressional activities sitting as its presiding officer.

This is the first time I have had the pleasure of appearing in this new room here in this new Senate Office Building.

The Commission, Mr. Chairman, was authorized after a great deal of thought and study that went into the preparation of the law, and after full debate on the floor, and after consideration by the President, who approved the legislation as Public Law 88-606. This is a bipartisan operation. The membership is composed of six Members from the Senate of the United States, three from each party; six from the House, three from each party; six appointed by the President of the United States; and a Chairman elected by the first 18.

At the start of the organization meeting which was held last July, I was a member of the Commission appointed by the Speaker. At the organization meeting I was elected chairman and my position as a House Member was taken by another Member of the House of Representatives. The organization meeting, and a meeting in August 1965 at which the Commission named 25 members of the Advisory Council, are the only meetings that we have had to date.

ADVISORY COUNCIL

Since then we have had added to our operation on the Advisory Council eight liaison members from the departments and agencies of the Government most directly affected by the public land law operations. In addition we have had 50 persons appointed by the 50 Governors to act as their representatives in the activities of the Commission.

STAFF MEMBERS

We will have a meeting of the Commission here in the New Senate Office Building on March 24 and March 25, at which time we hope all of the members will be present. Since July 1965 when Mr. Pearl was elected as the director of the staff at the organization meeting—Mr. Pearl was with us over in the House Committee on Interior and Insular Affairs as professional consultant on public lands and mines and mining—we have hired a partial staff. At the present time we have a staff of 28, if I remember correctly, and we will do our best to get 12 more on that staff as soon as we possibly can.

It has been a very difficult matter to find trained individuals for the top jobs who have the experience for this kind of a study.

May I just take time enough to greet my friend from North Dakota.

Senator YOUNG. How are you, Wayne?

Representative ASPINALL. Fine, thank you.

This study will be divided primarily into studying the laws and the resources—the natural resources—and the staff is set up for that purpose. They are specialists. We are not bound by the civil service provisions.

It has been difficult to get staff members for the prices that we felt that we could pay, but as I have said before we are getting a very competent staff together.

All of us realized when the authorization was set up for the work to be completed by December 31, 1968, and the $4 million that it would be very difficult to finish the task in the time provided.

Definition of Public Land

The act defines the public land as the public domain of the United States, the reservations, other than Indian reservations, created from the public domain, lands permanently or temporarily withdrawn, reserved, or withheld from private appropriation and disposal under the public land laws, including the mining laws, outstanding interests of the United States in lands patented, conveyed in fee or otherwise, under the public land laws, natural forests, wildlife refuges and ranges, and the surface and subsurface resources of all such lands, including the disposition or restriction on disposition of the mineral resources in lands defined by appropriate statute, treaty, or judicial determination as being under the control of the United States in the Outer Continental Shelf.

This is not a codification program, Mr. Chairman, and members of the committee. Neither is it a program where we will be able to study every little minute law and detailed history of that law. We have to choose and we are in the process at the present time of choosing the main subjects or problems which will come before the Public Land Law Review Commission.

Functioning of the Commission

This is the way it will act. The staff will and is getting together the overall plan. The staff will work closely with the Commission. The Commission will work closely with the Advisory Council. All the time the liaison members from the various Federal departments will be in contact with the Commission, the staff and Advisory Council. The staff will work with the Governors' representatives, who will be permitted to take part in our proceedings. All suggestions will be received.

1965 and 1966 Appropriations

Getting to the appropriation request, the Congress appropriated $350,000 for fiscal year 1965 and $750,000 for fiscal year 1966. Both appropriations remain available until expended as provided by Public Law 88–606.

Contracting of Detail Work

I might say, Mr. Chairman, that we endeavored to keep our staff just as small as we could possibly keep it, having our in-house staff work limited as much as we could. We have contracted with GSA to do a great deal of the detail work of the office and take care of such matters as payrolls and help us in the leasing of our offices at 1730 K Street.

The professional staff will study the activities that they think necessary and we will contract a great deal of our work, so that the staff will be evaluating the contract work a great deal of the time.

Obligations and Projected Obligations

As of the end of December 1965 we had obligated only $85,981, and the reason for this is that we were slow in starting. It was difficult to get our activity underway, to get the Commission set up and organized and also to get the staff personnel that is necessary. We project that we will obligate a total of $777,000 by the end of this fiscal year and $1,230,000 during fiscal year 1967.

Budget Request, 1967

This leads us to request approval of new obligational authority in the amount of $907,000, as has been noted before in this committee hearing.

A small but significant item in our budget is for $25,000 to reimburse the General Services Administration for administrative support. We have been advised that there is a likelihood that that perhaps is more than will be needed and if so our contract will be changed to a lesser amount.

Aside from the $542,000 proposed for personnel compensation and the $464,000 estimated for contract services, both of which I have touched on, major objects of expenditure include $40,000 for travel and transportation, $58,000 for rent, communications, and utilities, $25,000 for printing and reproduction, and $25,000 for equipment.

Entertaining Activities

Mr. Chairman, when we drafted the legislation and passed it, we didn't realize that there might be an entertaining activity that we would have to fund some way or other and we didn't place anything in the legislation or in last year's appropriation that provided us authorization for some money for what is known as reception and representation activities.

There won't be much entertaining involved. However, just consider this coming meeting of the Commission on March 24 and March 25. We should get together. We should become acquainted. We should know each other. And, to do so, the best thing is to have a little entertainment hour.

We are going to have it, but the money will have to come from some other means or measures than appropriated funds. It will have to come out of somebody's pocket or it will have to come out of some other programs in some other department or maybe it will have to come out of just what we call a cash counter where the members will have to go up and buy their own refreshments. Accordingly, we have provided in our request to you, and it is done so with the knowledge of the Bureau of the Budget, for an amendment to the appropriating language so that it will read as follows:

> For necessary expenses of the Public Land Law Review Commission, established by Public Law 88–606, approved September 19, 1964, including services as authorized by section 15 of the Act of August 2, 1946 (5 U.S.C. 55a), and not to exceed $750 for official reception and representation expenses, [$750,000] $907,000, to remain available until expended.

We understand that this will take care of these activities in the amount that would be modest and yet would be a drain upon somebody's personal pocketbook.

STAFF PERSONNEL

Mr. Chairman, members of the committee, I have with me this morning the staff director, Mr. Pearl, and the associate director, Mr. Foster, and if there are any technical questions I would like to have the opportunity of referring them to the staff.

Chairman HAYDEN. I haven't any technical questions. I think I understood you to say you have 12 personnel and you expect to get 12 more?

Representative ASPINALL. We have 28 in our personnel at the present time, Mr. Chairman, and we expect to get 12 more during fiscal 1966. Then there was a little difference for fiscal year 1967 which can be explained here if the chairman wishes it.

We asked for an additional 10 if found necessary during fiscal 1967 to bring our staff up to its full complement, what we have planned and what we have decided is the maximum amount for fiscal year 1967.

The Bureau of the Budget has suggested, inasmuch as we said that we might stay at 45—this is correct now?

Mr. PEARL. Yes.

Representative ASPINALL. That perhaps it would be better if we provided for 45 and that we make the record here showing that we might need the additional 5: 45 plus 5 or a total of 50. And then come back later on if we saw fit to have it, but our maximum personnel is expected to be someplace in the neighborhood of 50 in fiscal year 1967 and perhaps fiscal year 1968.

Chairman HAYDEN. Is provision made for the use of experts from other agencies of the Federal Government?

Representative ASPINALL. We have these liaison members from the departments concerned who are going to be advising with us and then the provision of the law provides that we can contract with the agencies of Government having the personnel that would be able to help us and that would be a part of our contracting operations.

FEDERAL LANDS EXCLUDED FROM AUTHORIZED COMMISSION STUDY

Chairman HAYDEN. Are there any Federal lands which are not included within your study authorization?

Representative ASPINALL. Well, we don't include all the military reservations. We don't include post offices. We don't include the sites of Federal buildings. We don't include Indian reservations; Indian reservations are excluded by statutory provision. Acquired land as such would be excepted, except the national forests and wildlife refuges and game ranges.

This would be the big category that wouldn't be included in this. Of course, what I was detailing were mostly acquired lands.

SCOPE OF COMMISSION AUTHORITY

Chairman HAYDEN. Is it the purpose of the Public Land Law Review Commission to suggest amendments to current law?

Representative ASPINALL. Mr. Chairman, it is more than that. The purpose of the Public Land Law Review Commission is to study the history of our laws, the present public land laws, the present situations as we find them in a study as detailed as we can, and then to recommend to the Congress what we think current policy relative to

public land should be, leaving to the Congress of the United States the determination of whether or not it amend existing laws, whether it repeal existing laws, or whether it adopt new policies with entirely new wording.

Chairman HAYDEN. It is a broad field.

Representative ASPINALL. Mr. Chairman, you are correct.

CONFLICTS IN DEPARTMENTAL JURISDICTIONS AND IN REGULATIONS

Senator YOUNG. Do you find some conflict now in the use of public land which you will attempt to correct, or different Government policies affecting different public lands?

Representative ASPINALL. Senator Young, I think that we use the word "hodgepodge" when we refer to our public land laws. They have been developing ever since the beginning of the first year or even before the first year of our Constitution and operation as a government. We find conflicts between various departments as to jurisdiction. We find conflicting regulations so that it is almost impossible to tell how to proceed and when to proceed.

We find so many variances that anyone depending upon the public land laws of the United States would just pretty nearly give an unlimited amount of his time to find the answers, and also we find a conflict, Senator Young, as far as policy is concerned.

TAYLOR GRAZING ACT OF 1934

The last major revision of our public land laws was the act of 1934 known as the Taylor Grazing Act under which the Bureau of Land Management now operates.

The policy set up in that act is that whatever was decided as of that time was to be a temporary operation, an emergency measure, and here we have had 30-plus years go by and we are still operating under this emergency measure.

Also, are lands withdrawn and for what purposes are they withdrawn? What land do we retain? Should we retain all of the public domain land under the jurisdiction of the Bureau of Land Management, or should part of it be disposed of as is the stated policy in the Taylor Grazing Act, that is, current management is "pending final disposal."

All of these things are involved in this study, and what we are attempting to do is to bring the public land laws up to date. We have had three studies, Senator Young and Chairman Hayden, on public lands. Only one of these studies ever had anything done about what was suggested in the report. The others were placed on the shelf. The one that was significant was activated to a very limited extent.

COMMISSION AND ADVISORY COUNCIL MEMBERSHIPS, LIAISON OFFICERS, AND GOVERNORS' REPRESENTATIVES

Senator YOUNG. I don't know who would do a better job than you as Chairman of the Commission.

Representative ASPINALL. You are very charitable.

Senator YOUNG. I don't envy you your assignment.

Representative ASPINALL. May I just say that I had no idea when drafting the legislation and working for the passage of the law that I would ever be asked to be other than a member.

I wanted to be a member of the Commission. But it just so happens that that is the way the wheel spun and I feel very honored to have been chosen chairman. However, I can tell you there is a lot of work and if I didn't have men like Mr. Pearl, whom I know especially, and Mr. Foster, and Mr. Nelson, formerly of the Bureau of Land Management, and Mr. Elmer Bennett, former Under Secretary of the Department of the Interior, and Mr. Rapp, I think known to you gentlemen as a former staff member of the Bureau of the Budget, if I didn't have men like this I would either fall flat on my face or the Commission would, one or the other.

Senator YOUNG. Have the other members of the Commission been named yet?

Representative ASPINALL. Oh, yes. They are all named, and that question being asked, Mr. Chairman, I will be glad to respond to the Senator's question, but I would ask unanimous consent that I be permitted to place in the record immediately following my own statement the names of the members of the Commission, the names of the Federal liaison officers and non-Federal Government members who are members of the Advisory Council, and the names of the Governors' representatives.

Chairman HAYDEN. They may all be included in the record. We thank you for your appearance.

Representative ASPINALL. Thank you very much, Senator Hayden.

MONDAY, FEBRUARY 21, 1966.

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

STATEMENTS OF CHARLES H. STODDARD, DIRECTOR; JOHN O. CROW, ASSOCIATE DIRECTOR; EUGENE V. ZUMWALT, ASSISTANT DIRECTOR; JAMES P. BEIRNE, ASSISTANT DIRECTOR; MARK B. WELT, CHIEF, DIVISION OF FINANCIAL MANAGEMENT.

RECEIPTS AND ALLOCATIONS

Chairman HAYDEN. Next we have the Bureau of Land Management.

This morning the committee will consider the budget estimates for the Bureau of Land Management for fiscal year 1967. There will be included in the record a table showing amounts received by the Bureau of Land Management by sources for fiscal years 1963 through 1967; and another table showing allocation of Bureau of Land Management receipts to the several States for fiscal year 1965.

(The tables follow:)

RECEIPTS BY SOURCES

The following table shows actual receipts of the Bureau of Land Management for fiscal years 1963, 1964, and 1965, and the estimated receipts for 1966 and 1967:

	1963	1964	1965	1966	1967
Sales, public lands and materials	$3,382,561	$3,169,208	$3,061,158	$3,450,000	$3,500,000
Fees and commissions	3,004,406	3,748,197	3,817,957	4,500,000	4,100,000
Mineral leasing	118,562,815	122,245,697	123,272,268	131,104,000	137,130,000
Mineral leasing, Outer Continental Shelf	366,814,447	16,491,410	53,469,903	165,000,000	400,000,000
Grazing fees	4,027,587	4,405,975	4,250,636	4,600,000	4,600,000
Right-of-way leases	256,598	378,057	243,477	375,000	375,000
Timber sales	33,628,924	47,154,505	44,874,446	46,400,000	43,500,000
Miscellaneous receipts	1,015,322	1,458,537	1,371,039	1,500,000	1,500,000
Total	530,692,660	199,051,586	234,360,884	356,929,000	594,705,000

Allocation of Bureau of Land Management receipts to States, 1965

State	Sales of public land and timber	Mineral leases and permits	Taylor grazing leases	Taylor grazing districts	Other	Total
Alabama	$920	$6,416				$7,336
Alaska	3,991	6,743,521				6,747,512
Arizona	6,021	160,639	$33,244	$18,251		218,155
Arkansas	903	56,054				56,957
California	70,970	2,675,480	44,042	5,914		2,796,406
Colorado	6,657	3,218,469	11,275	16,334		3,252,735
Florida	116	159				275
Idaho	18,253	403,546	9,326	31,165		462,290
Kansas		138,781	1			138,782
Louisiana	1,063	241,716				242,779
Michigan	172	3,301				3,473
Minnesota	18					18
Mississippi	830	10,255				11,085
Missouri	6					6
Montana	12,379	2,191,279	32,596	21,461	[1] $54,261	2,311,976
Nebraska	36	2,144	417			2,597
Nevada	14,834	549,017	9,406	56,953		630,210
New Mexico	17,915	10,881,753	8,893	42,933	[1] 2,084	10,953,578
North Dakota	113	174,341	2,220			176,674
Oklahoma	893	111,547	52			112,492
Oregon	52,837	1,856	15,499	24,858	[2] 20,261,489	20,356,539
South Dakota	1,452	127,394	13,208			142,054
Utah	3,669	3,733,216		33,768	[1] 99	3,770,752
Washington	1,851	4,020	5,369			11,240
Wisconsin	8					8
Wyoming	4,485	15,118,846	75,863	39,113		15,238,307
Total	220,392	46,553,750	261,411	290,750	20,317,933	67,644,236

[1] Executive Orders 10787, Nov. 6, 1958 and 10890, Oct. 27, 1960, from grazing.
[2] From Oregon and California lands, $20,037,859; Coos Bay lands, $223,630.

HIGHLIGHT STATEMENT

Chairman HAYDEN. There also will be placed in the record the highlight statement furnished with the Bureau's budget justifications. (The statement follows:)

In 1964 three laws were enacted defining the policy "that the public lands of the United States shall be (a) retained and managed, or (b) disposed of, all in a manner to provide the maximum benefit for the general public." In 1965 the Bureau of Land Management moved to cooperate with the Public Land Law Review Commission created by Public Law 88–606. It commenced to implement the Classification and Multiple Use Act (Public Law 88–607) and the Public Sale Act (Public Law 88–608) by establishing policy and regulations under the provisions of these acts. On October 9, 1965, the Department published in the Federal Register the policies and criteria for retention and disposal of lands, pricing of lands, interim management of retained lands, priority of use of lands retained for multiple-use management, and the components of multiple-use management. Additionally, procedures for public sale and land classification were published at the same time.

The programs of the Bureau are based on the expectation that the question of "final disposal" of the public domain, left unsettled by the Taylor Grazing Act, will be resolved at least to the extent that long-range plans and investments can be made by the Federal Government on those public lands best suited for Federal retention, and by other landowners on related non-Federal lands, with some assurance of stable land tenure. The Public Land Law Review Commission's recommendations are expected to provide a basis for resolving this issue in a comprehensive manner. In the meantime, the work on our initial analysis is a starting point toward reaching decisions on individual parcels of land. It identifies separate geographic areas (planning units) where the Bureau's program can be logically focused, over time, toward either—

(1) Disposition of lands near expanding communities which are best suited for private or local public ownership and widely scattered tracts having little or no public value, or

(2) Management of the present land pattern where public lands are in large, relatively solid blocks which are expected to remain in public ownership, or

(3) Management, accompanied by land pattern improvement and/or development of cooperative agreements with other intermingled landowners on highly complex Federal and non-Federal land patterns containing significant proportions of public lands which are expected to remain in public ownership, or

(4) Coordinated management with other Federal agencies on national recreation areas, military withdrawals, and other Federal reservations.

Generally, land will be classified for disposal when the land will satisfy the following objectives:

(1) Provide for community growth;

(2) Satisfy outstanding State indemnity selections and other Federal obligations;

(3) Improve public land management programs;

(4) Transfer lands more valuable for other purposes; and

(5) Lands surplus to management needs.

On lands classified for interim retention and multiple use management, the Bureau in its management program will consider both economic demand and intangible social need, and will strive for that use or combination of uses which will provide the maximum, long-term benefit to the general public. In considering economic demand and social need, all viewpoints—national, regional, State, and local—will be fully considered. However, the first objective is to insure that the public lands meet their share of anticipated future national needs for resource uses and products, and then that these lands make the maximum possible contribution to the regional, State, and local economies dependent upon them.

The Bureau is actively pursuing its management programs. During the months of December 1964 and January and February 1965, road systems on lands administered by the Bureau in western Oregon were damaged severely by floods which struck the Pacific Northwest. Damage to these roads was $18.5 million. The repair and reconstruction of these road systems were essential to continued flow of resources to conversion points, and thus were essential to the strength of the economy of this region which is dependent to a great extent upon timber. Congress has appropriated $14,820,000 for repair of the flood damage in western Oregon, plus $500,000 for repair of flood damage on the public domain in eastern Oregon, Idaho, and California. Road repair work in California, eastern Oregon, and Idaho is essentially complete. Repair to western Oregon roads, where the bulk of the damage occurred, is progressing satisfactorily.

This year the Bureau should complete its recreation inventory of the public lands to identify recreation sites and areas. This is a part of a national recreation inventory conducted in cooperation with the Bureau of Outdoor Recreation.

Similarly, to improve the internal management of the Bureau, the reorganization of the field administrative and technical support organizations has been implemented. In order to provide more efficient services to the Bureau and to make the best possible use of limited manpower, these functions have been consolidated in two locations.

During fiscal year 1966, the soil and watershed program will give special attention to correction of deteriorating frail lands.

While the Bureau has been moving forward to implement the new approach to public land management, the fiscal year 1967 budget allowances for the BLM involve a reduction of $1,360,000 from the amount authorized by Congress for fiscal year 1966 for the "Management of lands and resources" appropriation. This reduction includes $1,260,000 identified reductions and $100,000 which represents the annualization of operational savings initiated in 1966.

The reduction, in program terms, is about $1,800,000 from the fiscal year 1966 "Management of lands and resources" appropriation level since, in addition to the $1,360,000 reduction, the Bureau will absorb over $300,000 needed to pay within-grade increases in fiscal year 1967 and $150,000 for anticipated wage board salary increases and Davis-Bacon Act prevailing wage increases.

The estimates of the Bureau for direct appropriations are summarized below by major program in thousands of dollars:

	1966	1967	Increase (+) or decrease (−)
Realty and mineral leasing service	5,946	5,937	−9
Resource management, conservation, and protection	35,197	34,912	−285
Cadastral surveys	5,021	4,778	−243
Firefighting and rehabilitation	1,250	1,000	−250
General administration	2,115	2,128	+13
Total, management of lands and resources	49,529	48,755	−774
Construction and maintenance	3,150	2,900	−250
Public land development, roads and trails	2,000	2,000	
Total	54,679	53,655	−1,024

Increased productivity and efficiency during 1966 are scheduled to produce cost savings of $1,153,000. The anticipated total savings for fiscal year 1967 in the amount of $684,000, plus net adjustments in programs of $340,000, produce a reduction of $1,024,000 in direct appropriations. The Bureau is striving to meet constantly growing responsibilities with approximately the same manpower. Projected travel continues to be critically reviewed and initial plans for fiscal year 1966 have been reduced with the reductions continued on in the fiscal year 1967 estimates.

The Bureau views the natural resources of this Nation as a capital base which can be squandered and depleted and lost to future generations, or alternately, which can be prudently managed to provide the maximum long-range benefit to the Nation. If our natural resources are considered to be a capital stock, some of this stock will be depleted as it is used because of its nonrenewable nature, and some is renewable and will produce a steady "flow" if it is managed wisely. Unlike a prudent businessman, this Nation has not always used this capital stock of natural resources wisely. The businessman provides for the replenishment of capital by plowing back into his business a portion of his current income. The Bureau of Land Management, aspiring to manage a natural resources capital stock wisely, recognizes that a part of the revenues derived from the utilization of natural resources really are costs rather than income. Thus, to preserve a viable capital stock of natural resources, there must be a "plowing back" of current income into that capital plant.

In fiscal year 1967 the Bureau of Land Management will realize receipts estimated at $595 million. Of this amount $77 million will be paid to States and counties; $1.4 million will be appropriated for range improvements; $68.6 million will be deposited in the Reclamation Fund; and the balance of $448 million will be deposited in the Treasury. In each instance the amount deposited with the Treasury, paid to States and counties, and deposited in the Reclamation Fund exceeds the fiscal year 1967 request for Bureau operation and investment funds.

PREPARED STATEMENT

Chairman HAYDEN. The Director of the Bureau of Land Management is present this morning to make his statement. If you care to do so you may summarize your statement, or if you prefer you may read it in full.

Mr. STODDARD. Thank you, Mr. Chairman.

It is a pleasure to have the opportunity to appear before you once again and we have always felt that we have an understanding on the part of this committee of our land problems. We have a formal statement which we will submit which summarizes broadly the principle items of emphasis and change in the current year's budget.

Rather than read the whole thing, if you would like I can give a few highlights from it.

Chairman HAYDEN. All right. That may be done.

(The statement follows:)

We are pleased to be here today to discuss the budget request for fiscal year 1967 for the Bureau of Land Management. This statement will touch briefly upon the more important recent developments affecting the management of the public lands and the details of the financial requirements necessary to implement the management of these lands.

One of the most significant events affecting the management of public lands occurred in 1964. This was the enactment by Congress of three laws—the Classification and Multiple Use Act, the Public Sale Act, and the act establishing the Public Land Law Review Commission.

Accordingly, the programs of the Bureau are based on the expectation that for the public domain, in this decade, there will be resolved the extent to which these lands will be disposed of or retained. Long-range plans and investments will be concentrated on those public lands best suited for Federal retention, and by other landowners on related non-Federal lands, with some assurance of stable land tenure. Also an orderly program of disposal will replace the present unwieldy structure as the land laws are simplified.

The Public Land Law Review Commission's recommendations are expected to provide a basis for resolving this issue in a comprehensive manner.

Over the past year we have completed an initial analysis of the public lands, which identifies areas of land which appear to be generally suited to management and disposition classifications. Through use of this tool we hope to be able to make more efficient the actual classifications authorized by the act. We are now testing a classification approach new to the Bureau, involving considerable local public participation. If this approach works, and we are quite enthusiastic, we should be able to rapidly classify large acreages, at comparatively little expense to BLM, and at the same time gain a major degree of local participation and understanding of the program.

Generally, land will be classified for disposal when the land will satisfy needs for community growth, will meet outstanding State indemnity selections and similar Federal obligations, or will improve public land management programs. Transfers to private ownership will yield increasing revenue to the Federal Government. On lands classified for interim retention and multiple use management, our first objective is to insure that the public lands meet their share of anticipated future national needs for resource uses and products, and then that these lands make the maximum possible contribution to the regional, State, and local economies dependent upon them.

During the months of December 1964 and January and February 1965, road systems on lands administered by the Bureau in western Oregon were damaged severely by floods which struck the Pacific Northwest. Damage to these roads was estimated to be over $18 million. Repair and reconstruction of these road systems was essential to orderly marketing of approximately $45 million worth of timber sold each year by the Bureau. The Congress appropriated $14,820,000 for repair of the flood damage in western Oregon, plus $500,000 for repair of the flood damage on the public domain in eastern Oregon, Idaho, and California. Road repair work in California, eastern Oregon, and Idaho is essentially complete. Repair to western Oregon roads, where the bulk of the damage occurred, is progressing satisfactorily. We have been working very closely with the Bureau of Public Roads to assure that the program progresses on schedule.

While the Bureau has been moving forward to implement the new approach to public land management, the fiscal year 1967 budget contemplates an overall program reduction of $1,360,000 from the amount authorized by Congress for fiscal year 1966 for the Management of Lands and Resources appropriation. In addition to the $1,360,000 reduction, the Bureau will absorb over $300,000 needed to pay within-grade increases and $150,000 for anticipated wage board salary increases and Davis-Bacon Act prevailing wage increases. This is a tight budget and will require that we increase our operating effectiveness.

In fiscal year 1967, the Bureau of Land Management will realize receipts estimated at $595 million. Of this amount, approximately $77 million will be paid to States and counties; $68.6 million will be deposited in the Reclamation fund, and $448 million will be deposited in the Treasury. In each instance, the amount deposited in the Treasury, paid to States and counties, and deposited in the Reclamation fund exceeds the fiscal year 1967 request for Bureau operation and investment funds.

Within the overall reduction of $1,360,000, we are requesting small increases to expedite land transfers, to intensify the range management program in order

to protect the investments already made for soil and watershed conservation, to meet the increased cost of contract fire protection, and to replace outmoded protection equipment. These increases are more than offset by decreases resulting from the completion of the recreation inventory, the lessening of the range adjudication program, reduced intensity of dependent property surveys, decreases in some aspects of the soil and watershed conservation programs, in the Alaska cadastral survey program, and the fire rehabilitation program, and finally by $100,000 in nonrecurring savings resulting from cost-reduction programs initiated in fiscal year 1966.

The Bureau is striving to meet constantly growing responsibilities with slightly less manpower. By consolidation of field offices and employment of more modern equipment and of modern management techniques, the Bureau will accomplish the program planned for fiscal year 1967.

Classification and Multiple Use and Public Sales Acts

Mr. Stoddard. One of the most significant developments affecting public land occurred in 1964, which as Congressman Aspinall just described, was the new Public Land Law Review Commission enactment.

At the same time the Classification and Multiple Use and Public Sale Acts were also passed. These were temporary acts passed in an effort to provide a working pilot effort, during the studies of the Commission, to use modern techniques of land classification for determining which lands logically should be disposed of and which lands should be retained and marked for multiple uses by the Federal Government.

These classifications are now underway and we hope that we will in the process provide some grist for the Public Land Law Review Commission mill, to enable them to provide a long-term decision with respect to the dilemma that the Bureau has been in for many years on whether land should be disposed of or retained. The idea being that the land disposed of under the Public Sale Act would be classified in advance and zoning and planning would be required before it would be transferred to private or local public uses.

Likewise, lands that are classified for multiple use management which would be lands on which proper soil and watershed, and forest conservation measures would be installed with the Federal investments made over a period of time and would pay off to the benefit of the public treasury.

1966 Appropriation for Western Flood Damages

Last year the Bureau came before this committee for a special appropriation to take care of flood damages in the Pacific Coast States and in Idaho. The Congress appropriated almost $15 million to repair this flood damage. Most of the work is now completed except in western Oregon. We are working now on the backlog of this road repair work and we feel it will be completed during this calendar year.

Overall Budget Reduction

We have been trying to move forward under the new legislation, that I just described, in public land management with the current level of funding. Actually the budget presentation before you now contemplates an overall reduction of $1,360,000, plus some absorption of within grade pay increases.

Receipts Allocation, 1967

During fiscal year 1967 the Bureau of Land Management will realize receipts of $595 million from a number of sources. Of this, $77 million will be paid to the States and counties; $68.6 million will be deposited into the Reclamation fund; and $449 million will be deposited in the Treasury of the United States. In each instance the amount deposited under these various accounts exceeds the total appropriation of the Bureau of Land Management.

We hope to carry out the new responsibilities within this overall reduction by some shifting in funds. We look forward to accelerating our transfers of land under the Public Sale Act which will bring in additional revenues to the Federal Government. We have in this request an overall reduction in our Alaskan cadastral survey program because we are now keeping up with the States' selections.

New Surveying Techniques

Also, we have some new techniques for surveying which enable us to carry out the survey work at a more rapid rate with about the same program funds. This, Mr. Chairman, summarizes about the full extent of our statement.

Management of Lands and Resources

Chairman Hayden. The estimate for fiscal year 1967 is $48,755,000 for "Management of lands and resources." This is $820,000 less than the amount appropriated in fiscal year 1966. The justification for the estimate will be included in the record.

(The justification follows:)

Appropriation, 1965	$45, 372, 000	
Supplemental appropriation	1, 000, 000	
Second supplemental appropriation	3, 950, 000	
Total appropriation, 1965		$50, 322, 000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration		−26, 332
Total available, 1965		50, 295, 668
Appropriation, 1966	$49, 080, 000	
Pay cost supplemental	495, 000	
Total appropriation, 1966		49, 575, 000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration		−45, 790
Total available, 1966		49, 529, 210

SUMMARY OF INCREASES AND DECREASES, 1967

Realty and mineral leasing services:		
To provide for increased pay costs for 1966 positions	+$90, 040	
Annualization of 1966 savings and improved billing procedure	−99, 550	
		−9, 510

Resource management, conservation and protection:		
To provide for increased pay costs for 1966 positions	+$390,330	
(a) Land classification and mineral examination:		
Increase to expedite land transfers	+50,000	
Decrease due to completion of recreation inventory program	−285,000	
Annualization of savings and lower costs through better utilization of manpower	−33,200	
(b) Range management:		
Acceleration of range management program	+150,000	
Lessening of range adjudication program	−175,000	
Reduction in intensity of dependent property surveys	−60,000	
Annualization of savings and lower operating costs	−43,000	
(c) Forestry:		
Nonrecurring program savings	−38,300	
(d) Soil and watershed conservation:		
Decrease in soil and watershed conservation programs	−300,000	
Nonrecurring program savings	−39,500	
(e) Fire protection:		
Increased contract protection costs and equipment purchases	+100,000	
Nonrecurring program savings	−1,030	
		−$284,700
Cadastral surveys:		
To provide for increased pay costs for 1966 positions	+64,630	
(a) Alaska, decrease in Alaska survey program	−300,000	
Nonrecurring program savings	−4,000	
(b) Other States, nonrecurring program savings	−3,630	
		−243,000
Firefighting and rehabilitation:		
Decrease in rehabilitation program	−250,000	
		−250,000
General administration:		
To provide for increased pay costs for 1966 positions	+41,000	
Nonrecurring program savings	−28,000	
		+13,000
Net decrease, fiscal year 1967		−774,210
Budget estimate, fiscal year 1967		48,755,000

Analysis by activities

Subactivity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Transfers [1]	Amount available
1. Realty and mineral leasing services:					
(a) Title, lease, and records service	$5,447,214	$5,124,000	$65,760	−$1,750	$5,188,010
(b) Records improvement	691,928	756,000	11,200	−8,700	758,500
2. Resource management, conservation, and protection:					
(a) Land classification and mineral examination	4,318,529	4,594,970	68,800	−770	4,663,000
(b) Range management	5,127,624	5,378,750	65,500	−3,750	5,440,500
(c) Forestry	6,877,355	6,705,000	83,900	−19,700	6,769,200
(d) Soil and watershed conservation	11,142,920	14,934,628	85,500	−5,128	15,015,000
(e) Fire protection	2,962,915	3,288,652	23,970	−3,622	3,309,000
3. Cadastral survey:					
(a) Alaska	1,793,950	1,967,000	14,000		1,981,000
(b) Other States	3,119,348	3,000,000	42,370	−2,370	3,040,000
4. Firefighting and rehabilitation	5,443,851	1,250,000			1,250,000
5. General administration	1,818,448	2,081,000	34,000		2,115,000
Comparative transfer to other accounts	1,062,471				
Unobligated balance lapsing	489,115				
Total	50,295,668	49,080,000	495,000	−45,790	49,529,210

[1] Represents transfers to General Services Administration.

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimates	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Realty and mineral leasing services:						
(a) Title, lease, and records service	$5,447,214	$5,188,010	$5,166,000	−$22,010	+$77,540	−$99,550
(b) Records improvement	691,928	758,500	771,000	+12,500	+12,500	
2. Resource management, conservation, and protection:						
(a) Land classification and mineral examination	4,318,529	4,663,000	4,473,000	−190,000	+78,200	−268,200
(b) Range management	5,127,624	5,440,500	5,389,000	−51,500	+76,500	−128,000
(c) Forestry	6,877,355	6,769,200	6,836,000	+66,800	+105,100	−38,300
(d) Soil and watershed conservation	11,142,920	15,015,000	14,777,000	−238,000	+101,500	−339,500
(e) Fire protection	2,962,915	3,309,000	3,437,000	+128,000	+29,030	+98,970
3. Cadastral survey:						
(a) Alaska	1,793,950	1,981,000	1,691,000	−290,000	+14,000	−304,000
(b) Other States	3,119,348	3,040,000	3,087,000	+47,000	+50,630	−3,630
4. Firefighting and rehabilitation	5,443,851	1,250,000	1,000,000	−250,000		−250,000
5. General administration	1,818,448	2,115,000	2,128,000	+13,000	+41,000	−28,000
Comparative transfer to other accounts	1,062,471					
Unobligated balance lapsing	489,115					
Total	50,295,668	49,529,210	48,755,000	−774,210	+586,000	−1,360,210

[1] To provide for increased pay costs for fiscal year 1966 positions.

Management of lands and resources

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Realty and mineral leasing services:						
(a) Title, lease, and records service	$5,447,214	$5,188,010	$5,166,000	−$22,010	+$77,540	−$99,550
(b) Records improvement	691,928	758,500	771,000	+12,500	+12,500	
Total	6,139,142	5,946,510	5,937,000	−9,510	+90,040	−99,550

[1] To provide for increased pay costs for 1966 positions.

(a) *Title, lease, and records service*

The estimate for 1967 is $5,166,000, a decrease of $22,010 over 1966. The decrease consists of—

(1) an increase of $77,540 to provide for increased cost of pay raise authorized by Public Law 89-301;

(2) a decrease of $99,550 through improved practices and annualization of the substantial savings programs implemented in fiscal year 1966. Full consolidation of land office functions with State office lands and minerals functions will be completed by the end of fiscal year 1966.

Plan of work.—The total program during fiscal year 1967 will be geared to remaining current in the processing of land and mineral transactions through (1) meeting obligations to the public under existing public land laws; (2) completing realty transactions necessary to support departmental programs; and (3) furnishing required data and land status for Bureau programs and other Federal agencies. Further approaches such as closures to agricultural entry will be instituted, if needed, to maintain casework on a current basis. Close cooperation with local planning and governing authorities will be stressed, particularly in areas of rapidly expanding urban population. Paperwork processing and related services will be kept to the minimum necessary to accomplish land tenure adjustments.

Through fiscal year 1967, land classifications for interim disposition or management under Public Law 88-607 should reduce the filing of petition-applications, and open areas to logical disposal and start the shift from an application-oriented approach to a heavier concentration upon land use planning and development. This trend toward more intensive Bureau-motion activity will eliminate the need to adjudicate filings received for public lands in such areas. As a result, an accelerated shift in emphasis is expected from constant handling of the traditionally heavy burden of individual applications to (1) handling an increased volume of useful transactions at less cost, and (2) maintenance of continuing essential programs such as mineral leasing. The net effect of this will be more concentrated and efficient realty services.

Mineral leasing activity will continue to be based on anticipated demand through fiscal year 1967. Simultaneous filings for oil and gas are projected to increase slightly to 350,000 during fiscal year 1967.

The 24,738 cases pending at the end of fiscal year 1965 indicate the effectiveness of the various efforts which have been made to reduce the case backlog since 1961 when it numbered over 100,000 cases. The goal of reducing pending land and mineral cases to about 20,000 should be reached by the end of fiscal year 1967.

(b) *Records improvement*

The estimate for 1967 is $771,000, an increase of $12,500 over 1966. This increase is for pay costs.

Plan of work.—Work has been completed in Alaska, Arizona, Montana, Nevada, New Mexico, Oklahoma, North and South Dakota, Utah, and Wyoming. In fiscal year 1966 the new records for Colorado will be completed and work begun for Oregon. In fiscal year 1967 the Oregon records will be nearing completion, while preliminary work for Idaho will be initiated. In addition, the Bureau has been investigating the possibilities of converting land records to ADP for more economical handling of certain data needs and work processes. These investigations will continue and may involve pilot testing in fiscal year 1967.

Management of lands and resources

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
2. Resource management, conservation, and protection:						
(a) Land classification and mineral examination	$4,318,529	$4,663,000	$4,473,000	−$190,000	+$78,200	−$268,200
(b) Range management	5,127,624	5,440,500	5,389,000	−51,500	+76,500	−128,000
(c) Forest y	6,877,355	6,769,200	6,836,000	+66,800	+105,100	−38,300
(d) Soil and watershed conservation	11,142,920	15,015,000	14,777,000	−238,000	+101,500	−339,500
(e) Fire protection	2,962,915	3,309,000	3,437,000	+128,000	+29,030	+98,970
Total	30,429,343	35,196,700	34,912,000	−284,700	+390,330	−675,030

[1] To provide for increased pay costs for 1966 positions.

This activity includes the fieldwork of the Bureau as performed by the district offices. The amount available for fiscal year 1966 has been adjusted by increasing "Fire protection" by $160,000 and decreasing the other subactivities accordingly. This adjustment reflects a change in the recording of costs for repair and maintenance of radio communications. Beginning July 1, 1965, all communications support costs are being charged to "Fire protection" on the basis that this program is the primary reason for maintaining the communications systems. In prior years these costs were distributed among all the field programs. The adjustment is not intended to change the magnitude of communications operations in fiscal year 1966.

(a) *Land classification and mineral examination*

The estimate for 1967 is $4,473,000, a decrease of $190,000 over 1966. This decrease consists of—

(1) An increase of $50,000 to aid the transfer of lands by sale and other authorized means to local communities to meet urgent residential, recreational, agricultural, industrial, and commercial and open space needs;

(2) An increase of $78,200 to provide for increased costs of the pay raise authorized by Public Law 89–301;

(3) A decrease of $285,000 upon completion in fiscal year 1966 of the initial recreation inventory on BLM administered lands;

(4) A decrease of $33,200 reflecting annualization of various cost savings programs initiated in fiscal year 1966.

Need for increase.—The Land Classification and Multiple Use Act (Public Law 88–607) authorizes classification of public lands for (1) disposal to assist orderly community growth and development, and (2) long-term Federal management. Proper administration of the new Public Sale Act (Public Law 88–608) during its 3 remaining years will require a concerted effort to develop adequate working relationships with the counties and local communities involved. The $50,000 requested will enable the Bureau to work with western communities in meeting urgent residential, recreational, agricultural, industrial, commercial, and open space needs for public lands. Seventy transfer areas, in close proximity to expanding western communities, have been identified and 30 will receive intensive work in fiscal year 1967. Because of requirements under Public Law 88–608, increased Bureau participation and close cooperation with local government will be necessary to insure consistency between planning and local zoning regulations.

Plan of work.—Public land management has taken on a new outlook with the enactment of progressive legislation designed to review existing land laws (Public Law 88–606) and to give the Secretary of the Interior authority to retain and manage public domain land (Public Law 88–607). The retention classification program for lands to be retained and managed will be continued in consultation with local government.

Approximately 10 million acres of public land in the 11 Western States have been tentatively identified as eligible for possible disposal. In this connection, coordination with county governments is being established to insure that disposals are consistent with local zoning ordinances and local comprehensive master plans. The new Public Sale Act (Public Law 88–608) requires zoning ordinances by local

authorities prior to sale. In fiscal year 1967, lands to be transferred will continue to be identified to local communities, working primarily through county governments. BLM plans to integrate its disposition efforts with local government plans and requirements for land to the extent feasible and thus avoid creating costly problems for State, county, and local governments.

Tenure adjustments of all types will continue to require intensive field work to insure that valid data is used, that the planning of tenure adjustments is of benefit to all concerned, and that full recognition is given to resource values. Field investigation and reporting in connection with petition-applications and other land oriented cases will be kept current. Public demand casework requirements will receive prompt action.

Timely support of the resource management programs of BLM and other agencies and organizations will continue to be accomplished through land exchanges and transfers which add needed lands to Federal, State, local, nonprofit and private management areas. Land exchanges are a vital part of the programs of many agencies because they serve as a tool to improve land patterns and to acquire access to blocked land holdings. Careful planning and informal negotiation will precede the filing of an exchange application. The current BLM-Forest Service land adjustment studies and actions in Montana are examples of such efforts. These transfers are expected to be completed early in calendar year 1966. In addition, rights-of-way actions, selection, and other public laws will be used to provide for use or transfer of ownership of public lands. The Taylor Grazing Act and new Public Sale Act will be the principal acts under which disposal will be accomplished.

The small tract program is being integrated into the overall resource management and land tenure effort. Land presently classified as suitable for disposal under the Small Tract Act will be reclassified when appropriate (1) to provide alternate tracts to qualified applicants under the Mining Claim Occupancy Act (Public Law 87–851); (2) to satisfy certain State selections; (3) to satisfy claims arising out of scrip and other rights under Public Law 88–845; and (4) to meet community and other public purpose needs. "Open space" detailed land use planning will continue to be employed. Wherever possible, the Bureau will continue to provide land to meet local community requirements for orderly growth, parks, playgrounds, and similar public facilities. The new Public Sale Act and the Recreation and Public Purposes Act will be the principal acts involved.

The recreation inventory to be completed during fiscal year 1966 will be updated. Also, the Bureau will continue to cooperate with the Bureau of Outdoor Recreation and other Federal, State, county and local agencies in order to achieve coordinated recreation plans. Preparation of long-range master development plans for each recreation complex will be an integral part of the Bureau's multiple-use planning system.

Continued cooperation with local agencies will be necessary to increase the tempo of the educational campaign to promote visitor safety and to reduce water pollution, littering, and danger of man-caused fire on the public lands. In addition, the posting of appropriate signs on approved access roads to public lands, on fence lines adjacent on public lands, and in areas containing antiquities, fossiliferous rocks, and petrified wood will be continued.

At least 750 "eyesore"-type occupancy and signpoard trespasses will be resolved. This will complete action on 50 percent of the 3,000 trespasses estimated to exist in fiscal year 1966 which are deemed detrimental to natural beauty.

Continued review of withdrawals will be accelerated, and public land orders and supporting memoranda will be prepared in final form by field personnel. BLM-Forest Service adjustment studies will be continued as part of the overall effort toward land tenure adjustments which benefit other agencies.

Recent regulatory changes will provide improved tenure and more flexible methods of payment for mineral material sales. These changes, plus available up-to-date mineral resource data, will permit accommodation of community needs within the framework of sound conservation practices. The Bureau will seek to establish sources of sale materials where public demand dictates, and to minimize scattered small sales. Coordination with other agencies will be emphasized and community growth patterns will be considered.

Priority will be given to various mining claim investigation projects such as validity determinations on oil sale test cases and resolution of uranium trespass cases on the Colorado plateau. Mineral trespass investigations, not involving mining claims, will also be assigned a high priority. Field investigation and reporting on all public demand minerals casework will be kept current.

By fiscal year 1967 the existing mineral resources data will provide timely warning of mineral conflicts with proposed resource developments. This data will be updated and maintained as a continuing program effort.

(*b*) *Range management*

The estimate for 1967 is $5,389,000, a decrease of $51,500 over 1966. The decrease consists of—

(1) An increase of $150,000 to progress from passive custodial management to a more active program of total resource management to initiate programs to arrest further deterioration of the land, to restore depleted areas, and to protect past and future watershed rehabilitation investments. The increase will be applied toward improving management practices, intensifying management of critical wildlife habitat areas and deteriorating and poor condition lands, and raising the overall level of use supervision to assure compliance with and adequacy of management plans.

(2) An increase of $76,500 to provide for increased costs of the pay raise authorized by Public Law 89–301.

(3) A decrease of $175,000 resulting from a lessening in the adjudication program as it nears completion.

(4) A decrease of $60,000 resulting from savings through reducing the intensity of dependent property surveys.

(5) A decrease of $43,000 reflecting annualization of various cost savings programs initiated in fiscal year 1966.

Need for increase.—The resource management problems on the public lands are substantial. Twenty and one-half million acres, including 6.3 million acres of frail lands, are steadily deteriorating at the present level of management. Sedimentation and water pollution damages from these areas are quite significant. For example, the Paria River drainage of the lower Colorado River Basin annually produces 2.4 acre-feet of silt per square mile of watershed. Much of the remaining 155 million acres of public grazing land is inadequately managed to provide the vegetative cover necessary to yield water of a desired quality, to curb excessive runoff and soil loss, and to replenish ground water supplies. In addition, the needs for wildlife habitat and recreation uses are impaired, natural beauty destroyed, and the current and potential productive value of the land is diminished.

We now have many examples of the ability of the land to respond to good management, of the savings which can accrue from decreased rehabilitation costs, and of the increased returns to the public. Recent work in the 304,000-acre Soldier Creek Unit of the Vale District, Oregon, demonstrates that with the development and implementation of an effective management plan, integrated with the soil and watershed conservation program, desired results can be obtained through treatment of only 20 percent of the total area. The rehabilitation of the untreated portion is made possible in a remarkably short period of time by the management efforts taking advantage of treated areas. This results in substantially less rehabilitation costs than if the entire area of depleted lands is treated.

Investments in soil and watershed conservation do increase requirements for management personnel to develop comprehensive plans, to implement adjustments in grazing use prior to land treatment, and to assure subsequent proper use. Natural improvement of deteriorated ranges can be attained on many of the public lands through an adequate level of management. This will curb further deterioration, lessen future costs of rehabilitation, and prevent additional loss of the productivity of the land. The increase will allow Bureau personnel to achieve a management level sufficient to properly evaluate, plan and supervise the use of the grazing resources to maintain investments already made and to prevent losses through deterioration for approximately 13 million acres of the 176 million acres of public land administered, exclusive of Alaska.

Plan of work.—The Bureau's range management program is being geared to apply recent changes in philosophy and procedures resulting from new overall land management concepts. For example, new techniques and programs will be used, such as the rest-rotation grazing system, flexible management, and management in cooperation with soil conservation districts and Farmers Home Administration associations. Past methods or policies for allotment of use areas, apportionment of increased forage supplies, and the conduct of range condition and trend studies are being evaluated and will be changed to meet present day conditions.

Basically, the overall program trend toward more adequate management initiated in fiscal year 1965 will be continued and accelerated in fiscal year 1966 and fiscal year 1967, emphasizing broader concepts of land husbandry and balanced resource use.

Major effort will be directed toward better management of grazing use to prevent further deterioration of the rangeland. Secondary effort will be directed to improvement of present range conditions toward their potential. These efforts will be concentrated on public rangelands which appear proper for retention in Federal ownership. Management procedures in cooperation with other groups will be stressed to promote proper management and recovery of the public lands within fragmented land pattern areas. The adjudication program will continue to receive high priority and will be essentially completed by July 1, 1967.

Streamlining of procedures for making dependent property surveys and a decreased effort in the adjudication program as it nears completion allow an increasing shift of emphasis to on-the-ground management and supervision. Management will be intensified in areas where it will promote natural rehabilitation and maintain ranges presently in good condition. Areas which continue to decline in range condition, such as frail lands, and range areas not suitable for livestock use will be further identified. Good management practices will be used to promote watershed protection through increasing the vegetative cover and maintaining the resource in a productive state.

Bureau management efforts and data will be evaluated in relation to the resources and uses of the area under consideration to determine where to apply systems of management such as rest-rotation and deferred rotation to the best advantage. Efforts will be increased to "sell" key permittees on changing old customs and adopting new concepts. Active management plans will then be put into operation which consider all uses of the land including watershed, recreation, wildlife habitat, occupancy, domestic livestock, minerals, timber, and other values and products. Comprehensive planning on a multiple-use basis will be increased.

An adequate level of management will be reached on approximately 13 million acres of public rangeland. This will aid in protecting investments made under the expanding soil and watershed and range improvement prograns.

Progress will be continued toward development of improved methodology, including economic analyses. This will aid in determining how the public lands will specifically assist in meeting the social, economic, and ecologic needs of the Nation, together with determining the ecologic needs of the land.

The wildlife habitat management effort will be intensified in the following three main areas:

(1) Studies will be made to insure that habitat modification resulting from land management and treatment practices, such as fencing, brush control, water impoundments, and reseeding, result in the desired benefits to wildlife.

(2) Positive coordination with the State wildlife agencies will be provided to insure that wildlife habitat management by the Bureau is in phase with wildlife population management by the States;

(3) Increased effort will be applied to development of adequate access to the public lands as an aid to better management and greater total public use.

Finally, the Bureau must continue routine duties, including meeting with its advisory boards, reviewing and issuing over 29,000 grazing permits, leases, and licenses annually, arbitrating disputes between users, investigating trespass, etc.

(*c*) *Forestry*

The estimate for 1967 is $6,836,000, an increase of $66,800 over 1966. The increase consists of—

(1) An increase of $105,000 to provide for increased cost of the pay raise authorized by Public Law 89–301;

(2) A decrease of $38,300 reflecting annualization of various cost-savings programs initiated in fiscal year 1966.

Plan of work.—The forest management program for western Oregon and the forest management and development programs for public domain areas are explained separately below.

1. Forest management, western Oregon: The estimate for 1967 is $4,299,000, an increase of $38,800 over 1966. The increase consists of—

(*a*) An increase of $69,300 for pay costs;

(*b*) A decrease of $30,500 related to fiscal year 1966 cost-savings programs.

Forest production in western Oregon will continue at the current level by the offering of 1,180,000 m.b.f. The trespass backlog will be eliminated in fiscal year 1967 and continuing effort will be expended to handle trespasses on a current basis. Intensive management of these highly productive forest lands will continue.

In western Oregon there have been a succession of three disasters: (*a*) the windthrow resulting from the storm of October 1962; (*b*) from that windthrown timber, local insect epidemics have developed; and (*c*) the floods of the winter of 1964–65 caused major damage to existing transportation systems. The compounding of these three circumstances requires major program adjustments in western Oregon. Management plans must again be revised to meet changed operating circumstances brought about by the windstorm, subsequent insect outbreaks, and the flood. These plans will be extended, taking into account the various aspects of multiple use, available land resources, and the maintenance and improvement of the land resource.

It has been necessary to drastically alter plans for road construction and attendant timber harvest in order to cope with the requirements for salvaging beetle infested timber. We now find it necessary to offer many small scattered salvage sales, involving higher cost than normal, in order to keep total losses to a minimum.

Forests on BLM lands in western Oregon are managed under the principles of sustained yield which provide for an even flow of timber into the local economy. For the most part, emphasis still is placed upon converting decadent, overmature stands into vigorous, young, productive forests. However, in some areas we already have new stands needing intensive second-growth management. This second growth yields greater returns but is more costly to manage than old growth liquidation.

The increased cost of offering second growth has been offset by a slight reduction in total timber sales volume to be offered. This reduction is a continuing adjustment to compensate for overcutting in previous years which was necessary due to the windstorm salvage program.

The forests management program for western Oregon will result in the following economic benefits:

1. Contribute $738 million to the gross national product;
2. Provide 63,000 man-years of private employment.

The following table shows volume, sales price, and receipts for timber in western Oregon in 1963, 1964, and 1965, and estimated sales and receipts for 1966 and 1967:

	BLM sales		Receipts	
	Volume sold (mbf)	Sales price	Bureau of Land Management	Forest Service
Fiscal year:				
1963	1,567,267	$35,979,838	$28,141,849	$4,051,005
1964	1,569,337	41,466,178	41,564,537	4,237,021
1965	1,225,753	42,058,687	38,466,133	5,209,112
1966	1,161,000	32,000,000	39,400,000	5,500,000
1967	1,180,000	32,000,000	37,300,000	4,500,000

The trespass backlog will be eliminated in western Oregon and this portion of the program will be brought into a maintenance phase. A total of 280 cases will be processed. Values involved will be approximately $290,000.

During fiscal year 1967, the Bureau will require 220 easements covering approximately 230 miles of timber access roads. Approximately 240 permits covering more than 380 miles of road will be granted to persons whose lands intermingle with those of the Federal Government.

2. Forest management, public domain: The estimate for 1967 is $2,072,000, an increase of $23,000 over 1966. The increase consists of—

(*a*) An increase of $30,800 for pay costs;

(*b*) A decrease of $7,800 related to fiscal year 1966 cost reduction programs.

The allowable cut under the principles of sustained yield is estimated at 155 million board feet. The 1967 program proposes to offer this volume for sale. This offering, if sold, will contribute an estimated $40 million to the gross national product and provide over 8,000 man-years of work.

In view of the recently completed forest inventory findings, the forest management programs on public domain have been restructured to concentrate management activities into the States of California, Colorado, Idaho, Montana, eastern Oregon and Washington, and Wyoming. In these States there is a definite potential for development of the commercial forest lands under present economic

and utilization conditions. In the remaining States (Alaska, Arizona, Nevada, New Mexico, and Utah), the forestry program will be maintained in a custodial status until such time as a higher level of management is warranted.

Increasing demands are being made on public domain timber lands not only for the production of forest products but also for the contribution which they can provide to watershed management and recreation. An increase in the intensity of land use and management also means that an increased effort must be made to acquire access to these lands in advance of their development and use.

The 1967 program provides for the acquisition of 280 permits and easements involving approximately 390 miles of road. The granting of rights to use existing roads or to construct roads across Federal lands administered by BLM will involve 170 permits and 180 miles of road. Emphasis on trespass control will be continued by processing of 195 cases during the 1967 fiscal year.

Actual and estimated volumes and receipts for timber sold from public domain lands, excluding those of western Oregon, for fiscal year 1963 through fiscal year 1967 are as follows:

Fiscal year—	Volume sold (mbf)	Sales price	Receipts
1963	100,260	$1,083,564	$1,436,070
1964	100,491	1,331,808	1,352,947
1965	115,632	1,566,252	1,199,201
1966	155,000	1,700,000	1,500,000
1967	155,000	1,705,000	1,700,000

3. Forest development, public domain: The estimate for 1967 is $465,000, an increase of $5,000 over 1966. The increase is for pay costs.

This program provides for treating only those denuded forest sites and stagnated stands having the highest productive capacity. On these favorable sites, the early establishment or release of trees is necessary if the sites are to be kept at or developed to an adequate producing capacity. Often when tree reproduction is not established at the proper time after denudation, undesirable brush species will take over. Such invasion complicates the process of reforestation with a commensurate increase in cost of reestablishing tree species.

Specific accomplishments under the proposed level of financing will be—

2,270 acres of site improvement;
3,380 acres of reforestation;
750 acres of stand improvement.

In addition to the above, forest development costs include—

(*a*) Planning;
(*b*) Contract preparation and administration;
(*c*) Seed collection;
(*d*) Nursery costs such as seedbed preparation, seedling care, lifting, sorting, and packing;
(*e*) Protection measures including baiting for rodent control and temporary fencing to prevent animal damage.

(*d*) *Soil and watershed conservation*

The estimate for 1967 is $14,777,000, a decrease of $238,000 over 1966. The decrease consists of—

(1) An increase of $101,500 to provide for increased costs of the pay raise authorized by Public Law 89–301;

(2) A decrease of $150,000 in the beet leafhopper control program. This program, being carried out in Idaho, is now in the eighth year of a planned 10-year program. It consists basically of the seeding of perennial grasses to replace the annual plant hosts of the beet leafhopper insect. The objective now can be attained in most areas by providing adequate range management and fire control along with the regular soil and watershed conservation program;

(3) A decrease of $130,000 in the halogeton and other weed control programs. This program is reduced by $130,000 from the present level of $815,000. The remaining $685,000 can attain a minimum level of poisonous and noxious weed control with the assistance of improved land management and conservation practices of reseeding and brush control as part of regular soil and watershed projects;

(4) A decrease of $20,000 due to decreased requirements for Bureau of Employee Compensation payments;

(5) A decrease of $39,500 reflecting fiscal year 1967 cost reduction projects and cost savings programs initiated in fiscal year 1966.

Plan of work.—The 1967 program highlights essential investments to—

1. Curb further deterioration of the public lands;
2. Improve and safeguard water quality;
3. Promote favorable conditions of streamflow, including seasonal distribution of flow and reduction of flood discharges;
4. Maintain the hydrologic balance between soil, water, and vegetation;
5. Avoid, prevent, and control rapid runoff and accelerated erosion;
6. Rehabilitate deteriorated watersheds with emphasis on treatable frail lands, and restoration of some natural beauty areas.

The table on the following page lists several major soil conservation practices which BLM applies to public lands, the accomplishments achieved by use of these practices, the inventory of total work necessary, the portion of the total work planned for 1966 and 1967 and the portion remaining for future years.

Conservation accomplishments and needs on lands under jurisdiction of the Bureau of Land Management

Practice	Unit	Accomplishments, 1935–65	Inventory of total needs [1]	Planned, 1966	Planned, 1967	Remaining work
Water control structures	Cubic yard	21,501,945	242,602,293	2,274,600	2,270,000	216,555,748
Other conservation practices [2]	Acre	2,848,285	19,125,872	82,900	82,800	16,111,887
Protective fencing	Mile	49,453	121,897	2,461	2,485	67,498
Undesirable plant control	Acre	1,296,288	16,498,780	299,200	293,000	14,610,292
Revegetation	do	2,327,836	14,797,957	231,910	187,000	12,051,211
Water developments	Number	36,448	85,215	1,050	950	46,767

[1] Estimate of conservation needs inventory was completed by the Bureau during 1964. This reflects the total needs of the public lands. It includes accomplishments to date as well as future needs.
[2] Includes contour trenches, pitting, furrowing, waterspreading, dune control, and deep tillage.

The work planned for these years will be performed primarily in defined management areas where public lands are concentrated and in other areas where land conditions clearly justify this work. This work consists primarily of the rehabilitation of watersheds which have deteriorated or the protection of watersheds where accelerated deterioration is imminent. It will be implemented through the application of two categories of conservation practices.

The first category consists of those practices which are directed to silo stabilization and improvement. Measures under this category are revegetation of denuded areas and land treatment practices, such as contour furrowing, terracing, deep tillage, soil ripping, brush control, small check dams and similar measures. The purposes of these measures are to increase infiltration of precipitation into the soil, to stabilize the soil mantle or to decrease surface flows of water. These practices provide significant benefits to the site on which they are performed. They allow the introduction of desirable soil stabilizing and forage producing vegetation and elimination of undesirable plants.

The second category of conservation practices consists of those designed for control of water flow and attendant erosion. These measures include detention and retention dams, waterspreading projects, silt detention basins, and similar practices. The purpose of the water control practices is to diminish the erosive energies of waterflow where headcutting, gullying, and other erosion presently occurs. Man of the benefits of such practices will accrue to other land and waters downstream through flood and sedimentation control and the yield of water with improved quality over a longer period.

It is proposed that approximately two-thirds of the program will be directed toward land treatment and one-third toward water control and management practices.

Other programs which relate to the soil and watershed function include:

1. Encouraging the development of conservation plans on intermingled privately controlled lands and coordination of such plans with BLM programs for the public domain;
2. Designing management systems which will allow the optimum use consistent with prevention of deterioration of soil and watershed resources;
3. Development of methods for evaluating conservation practices to more effectively measure degree of success;

4. Development of economic analysis techniques for measurement or estimation of both tangible and intangible benefits;

5. The development of new and more precise methods for gathering and analyzing resource data to aid in decisionmaking.

Management efforts are being strengthened constantly to prevent further depletion and promote recovery of deteriorated lands. Over 84 percent of the 176 million acres of public land administered by the Bureau of Land Management in the Western States are in an erosion hazard condition that requires treatment and more intensive management. Of this amount, 44 million acres, including 6.3 million acres of frail lands, are in critical condition.

Public lands administered by BLM are highly susceptible to damage from any form of use which disturbs or depletes the vegetal cover and thereby exposes the soil mantle. The extent of current erosive conditions can be principally attributed to such factors as unregulated past use, drought, and the high intensity of western rainstorms.

The public lands comprise a major portion of the watersheds in the Western States, encompassing a wide variance of fluctuations in annual conditions. The disastrous floods this past year in the Pacific Northwest and central Rocky Mountain river basins emphasize the imperative need for improving the waterholding capacity of the land.

Water of adequate quality, and in the desired quantity, is the key to sustaining future economic development of the Western States; unfortunately, the deteriorating public lands are not making their proper contribution. In fact, excessive runoff and large amounts of sediment and soluble salts carried by the water have negative effects. For example, the Rio Puerco drainage of New Mexico yields 6 percent of the water and 56 percent of the sediment that enters the Rio Grande Valley. A program started in 1962 is reversing this trend.

Other prime examples of such deteriorated public lands are found in the Bearpaw and Pierre shale soil regions of the upper Missouri Basin and the Mancos shale areas of the Colorado Plateau. Serious problem areas also are found in the Great Basin and the Columbia River watershed although erosion is not of such magnitude. Each of these areas is contributing millions of tons of sediment annually to its drainage basin. Coupled with these huge tonnages of suspended solids are large quantities of soluble salts which are derived from eroded parent soils and taken into solution.

A significant source of salinity pollution in the Colorado River is derived from the eroding soils of public lands within the Colorado Basin. The basin has a drainage area of 243,000 square miles of which over one-third of the land area is administered by the Bureau of Land Management.

Studies on the Walnut Gulch experimental watershed in southern Arizona indicate the sediment yield from brush areas to be over four times that of the grassland. In BLM's Arizona strip district, a 70,000-acre watershed was treated by fencing it into pastures, constructing water developments, controlling 14,000 acres of brush, revegetating 2,800 acres, and intensifying range management. Soil erosion caused by flash rains resulting in headcuting and gullying has been materially reduced by the improved vegetative cover.

In fiscal year 1967 the Bureau also will continue to give special attention to the frail lands areas on which correction work was initiated in fiscal year 1966.

Emphasis in the regular soil and watershed conservation activity is continuing in the special project areas. The projects and the amounts of fiscal year 1967 soil and watershed funds to be allocated to each project are listed below:

Soil and watershed conservation funds, fiscal year 1967

Special project:	
Rio Puerco	$597,000
Makotapi	68,000
Vale	1,292,000
Owyhee	420,000
Big Horn Basin	409,000
Beowawe	349,000
Little Beaver	57,000
Total	3,192,000

In our project approach, soil and watershed conservation is not the only consideration, but the primary emphasis is directed to this activity. Other types of work completed in the project areas are financed from other activities.

The Bureau's Public Law 566 (Watershed and Flood Prevention Act) program for fiscal year 1967 will be continued at the fiscal year 1966 level of $150,000. This program properly coordinates public land programs with the plans and treatment measures being conducted by other agencies under this act.

(e) Protection

The estimate for 1967 is $3,437,000, an increase of $128,000 over 1966. The increase consists of—

(1) an increase of $22,000 to meet increased costs of contract protection;
(2) an increase of $78,000 for equipment;
(3) an increase of $29,030 for pay costs; and
(4) a decrease of $1,030 reflecting annualization of various cost-savings programs initiated in fiscal year 1966.

Need for increase.—The Bureau presently has protection contracts with fire control organizations covering about 3.5 million acres of principally commercial timberlands. These contracts are negotiated with fire control organizations which have the best access and facilities for efficient and effective protection. Contracts are generally negotiated on a rate per acre, based on the average of 5 prior years experience. In view of past fire experience, higher contract costs are anticipated. Increased costs are expected primarily in California.

Technological changes in electronics, together with the need to meet minimum international, domestic, and Government requirements, will require the orderly modernization of communications equipment. This requires our radio network be converted to single sideband transceivers. This conversion will strengthen the communications systems by permitting more radio frequencies to operate within assigned limits without interference and is necessary to meet the demands for more reliable and dependable communications.

In Alaska a newly developing sferics detection system will be installed to expand detection into present areas of inaccessibility. When fully developed, this system will, through electronics, accurately pinpoint lightning strikes. This system will supplement the regular fire control organization in carrying out essential force account programs of prevention, detection, and suppression of fires on about 220 million acres of Alaska's public domain lands.

In addition, this requested increase will permit the replacement of an overaged aircraft which has depreciated past the point of economical operation and is becoming a safety hazard.

Plan of work.—This program now includes all fire protection efforts, both force account and contractual, being conducted on the BLM-administered lands, with the exception of (1) the forest protection activity in western Oregon (see "Oregon and California grant lands, forest protection") and (2) the firefighting and rehabilitation activity.

As a significant improvement of the fire protection program, special emphasis is being placed on fire control zone planning. This process relates the rate of fire spread by fuel classes, relative value classes of different resources, weather, fire risks and hazards, and other variables to determine adequate protection needs. Fire zone control planning is a basic requirement for establishing a protection program designed to keep pace with changing resource values and fire risks. However, with present levels of manpower and funding for this activity, and the variable and emergency nature of the fire suppression program, zone planning must be scheduled for initiation on an area-by-area basis over a span of 1966 through 1969.

Emphasis will be continued in training regular fire control personnel, and fire suppression crews, including special Indian groups, in the modern techniques of fighting forest and range fires. The Bureau is continuing to take a leading role in the development and operation of departmentwide fire-training schools covering fire weather, supervision, and air suppression methods. A continuing program of fire information and education for the public, investigation of all man-caused fires, and fire law enforcement is programed. Fire equipment including vehicles obtained through war equipment surplus will be replaced as required in order to maintain an efficient, safe fire organization force.

Negotiations of 20 contracts with the fire-control organizations in 6 States for the protection of approximately 3.5 million acres of principally commercial forest on public domain land will be continued. Fire risk continues to increase on these lands due to the intensified public use of recreationists, hunters, and fishermen. Substantial progress has been made through better supervision of contracts, improved access for suppression crews, and the reduction of snags and slash in many areas.

Contracts for fire protection are negotiated on a rate per acre that is generally based on the average of 5 prior years experience. The negotiations of some contracts may involve amounts in excess of the average due to the severity of the fire season immediately prior to the contract year. In view of fire experience, higher future costs must be anticipated.

The acreage and estimated contract and supervision costs for fiscal year 1967 are:

State	Acres	Cost
California	2,056,000	$562,000
Idaho	542,500	112,000
Minnesota	40,700	3,000
Montana	246,000	31,000
Oregon (eastern)	430,000	58,000
Washington	154,000	30,000
Total	3,469,200	796,000

Hazard reduction work and construction of firebreaks will be continued to keep pace with the increased needs in concentrated public use areas. Hazard reduction consisting principally of snag felling and flash fuel disposal will be accomplished on 500 acres. Firebreaks and truck trails will be constructed and maintained to reduce fire hazards along roadways and in areas of heavily concentrated public use.

In fiscal year 1966 the Bureau established a field level fire control center at Boise, Idaho, to provide staff and operational assistance in fire control to all States, except Alaska.

In fiscal year 1967 the Bureau of Land Management and the Forest Service plan to establish an interagency fire center at Boise, Idaho. This would enable both agencies to program a permanent joint operation, resulting in a substantial increase in overall efficiency in fire control activities. The location is ideally situated in each agency's fire protection area.

Commercial facilities at the proposed site are already available from which to develop a complete fire center, but present physical facilities at Gowen Field, Boise, are not adequate to service the joint needs of the agencies. A complete discussion of construction needs is explained under the "Construction and maintenance" appropriation. Facilities and equipment will be used jointly on a coordinated planned basis. Fire services provided will include personnel and equipment dispatching; air tankers; air detection patrol, smokejumpers; helicopters; expert firefighting reinforcement crews; paracargo packaging and dropping; transportation for personnel and freight; vehicle maintenance and tool repair; fire equipment warehousing and packaging; radio servicing and related training for these activities.

FOREST SERVICE

The consolidation of the present widely scattered aerial fire control facilities and services for the southern Idaho national forests will increase firefighting effectiveness. Better supervision and coordination will be obtained in these activities which are required for an integrated team for fast, efficient firefighting. The speed and mobility of the aircraft are essential for fast initial attack while the fires are small and for reinforcement on large fires. The Boise airport is the only one in the protection area with suitable runways to handle the many types of required aircraft.

The region's most complex fire protection problems and potential for destructive fires are in this southwestern Idaho protection area. It has the highest incidence of lightning fires, steepest topography, and most inaccessible primitive and wilderness areas, heaviest fuels, and most valuable stands of timber in the region.

In addition to furnishing primary protection in the Idaho area, the center will be able to quickly provide reinforcements of trained personnel and suitable equipment for two other regions within 200-miles radius. The other western regions are within nonstop flying distance from Boise.

BUREAU OF LAND MANAGEMENT

The BLM lands serviced by this center annually experience an average of 680 fires. These fires cover about 93 percent of the Bureau's annual acreage burned in the continental United States. Nearly 79 percent of the average pro-

tection costs occur within the area, with damages amounting to well over $1 million annually, or about 75 percent of the total loss. Damages to watersheds, recreation, wildlife, soil, esthetic, and other benefits reflect intangible losses far in excess of this amount.

Although only 3 percent of the total number of BLM fires reach campaign size, herein lies the real problem both in fire control, damages suffered, and loss of resources. The center will become the major dispatcher and coordinator for all fire operations when conditions exceed initial attack capabilities or when multiple fire situations occur within any administrative unit. The provision of a coordination center through which required assistance from other agencies can be used will be a major function of this organization.

Management of lands and resources

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
3. Cadastral survey						
(a) Alaska	$1,793,950	$1,981,000	$1,691,000	−$290,000	+$14,000	−$304,000
(b) Other States	3,119,348	3,040,000	3,087,000	+47,000	+50,630	−3,630
Total	4,913,298	5,021,000	4,778,000	−243,000	+64,630	−307,630

[1] To provide for increased pay costs for 1966 positions.

(a) *Alaska*

The estimate for 1967 is $1,691,000, a decrease of $290,000 over 1966. The decrease consists of—

(1) An increase of $14,000 to provide for increased salary costs authorized by Public Law 89–301;

(2) A decrease of $300,000 due to slower rates of State selection and technological improvements in surveys;

(3) A decrease of $4,000 due to annualization of various cost savings programs initiated in fiscal year 1966.

Plan of work.—It is anticipated that the Bureau, through the use of photogrammetry, electrononic measuring instruments, transportation by airplane and helicopter, use of ABC or Hoversight systems and thoroughly trained and experienced personnel will be able to accomplish all urgent program requirements, within the reduced amount of funds. A summary of the 1967 program follows.

The State of Alaska is permitted by the Alaska Statehood Act to select 103 million acres during the first 25 years of statehood. Selections to date by the State total 16 million acres. BLM cadastral crews must identify these lands. It is anticipated that the Bureau will complete cadastral survey field work on approximately 4 million acres of the current selections by the end of fiscal year 1966 and have an additional 6 million acres surveyed with the field notes in varying stages of completion. Field survey of an additional 2.5 million acres is planned in fiscal year 1967, which would complete field work on approximately 12.5 million acres or 78 percent of the 16 million total to date.

An essential element of the State selection survey program is the survey of small parcels of land falling within the selected areas to which rights have been attached. Before the State can obtain patents to selected areas, such small areas must be segregated from the selection. In addition, the survey of homesteads, small tracts, and other settlement and entry claims peculiar to Alaska, not falling in selection areas, is essential to the patenting of such tracts to Alaska citizens under the various settlement laws. In fiscal year 1967 approximately 50,000 acres of such surveys will be accomplished.

The State selection program in Alaska has been particularly adaptable to the use of advanced methods because of large areas of unsurveyed land. For example, the Hoversight technique which uses electronic measuring devices is linked by radio communication to Anchorage. Here a computer processes the survey data and relays the results by radio back to the field. This method makes it possible to survey almost twice the area as with electronic equipment alone and probably more than five to six times the area that would be possible with customary ground methods at the same cost.

(b) *Other States*

The estimate for 1967 is $3,087,000, an increase of $47,000 over 1966. The increase consists of—

(1) An increase of $50,630 to provide for increased salary costs of the pay raise authorized by Public Law 89–301;

(2) A decrease of $3,630 which reflects annualization of various cost savings programs initiated in fiscal year 1966.

Plan of work.—The 1967 program will provide support for the major resources inventory and multiple use programs of the Bureau. As the only official cadastral surveying service of the Federal Government, the cadastral survey program also will emphasize original surveys, resurveys, and special surveys needed to furnish official identification to public lands administered by other Federal agencies. Surveys which identify and mark reference points on the ground are fundamental to such actions as computation of land areas, map preparation, construction projects, and land transfers. Cadastral surveying responsibilities involve a total of 770 million acres of public land.

Over 1.2 million acres of closed traverse, 1,500 miles of open traverse, and 600 monuments, requiring 3,100 field party days are programed to support the resource management needs of BLM. Some 600,000 acres, 500 miles, and 200 monuments, requiring 3,000 field party days are scheduled in support of the lands and minerals programs.

The search for technological advances that may be of benefit to this program will continue in fiscal year 1967. For example, a thorough test of photogrammetric methods as applicable to resurveys is in progress in New Mexico, Wyoming, and Idaho. Currently, most surveys, especially resurveys, are accomplished by established ground methods. The results of the three photogrammetric projects underway are suggestive of procedures which will bring photogrammetric cadastral surveys into a competitive range with ground methods.

Management of lands and resources

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
4. Firefighting and rehabilitation:						
(a) Firefighting	$3,748,443	$400,000	$400,000			
(b) Rehabilitation	1,695,408	850,000	600,000	−$250,000		−$250,000
Total	5,443,851	[1] 1,250,000	1,000,000	−250,000		−250,000

[1] Does not include request of $1,000,000 supplemental funds proposed for separate transmittal.

(a) *Firefighting*

The estimate for 1967 is $400,000, the same amount as was appropriated in 1966.

The amount requested represents a continuation of the practice of requesting a token appropriation which will be followed with a supplemental request to cover the actual cost of fire suppression.

Plan of work.—Under this activity the Bureau will continue to suppress fires on or threatening lands under its jurisdiction except those protected under contract with States or other Federal agencies (see items "Forest protection, western Oregon" and "Protection"). The Bureau cooperates closely with States and other Federal agencies in its effort to reduce heavy losses from fires. Modern firefighting techniques, equipment, and materials are used wherever possible. The fire danger rating system, air-drop chemical fire retardants, improved radio communications, and smokejumpers are among measures developed to improve firefighting effectiveness. Regular salaries of permanent employees used on an emergency basis during regular duty hours for fire suppression are not included in this estimate.

(*b*) *Fire rehabilitation*

The estimate for 1967 is $600,000, a decrease of $250,000.

Plan of work.—Funds made available will be used for the emergency rehabilitation of burned areas which will not or have not reseeded within a period of time to adequately prevent loss of soil, watershed, and economic value. Without conservation treatment and rehabilitation, public lands suffer as a result of wildfires which destroy the vegetal cover, leave the soil vulnerable to accelerated erosion, seriously impair watersheds and subject the land to the encroachment of undesirable and poisonous plants. In addition to protecting the soil mantle by seeding deep rooting perennial grasses, the revegetation of burned over areas reduces future fire hazards in the area by preventing the encroachment of flash fuel type annual weeds and grasses. The program level requested should provide an adequate program for a typical year; however, more extensive damage in a critical fire year might require supplemental funds as was the case in Nevada in 1964.

Management of lands and resources

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−) 1967 compared with 1966		
				Total	Pay cost [1]	Program
5. General administration	$1,818,448	$2,115,000	$2,128,000	+$13,000	+$41,000	−$28,000

[1] To provide for increased pay costs for 1966 positions.

GENERAL ADMINISTRATION

The estimate for 1967 is $2,128,000, an increase of $13,000 over 1966. The increase consists of—

(1) An increase of $41,000 to provide for costs of the pay raise authorized by Public Law 89–301;

(2) A decrease of $28,000 which reflects general administration savings generated by cost savings programs initiated in fiscal year 1966 and new projects scheduled for fiscal year 1967.

Plan of work.—With increased funds in fiscal year 1966, a number of long overdue improvements in administrative support were initiated. These efforts will continue in fiscal year 1967. Consolidation of all accounting functions at Denver has been completed, thereby permitting more advantageous use of ADP equipment. Field staffs for management analysis have been established for the first time, and administrative services, personnel management, and financial management staffs are being strengthened in the field to provide assistance to all Bureau offices. Work is proceeding on the development of new administrative programs, adoption of improved practices, and changes in procedures that should reduce processing and reporting intervals. Property and equipment management, compliance work, and internal auditing also are being strengthened.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$48,744,082	$49,529,210	$48,755,000	−$774,210
Comparative transfer to other accounts	1,062,471			
Unobligated balance lapsing	489,115			
Transferred to "Operating expense, Public Buildings Service," General Services Administration (78 Stat. 655 and 956)	26,332	45,790		−45,790
Appropriation	50,322,000	49,575,000	48,755,000	−820,000
Obligations by objects:				
11.0 Personnel compensation	28,947,825	29,491,000	29,214,000	−277,000
12.0 Personnel benefits	1,998,426	2,134,000	2,120,000	−14,000
21.0 Travel and transportation of persons	2,670,611	2,504,000	2,500,000	−4,000
22.0 Transportation of things	1,122,429	1,267,000	1,200,000	−67,000
23.0 Rent, communications, and utilities	949,612	1,099,000	1,000,000	−99,000
24.0 Printing and reproduction	274,527	367,000	350,000	−17,000
25.1 Other services	7,312,558	7,330,210	7,187,000	−143,210
25.2 Services of other agencies	115,805	118,000	138,000	+20,000
26.0 Supplies and materials	4,159,395	4,278,000	4,180,000	−98,000
31.0 Equipment	1,195,359	955,000	880,000	−75,000
32.0 Lands and structures	2,727			
42.0 Insurance claims and indemnities	9,307			
Subtotal	48,758,581	49,543,210	48,769,000	−774,210
Quarters and subsistence charges	−14,499	−14,000	−14,000	
Total obligations	48,744,082	49,529,210	48,755,000	−774,210

Title, Lease and Records Service

Chairman Hayden. In your justification of $5,166,000 for title, lease, and records service, there is a statement that the Bureau will effect "Closures to agricultural entry * * * if needed, to maintain casework on a current basis."

Would you please tell the committee the status of the present agricultural entry applications; and indicate whether these closures will affect classifications of lands in the districts in such a way that they will be classified for other than agricultural entry?

Mr. Stoddard. Mr. Chairman, since statistics are involved in this and I don't have them readily available may I supply those for the record?

Chairman Hayden. Yes.

(The information follows:)

Exclusive of Alaska, there was a total of approximately 2,000 agricultural cases pending final classification action at the end of January 1966. This figure includes over 1,800 desert land cases. In areas which might be closed to agricultural entry, land classification will proceed in accordance with the Land Classification and Multiple Use Act (Public Law 88–607) for retention and disposal. Transfer areas will continue to be classified for the most suitable use or combination of uses. Since little public domain land remains having agricultural potential, few areas will be classified under this act for such use. Public Law 88–607 allows classification to take place more quickly in a relatively large area, as opposed to the more time-consuming process of responding to many individually filed applications for portions of the same land.

Recreation Inventory

Chairman Hayden. I observe that the recreation inventory on Bureau of Land Management administered lands will be completed during the current fiscal year. Isn't it necessary to keep this inventory up to date; and how much is included in your budget estimate for that purpose?

Mr. STODDARD. $50,000 is included in this budget estimate to maintain the inventory. The recreation inventory was the first inventory that has been carried on on the public lands. It is done in cooperation with and as part of the Bureau of Outdoor Recreation's national survey of recreational resources.

With this as basic data we now plan to do detailed planning site by site over a period of years. We feel that our present appropriation will enable us to do this site planning of development as the need for these recreation sites occurs. The need will be determined through visitor loads, and so forth.

RANGE MANAGEMENT PROGRAM

Chairman HAYDEN. I note that you propose an increase of $150,000 in your program of range management to arrest further deterioration of the land and to restore depleted areas. How much did you have for this activity in fiscal year 1966, and what additional do you propose to accomplish in 1967?

Mr. STODDARD. We had, $5,440,500 in fiscal year 1966, Mr. Chairman, for the range management alone. In 1967 the estimates are $5,389,000—a slight reduction. There are some reallocations of funds involved here in that we are tapering off our range adjudication program.

We are reducing the intensity of dependent property surveys, but we are increasing the range management work. We are going over to rest-rotation systems of grazing. We hope to take some manpower used on this data collection type of work and adjudication and use it in management.

DEPENDENT PROPERTY SURVEYS

Chairman HAYDEN. Under this same heading you would decrease the intensity of dependent property surveys by $60,000. Just what does this entail?

Mr. STODDARD. These surveys are basic to making our adjudications. As we go through and make an analysis of the feed capacity of the range as against the actual use of the range and try to bring these into adjustment we have to find out how much feed the base ranch, the private land, is providing. In other words, how many animal units of feed are being provided by the base property. This money has been going toward determining: Is the rancher able to maintain during the winter the cattle or sheep that he puts on public land during the spring, summer, and fall?

FOREST MANAGEMENT—WESTERN OREGON

Chairman HAYDEN. In connection with forestry management in western Oregon, have you about cleaned up the windthrow resulting from the 1962 storm?

Mr. STODDARD. Yes, sir. That work is practically completed except in a few scattered places where there are individual trees down. We don't think we will be able to get these until normal logging reaches them.

Western Oregon Insect Epidemics

Chairman Hayden. As a result also of that storm there were local insect epidemics. Have you made any headway in conquering those?

Mr. Stoddard. We have had very good luck in having relatively little trouble with insect epidemics. There have been some local outbreaks and we have gone right after those, but there has been no general epidemic in the blowndown areas.

Soil and Watershed Conservation

Chairman Hayden. Last year, at the instance of the Senate, $3 million were added to your budget estimate for soil and watershed conservation with the indication that this fund was to be used for soil treatment, watershed management, and vegetation restoration in the Bureau of Land Management districts in the several States. Would you please review briefly for the committee the specific uses to which you have put this fund and the results which you may now be able to relate to the committee?

Mr. Stoddard. Yes. Mr. Zumwalt had this work under his supervision. I would like to have him talk to that.

Mr. Zumwalt. Mr. Chairman, this particular program was principally for a little over 6 million acres of what we had classed as exceedingly frail areas. Areas that were gradually deteriorating, but were in more serious condition than some of the other western range area.

We have expended money for surveys and plans which were necessary to determine how the money could be spent most wisely. We also have completed various measures for rehabilitating the areas, including brush control, reseeding, contour ripping and other water control developments, including both retention structures and detention structures which would slow down the rate of flow of water and thereby decrease soil erosion.

We have also included bank protection on streams that were face cutting the banks and revegetated many of the areas to cut down on the soil loss.

Beet Leafhopper Control Program

Chairman Hayden. One of the decreases in the program of soil and watershed conservation is $150,000 for control of the beet leafhopper, a program now being carried out in Idaho. How much did you have available in fiscal year 1966, and have you so progressed toward the control of this insect that you can afford to reduce your efforts to stamp it out?

Mr. Stoddard. We have found that this weed control work, including this beet leafhopper insect, is best controlled in our normal improvement of range vegetation, have the direct effect in controlling these insects as well as in controlling certain weeds like halogeton.

Therefore, we are tying control into our total program and concentrating parts of it in areas where there are these serious outbreaks. However, the seriousness of this particular beet leafhopper is not as great as it was some years back.

HALOGETON AND OTHER WEED CONTROL

Chairman HAYDEN. You also propose a decrease of $130,000 in the amount of money to be available for halogeton and other weed control. Why is this desirable?

Mr. STODDARD. We found where there has been overgrazing or very severe use that halogeton has moved in and that by range improvement and revegetation we are able to establish better plants, such as crested wheatgrass. A good stand of this grass will replace the halogeton. Therefore we don't feel that we have to have a direct program for this halogeton.

Senator YOUNG. May I ask a question, Mr. Chairman?

Chairman HAYDEN. Yes.

Senator YOUNG. With your reduced funds, though, isn't this halogeton apt to spread more to other areas?

Mr. STODDARD. We are able to control it, Senator Young, instead of maintaining a direct control program on just halogeton, we tie the control in with our whole range improvement work. We found that it is very largely concentrated in areas of overuse. The same areas of overuse need to have a more thorough job than just halogeton control, but also establishment of vegetation generally.

Senator YOUNG. Have you no program at all of spraying to eradicate small tracts?

Mr. STODDARD. That is done where there is serious spreading, but we found that it doesn't last very long. We have to do a more thorough job.

Senator YOUNG. Are you abandoning spraying to keep it from spreading?

Mr. STODDARD. This is part of the control program in the areas that we are moving into.

Mr. ZUMWALT. We have found that spraying in itself is not too effective because the halogeton comes in areas that are seriously deteriorating. We found that by replacing the plants with good perennials they crowd out the halogeton.

HALOGETON CONTROL BUDGET REQUEST HISTORY

Senator YOUNG. I understand that. How much did you ask the Bureau of the Budget for and how much did they allow you? How much did you ask the Bureau of the Budget for, for this particular program?

Mr. STODDARD. We went from the Department to the Bureau of the Budget without including this in the total program. We didn't go to the Bureau of the Budget for this.

Senator YOUNG. What did you ask the Department for?

Mr. STODDARD. About the same as the year before I believe for the total soil and watershed conservation program. Then we were asked to take a new look at the program to see if we couldn't find ways to trim.

Senator YOUNG. I understand all that, but you were allowed less than you asked the Department for?

Mr. STODDARD. Yes.

Senator YOUNG. Is that right?

Mr. STODDARD. Yes, sir.

SFERICS DETECTION SYSTEM

Chairman HAYDEN. In your statements relating to "Protection," I note that you are to install in Alaska a sferics detection system. Just how does this system work, and what will be its cost?

Mr. ZUMWALT. Mr. Chairman, the sferics installation is a device very much similar to radar and it essentially enables us to locate lightning strikes and lightning storms. This will enable us to cut down on the amount of area which we fly by airplane to pick up fires that start following lightning storms. We will know the general location of them and where their strikes reach the ground.

This is yet in the experimental stage and we are installing some units we hope in this year which will enable us to test it out. As yet we do not know for sure that it will work, but we have hopes that it will and if so it will help us a great deal in our protection.

Chairman HAYDEN. Is this just an experiment?

Mr. STODDARD. No, sir.

Mr. ZUMWALT. It is in cooperation with the Forest Service research.

Chairman HAYDEN. What will it cost?

Mr. ZUMWALT. We have in here for this year $30,000 for the installation and testing out.

INTERAGENCY FIRE CENTER, BOISE, IDAHO

Chairman HAYDEN. Please describe for the commiteee your plans to establish with the Forest Service a cooperative fire center at Boise, Idaho?

Mr. STODDARD. We have Mr. Lowden from the Forest Service here this morning, Mr. Chairman, also to provide further background.

Mr. ZUMWALT. The Boise Interagency Fire Center is for the purpose of coordinating fire suppression activities for the Bureau of Land Management, Forest Service, and other bureaus within the Department of the Interior, such as the National Park Service, Bureau of Sports Fisheries and Wildlife, and Bureau of Indian Affairs. It will coordinate both manpower and supplies and make them available through a central dispatching service from Boise when the fires become so large that the local firefighting groups cannot take care of them by themselves.

At the present time we do cooperate with these agencies, of course, but we find that it would be much more advantageous to have a centralized location for personnel from the Forest Service and BLM together, having constant contact with people in the various parts of the West so that these fires could be manned and suppressed at the earliest possible time.

CENTER SERVICE AREA

Chairman HAYDEN. Can this one installation serve the entire West?

Mr. ZUMWALT. No, sir. This would serve principally the area of the five States around Boise. However, it would serve for the Bureau of Land Management training of people in the West and any type of technological help in the way of new developments and so forth. So far as the Bureau of Land Management is concerned, over 70 percent of the fires which we have had on an average, occur within a radius of about 150 miles of this particular center. In that way we feel that it would be the most strategic spot that could be picked in

the western part of the country. The Forest Service, has a great many fires in the Idaho area and coupled with very steep topography and very great incidence of lightning. It is also a strategic location for them.

ALASKA CADASTRAL SURVEY PROGRAM

Chairman HAYDEN. For your cadastral surveys in Alaska you ask $300,000 less than was appropriated for this purpose in fiscal year 1966. Why the reduction?

Mr. STODDARD. Basically, Mr. Chairman, the rate of States' selections has been the governing factor on the rate of our cadastral survey program. There was a backlog of lands which had not been surveyed. We have now moved into this quite substantially and we are keeping up with the surveying at about the same rate that the State selections are taking place. We expect to be able to keep up with this and really get ahead now by the use of helicopters and this hoversight technique which is a new technique for surveying.

CADASTRAL SURVEYS FOR OTHER FEDERAL AGENCIES

Chairman HAYDEN. In that same section of your justifications you indicate that the Bureau of Land Management has made provision for meeting the needs of other Federal agencies for cadastral survey work. Would you indicate the agencies which will require this work, and indicate also whether the work you perform for those agencies is on a reimbursable basis? How much do you estimate will be expended for each of the agencies?

Mr. STODDARD. Mr. Chairman, I will submit that for the committee's record.

Chairman HAYDEN. All right.

(The information follows:)

The estimate of funds for executing surveys in fiscal year 1967 for other Federal agencies is as follows:

Agency	From BLM funds	From other agency funds
Forest Service	$225,000	$75,000
Fish and Wildlife	10,000	5,000
Reclamation		50,000
Park Service	5,000	
Indian Affairs		40,000
Corps of Engineers		10,000

In addition to the above the Bureau anticipates an allocation of about $275,000 from the Forest Service to reestablish corners which cannot be reclaimed from existing evidence, $175,000 from the Bureau of Reclamation for cadastral survey work in connection with the Missouri River Basin project, and $50,000 from the National Park Service for establishment of administrative boundaries of national park and monument areas.

FIREFIGHTING AND FIRE REHABILITATION

Chairman HAYDEN. For firefighting you ask $400,000 again this year, as you did last year. You indicate, however, that as usual a supplemental estimate to meet costs of firefighting will be necessary, probably in the neighborhood of $1 million. I observe, however, that for fire rehabilitation in fiscal year 1967 you are asking only

$600,000, an amount $250,000 less than the 1966 appropriation. Why this reduction?

Mr. STODDARD. There is some change this year that I will ask Mr. Beirne to answer.

Mr. BEIRNE. This is based upon our record of the last few years where, while we may have spent quite a bit of money in putting out fires, the damages was less and the cost of rehabilitation is less. This is based on the average cost.

CONSTRUCTION AND MAINTENANCE

Chairman HAYDEN. For construction and maintenance in fiscal year 1967 the Bureau of Land Management estimates its needs at $2.9 million. The justification for this estimate will be placed in the record.

(The justification follows:)

Construction and maintenance

Appropriation, 1966	$3, 150, 000
Unobligated balance from prior years	632, 122
Total available for obligation	3, 782, 122
Decreases:	
Construction of buildings and recreation facilities	2, 232, 122
Maintenance of buildings, recreation facilities, and roads	1, 550, 000
Subtotal	3, 782, 122
Increases:	
Construction of buildings and recreation facilities	1, 350, 000
Maintenance of buildings, recreation facilities, and access roads	1, 550, 000
Total estimate, fiscal year 1967	2, 900, 000

Analysis by activities

Activity	Amount available, 1966	Fiscal year 1967			
		Unobligated balance from prior years	Budget estimate	Estimated total available	Total available, 1967, compared to total, 1966
1. Construction	$2, 232, 122	----------	$1, 350, 000	$1, 350, 000	−$882, 122
2. Maintenance	1, 550, 000	----------	1, 550, 000	1, 550, 000	----------
Total	3, 782, 122	----------	2, 900, 000	2, 900, 000	−882, 122

JUSTIFICATION

CONSTRUCTION AND MAINTENANCE, $2,900,000

(1) Construction, $1,350,000

The estimate for 1967 is $1,350,000, a decrease of $250,000 over 1966, exclusive of $632,122 in carryover funds. The program is for construction of (*a*) buildings and (*b*) sanitation and protection facilities.

(*a*) *Buildings.*—The estimate for 1967 is $600,000 a decrease of $200,000 over 1966, exclusive of carryover funds in that year.

Completion of the Anchorage fire station requires $500,000 in fiscal year 1967. This project, being constructed on a phased basis over 3 fiscal years, is currently

estimated at a total cost of $1,400,000, which includes $900,000 appropriated in fiscal year 1965 and fiscal year 1966 and $500,000 in this request. A three-phase contract has been let for construction of the entire facility. The third phase is subject to availability of appropriations in fiscal year 1967. However, the current estimate has little margin for possible rising costs of materials and labor which may affect construction work or for construction change orders that may be necessary as construction proceeds. Information will be furnished promptly regarding any further adjustments which may be necessary in this project.

The Bureau of Land Management and the Forest Service are cooperating in the development of a major fire center at Boise, Idaho. This center would serve the combined needs of both agencies, as well as other Department of the Interior agencies in that general area. Each agency has been considering the development of independent facilities at Boise to meet individual fire prevention and suppression needs. The development of a joint facility will facilitate interagency cooperation which is essential to successful and economical attack on major fires beyond the immediately available capacities of either agency. Boise, Idaho, is near the center of the major fire danger area for BLM. A fire center at this location will be the focal point for coordination of all BLM fire operations in the Western States except Alaska. The Boise Interagency Fire Center recently established by this Bureau in temporary facilities at Boise would evolve naturally into our participation in the joint center.

The current estimates of physical facilities required at the center include—

1. An administration building for personnel engaged in the operational program. The building also would provide facilities for a conference room;
2. A centralized warehouse with parachute loft for 50 jumpers, fire storage for 5,000 units, paracargo equipment, and packaging and receiving facilities;
3. A training center which will include 2 to 4 classrooms to accommodate approximately 100, 3 faculty rooms, an auditorium, and a simulator room. A reception center and lounge also is contemplated for this area;
4. Four 25-man barracks and a mess hall and kitchen to accommodate 150 men;
5. A hangar to house approximately 6 aircraft, plus rental aircraft, with necessary storage and maintenance facilities. A three-bay garage, machine and wood shops will be necessary for service and maintenance of equipment;
6. A fire retardant plant and storage facilities;
7. Room for central communications dispatching and for maintenance, technical development and proper utilization of communications equipment.

Because of the prime importance of the Boise station to BLM fire control efforts, it is proposed that this Bureau will assume responsibility for construction of the joint center. Accordingly, $100,000 for investigation and design of this facility is included in this request. The present preliminary estimate of the total cost of this projects is $2 million.

1967 building program summary

Anchorage fire station	$500, 000
Boise fire center design	100, 000
Total	600, 000

(*b*) *Sanitation and protection facilities.*—The estimate for 1967 is $750,000, a decrease of $50,000 over 1966, exclusive of carryover funds in that year.

Extensive public use of the vast areas of public land presents a tremendous challenge to land management. Construction of minimum sanitation and protection facilities in the areas of heaviest recreational use reduces fire and pollution danger to the resources and the using public. The proposed construction will provide minimum facilities such as safe drinking water, fireplaces, tables, toilet facilities, and garbage and litter receptacles.

At areas now receiving use, minimum facilities will reduce the potential man-caused fire hazard and the health and sanitation problem. Pollution, while not visibly as devastating as fire, is equally as damaging to the resources and to the using public. State and local health officials in several areas have expressed concern about the public danger caused by pollution of the watershed and streams on public lands which furnish water for domestic uses. Ever increasing human pressures dictate the necessity for maintaining minimum health standards. In some areas where facilities are planned, pollution and sanitation conditions on public domain lands have become so bad that county health authorities have posted "No camping" signs.

By law, public lands are open to the general public and annually millions of Americans use these lands for camping, picnicking, pack trips, hunting, fishing, water sports, and many other kinds of recreation. It is estimated that nearly 20 million visits will be made to the public lands for recreation purposes during 1967. For the most part these visitors will find no recreation facilities available. As a result, the land itself will be abused, streams will be polluted, trash will be strewn on the grounds, and in many instances devastating fires will result from unattended or unextinguished campfires.

The Bureau of Land Management encourages States and local governments to purchase or lease public lands under various land laws for recreation purposes and to accept the responsibility for their development. However, in many cases, a substantial number of the heavily used areas cannot be developed by State or local governments. Public Law 88-607 recognizes recreation as an important need of the general public and a part of multiple use management of the public lands.

The construction of facilities also has a substantial beneficial effort on local economy by providing a stabilized base through tourism. Outdoor recreation is now the second or third largest industry in most of the Western States.

The following projects are typical of those to be constructed in his program:

Lake Fork, Colo.: This is an 80,000-acre site located in the mountain regions between Proy and Lake City and is a recreation attraction of scenic views, mountain flowers, and fishing streams.

Presently there are no satisfactory sanitation facilities along either stream (Hinsdale Creek and Animas Drainage); however, the area is receiving increasing public use primarily from out-of-State visitors who take jeep tours emanating from Silverton, Ouray, and Lake City. Hinsdale County is gradually improving the roads along both drainages and increasing numbers of people are driving their own vehicles into the area to enjoy the magnificent scenery. The county commissioners have posted "No camping" signs to prevent stream pollution and have requested that BLM establish facilities and designate camping and picnic areas to provide for public safety.

Mackay Reservoir, Idaho: This reservoir site is located 4 miles northeast of Mackay, Idaho, along the Big Lost River on U.S. Highway 93A. The reservoir contains approximately 1,100 surface acres of water with 9 miles of shoreline. The Bureau of Land Management has jurisdiction over 5 miles of shoreline; the balance is privately owned.

The reservoir has a reputation for excellent fishing and as a result, its use has reached tremendous proportions. On opening day of fishing season in June 1965 an estimated 1,500 people were at the site, including many out-of-State users. In order to protect public safety and resource values, the Bureau must develop adequate sanitation facilities, potable drinking water, and control of use by designation of roads, picnic areas, and camping sites.

Details of the sanitation and protection construction program are set forth below:

State	Location	Cost
Alaska	Big Delta	$55,000
Arizona	Castle Dome	40,000
California	Crowley Lake	150,000
	McCain Valley	10,000
	Junction City	40,000
Colorado	Lake Fork	100,000
Idaho	Mackay Reservoir	55,000
Nevada	Red Rock	100,000
	Petroglyph Site	15,000
New Mexico	Santa Cruz Reservoir	40,000
Oregon	Steens Mountain	40,000
	Lower Deschutes	30,000
Survey and design of facilities		75,000
Total		750,000

(2) *Maintenance, $1,550,000*

The estimate of $1,550,000 is the same as the amount available for fiscal year 1966 for the maintenance of buildings, sanitation and protection facilities, and access roads.

(a) *Buildings.*—The estimate of $300,000 is the same amount as is available in fiscal year 1966.

Buildings maintenance consists of general structural frame repairs, reroofing, exterior and interior painting, and repair or replacement of electrical, water, heating, and plumbing systems in Bureau offices, warehouses, garages, gas and oil storage buildings, lookout stations, radio repeater installations, and Bureau-owned employee housing. Included also is the maintenance of grounds and yards surrounding the structures, resurfacing of yard areas, and repairs to entrance roads.

During fiscal year 1966 individual building maintenance plans will be completed and will be used to govern performance of annual and periodic maintenance work on a regular basis.

(*b*) *Sanitation and protection facilities.*—The estimate of $250,000 is the same as the amount available for fiscal year 1966.

Maintenance and operation of sanitation and protection facilities consists of the following:

1. Maintenance of a safe water supply;
2. Disposal of refuse and wastes;
3. General area cleanup and upkeep;
4. Painting and repair of facilities;
5. Replacement of broken or damaged tables and grills;
6. Repair of interior parking roads, parking areas, and trails;
7. Upkeep of protective fences, road barriers, and signs; and
8. Abatement of insects.

Although the sanitation and protection facilities are of the most simple design, they must be maintained adequately if they are to serve their intended purpose of concentrating use into supervised and controlled areas, thereby reducing potential fire hazards and health and sanitation problems. Adequate operation of these facilities is essential especially in areas of very intensive use, such as the Owens Valley in California. Unmaintained facilities will contribute to, rather than diminish, sanitation problems.

By the end of fiscal year 1966 the Bureau will have sanitation and protection facilities in use in 142 separate locations in the Western States and Alaska. This includes over 2,300 family units for camping or picnicking, nearly 100 miles of foot trails, and appurtenant sanitation and water facilities. Heavy public use of these facilities requires that they be maintained and kept operational during the public use season.

(*c*) *Roads.*—The estimate for 1967 is $1 million, the same amount as is available in fiscal year 1966.

The Bureau's network of approximately 18,200 miles of roads must be maintained to provide access to the public lands for management of resource programs and for the rapidly increasing use of the lands by the general public. It is estimated that during fiscal year 1967 nearly 20 million visits by recreationists and at least an equal number of visits for other purposes, such as mineral exploration, transportation of timber, livestock inspection, will be made to the public lands by the general public. This excludes visits by BLM personnel for management purposes.

Even with the expanded maintenance program performed in fiscal year 1965 and fiscal year 1966, many roads still remain impassable. A concentrated effort to reduce the huge backlog of deferred maintenance has been initiated with funds made available from fiscal year 1964 through fiscal year 1966. As additional new mileage is constructed and major restoration work on roads is completed, the regular preventive maintenance work expands and requires additional funds.

The program for fiscal year 1967 plans for performance of preventive maintenance on 5,400 miles and of corrective or deferred maintenance on 1,400 miles of access road. Emphasis will be placed on maintenance required to reopen high priority roads closed by slides, slumps, and washouts which provide access within the larger blocks of public lands. Ditching and repair and replacement of culverts will be accomplished to put unusable roads back into usable condition. Normal preventive maintenance will be performed on the usable roads to prevent further deterioration with priority given to those roads receiving the greatest use. Patching and resurfacing is planned for those roads which have had very little maintenance since construction.

An annual maintenance plan has been developed for each State which considers the following items for each road: (1) Amount and type of traffic; (2) road priority for resource management utilization; (3) safe public access to the public lands; and (4) consideration of contract or force account performance of maintenance.

The maintenance plan is based on an annual condition survey of each road and indicates all the work necessary to restore each road to the original construction standard.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$1,880,751	$3,782,122	$2,900,000	−$882,122
Comparative transfer from other accounts	−1,062,471			
Unobligated balance available start of year	−356,402	−632,122		+632,122
Unobligated balance available end of year	632,122			
Appropriation	1,100,000	3,150,000	2,900,000	−250,000
Obligations by objects:				
11.0 Personnel compensation	412,624	660,000	650,000	−10,000
12.0 Personnel benefits	26,564	47,000	48,000	+1,000
21.0 Travel and transportation of persons	40,407	38,000	44,000	+6,000
22.0 Transportation of things	6,200	7,000	7,000	
23.0 Rent, communications, and utilities	9,937	6,000	6,000	
24.0 Printing and reproduction	3,208	7,000	5,000	−2,000
25.1 Other services	826,000	994,000	775,000	−219,000
25.2 Services of other agencies	13,000			
26.0 Supplies and materials	41,021	81,000	65,000	−16,000
31.0 Equipment	33,900	27,000	25,000	−2,000
32.0 Lands and structures	467,890	1,915,122	1,275,000	−640,122
Total obligations	1,880,751	3,782,122	2,900,000	−882,122

Construction

ANCHORAGE FIRE STATION

Chairman Hayden. The amount included in this estimate for construction is $1,350,000, of which $500,000 is to be applied to completion of the Anchorage fire station. Are you confident that this amount will provide for the remainder of the work necessary?

Mr. Zumwalt. Yes, sir. We feel that this amount will enable us to complete the Anchorage fire facility.

INTERAGENCY FIRE CONTROL CENTER, BOISE, IDAHO

Chairman Hayden. $100,000 is for designing the joint fire-control center at Boise, Idaho. You indicate that the estimated cost of this project is $2 million. Will the cost be divided evenly between the Bureau of Land Management and the Forest Service?

Mr. Zumwalt. Since we will be the major agency involved here we had proposed that the Bureau of Land Management handle the construction of the facilities and that the money be appropriated to the Bureau of Land Management.

Chairman Hayden. How do you divide it?

Mr. Zumwalt. We will share in the operation of the facility.

Chairman Hayden. Who will put up the largest share?

Mr. Stoddard. We would construct it, Mr. Chairman, but make the facilities available for the Forest Service.

Chairman Hayden. Whatever happens?

Mr. Stoddard. Yes, sir.

SANITATION AND PROTECTION FACILITIES

Chairman HAYDEN. For construction and sanitation and protection facilities your estimate is $750,000. The material submitted in support of this request includes a statement of the construction program indicating the individual locations and costs. For this same purpose last year $800,000 was appropriated. Would you please place in the record the locations of the projects for which this money was provided, indicating the total cost of each of the projects, the amount expended thus far at each of the projects, and the status of the construction of each of them?

Mr. STODDARD. Yes, sir; we will supply that for the record.

(The information follows:)

Sanitation and protection facilities program, fiscal years 1965–67

State and county	Name	Total cost of project	Obligational authority			Obligations to Dec. 31, 1965	Status of project, Dec. 31, 1965
			Fiscal year 1965	Fiscal year 1966	Fiscal year 1967		
Alaska	Big Delta	55,000			55,000		
Arizona:							
Yuma	Castle Dome	105,000			40,000		
Mohave	Hualpi Mountain	110,000	41,000			36,000	Fiscal year 1965 project 85 percent completed. 12 family units, trails, roads, and sanitation facilities.
California:							
Inyo	Owen Valley	1,500,000	160,000	240,000		172,000	Fiscal year 1965 project completed July, 1965. 115 family units, water system, roads, and sanitation facilities. Fiscal year 1966 project to be awarded for contract in April 1966.
Mono	Crowley Lake	512,000			150,000		
San Diego	McCain Valley	134,000			10,000		
Trinity	Junction City	72,000			40,000		
Colorado:							
Eagle	Gypsum	33,000	33,000			33,000	Fiscal year 1965 project completed July 1965. 20 family units, water system, roads, and sanitation facilities.
Fremont	Five Points Placer	30,000	15,000			15,000	Fiscal year 1965 project completed October 1965. 14 family units, water development, roads, protection fencing, and sanitation facilities.
Mesa	Mud Springs	55,000		35,000		1,000	Fiscal year 1966 project—contract to be awarded, May 1966.
Do	Miracle Rocks	30,000		15,000		1,200	Fiscal year 1966 project—contract to be awarded, May 1966.
Montezuma	S.W. Arch. sites	7,000		7,000		100	Fiscal year 1966 project—contract scheduled for June 1966.
Hinsdale	Lake Fork	1,116,000		10,000	100,000	600	Fiscal year 1966 project—construction to begin when weather permits.
Idaho:							
Custer	Salmon River	100,000	40,000			40,000	Fiscal year 1965 project 90 percent completed. 15 family units, water system, roads, sanitation facilities, and protective fencing.
Do	Big Lost River	100,000			55,000		
Montana, Madison	Madison River	450,000	80,000	115,000		90,000	Fiscal year 1965 project completed August 1965. 62 family units, water system, roads, and sanitation facilities. Fiscal year 1966 project—contract award scheduled for May 1966.
Nevada:							
Clark	Red Rock Canyon	1,000,000	25,000	45,000	100,000	4,500	Fiscal year 1965–66 design complete—scheduled for May 1966.

Elko	Wildhorse Reservoir	200,000	90,000			90,000	Fiscal year 1965 project completed October 1965. 37 family units, shelters, road improvements, fencing, water development, and sanitation facilities.
Lander	Petroglyph site	15,000			15,000		
New Mexico:							
Otero	3-river petroglyph	25,000	20,000			20,000	Fiscal year 1965 project completed July 1965. 6 units with shelters, roads, interpretive features, sanitation facilities and chain link fence to protect petroglyphs.
Santa Fe	Santa Cruz	85,000		45,000	40,000	3,200	Fiscal year 1966 project—contract award scheduled for March 1966.
Oregon:							
Harney	Steens Mountain	320,000	20,000		40,000	20,000	Fiscal year 1965 project completed June 1965. 25 family units, water development, and sanitation facilities.
Wasco and Jefferson	Lower Deschutes River	270,000	50,000		30,000	32,000	Completion of fiscal year 1965 project delayed due to severe flood damage in January 1965 to access roads and partially completed work.
Malheur	Jordan Craters	20,000		20,000		100	Fiscal year 1966 project S. & D. complete—scheduled for May 1966.
Baker	Snake River	150,000		14,000		100	Fiscal year 1966 project scheduled for construction in May 1966.
Crook	Prineville Res	102,000		42,000		900	Fiscal year 1966 project scheduled for construction in March 1966.
Malheur	Twin Springs	7,000		7,000		100	Fiscal year 1966 project scheduled for construction in March 1966.
Utah							
San Juan	East Canyon Rims	250,000	36,000	40,000		46,000	Fiscal year 1965 project completed. Two overlooks with picnic facilities, shelters, sanitation facilities, protective barriers and fencing, trails, roads, and interpretive features.
							Fiscal year 1966 project—water system developed. Work on 20 family units to be initiated in April 1966.
Do	Grand Gulch	340,000		45,000		33,000	Fiscal year 1966 project under contract, scheduled for completion April 1966.
Garfield	Henry Mountain	50,000		25,000		300	Fiscal year 1966 project—plans complete—scheduled for construction April 1966.
Wyoming							
Big Horn	Five Springs	80,000	50,000			50,000	Fiscal year 1965 project completed July 1965. 12 family units, nature trails, overlook, visitor protective fencing, water system development, and sanitation facilities.
Fremont	Green Mountain	75,000		40,000		300	Fiscal year 1966 project scheduled for construction in May 1966.
Survey and design (all states)			40,000	55,000	75,000	58,000	
Total			700,000	800,000	750,000	747,400	

PUBLIC LANDS DEVELOPMENT ROADS AND TRAILS

LIQUIDATION OF CONTRACT AUTHORIZATION

Chairman HAYDEN. For fiscal year 1967 your request for road construction is $2 million, the same as in fiscal year 1966. I include the justification statements in the record.

(The justification follows:)

Public lands development roads and trails (liquidation of contract authorization)

Appropriation, 1966	$2,000,000
Decrease in construction of public domain roads and trails	2,000,000
Subtotal	
Increase in construction of public domain roads and trails	2,000,000
Total estimate, fiscal year 1967	2,000,000

Analysis by activities

	Actual, 1965	Estimate, 1966	Decreases	Increases	Estimate, 1967
Public lands development roads and trails	$2,500,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000

Status of cash authorization for liquidation of contract authorization

	1965	1966	1967
Appropriation	$2,500,000	$2,000,000	$2,000,000
Unexpended balance brought forward	49,768	1,007,137	
Total available	2,549,768	3,007,137	2,000,000
Less: Expenditures	1,542,631	3,007,137	2,000,000
Unexpended balance	1,007,137		

Need for funds.—The Federal Aid Highway Acts of 1962 and 1964 have authorized obligational authority for this program. During fiscal year 1964, the first year of this program, the Bureau had $2 million in obligational authority and $760,000 in liquidating cash appropriations. In that year $1,015,379 was obligated and $710,232 expended.

During fiscal year 1965 the Bureau had $2,500,000 in new obligational authority and $2,500,000 in additional liquidating cash appropriations. Both amounts included the $500,000 for repair of flood-damaged roads in California, Idaho, and Oregon. Obligations were $2,083,576 and expenditures were $1,542,631. In fiscal year 1966 the appropriation for liquidating cash of $2 million provides full financing for the new contractual authority available in that year. The same amount is requested in fiscal year 1967 to continue this program. On this basis, $7,260,000 in liquidating cash will be provided cumulatively through fiscal year 1967 to support $8,500,000 in cumulative contractual authority.

An explanation of planned use of new contractual authority available in fiscal year 1967 follows:

Contractual authorization program (obligations)

Section 2 of the Federal Aid Highway Act of 1964 authorized $2 million in contractual authority for "Public lands development roads and trails" for the fiscal year ending June 30, 1966, and $2 million for the fiscal year ending June 30, 1967. The $2 million authorized in fiscal year 1967 will permit construction of 118 miles of grading and 5 miles of surfacing. Construction scheduled is based upon requirements for all phases of the resource management, conservation, and

protection programs in promoting multiple use of the public lands. Adequate access is closely allied to execution of the Bureau's responsibilities of management, utilization, and protection of the public lands.

A summary of the road program for fiscal year 1967 by State is as follows:

Arizona	$120,000
California	292,000
Colorado	167,000
Idaho	211,000
Montana	187,000
Nevada	136,000
New Mexico	72,000
Oregon	128,000
Utah	276,000
Wyoming	60,000
Location, survey, design, and easement acquisition	351,000
Total	2,000,000

Contract authorization and liquidation program

	Contract authority available	Obligations	Unliquidated obligations, prior year	Total obligations	Expenditures	Unliquidated obligations carried forward
Fiscal year 1965: Public lands development roads and trails, total	$6,985,000	$2,083,576		$2,083,576	$1,542,631	$846,092
Fiscal year 1966: Public lands development roads and trails, total	6,901,000	3,401,045	$846,092	4,247,137	3,007,137	1,240,000
Fiscal year 1967: Public lands development roads and trails, total	5,500,000	2,000,000	1,240,000	3,240,000	2,000,000	1,240,000

Itemization of estimate

	Actual 1965	Estimate 1966	Estimate 1967	Increase (+) decrease (−)
Program and financing:				
Total obligations	$2,083,576	$3,401,045	$2,000,000	−$1,401,045
Unobligated balance available start of year (contract authorization)	−4,984,621	−4,901,045	−3,500,000	+1,401,045
Unobligated balance available end of year (contract authorization)	4,901,045	3,500,000	3,500,000	
Unfunded balance, start of year	5,240,000	4,740,000	4,740,000	
Unfunded balance carried forward	−4,740,000	−4,740,000	−4,740,000	
Appropriation to liquidate contract authorization	2,500,000	2,000,000	2,000,000	
Obligations by objects:				
11.0 Personnel compensation	639,994	606,600	616,000	+9,400
12.0 Personnel benefits	30,438	42,000	42,000	
21.0 Travel and transportation of persons	63,059	63,000	63,000	
22.0 Transportation of things	31,845	38,000	33,000	−5,000
23.0 Rent, communications, and utilities	13,583	2,000	2,000	
24.0 Printing and reproduction	3,282	5,000	5,000	
25.1 Other services	10,774	489,445	478,000	−11,445
26.0 Supplies and materials	58,518	121,000	65,000	−56,000
31.0 Equipment	15,086	11,000	15,000	+4,000
32.0 Lands and structures	1,216,997	2,023,000	681,000	−1,342,000
Total obligations	2,083,576	3,401,045	2,000,000	−1,401,045

1967 PROGRAM

Chairman HAYDEN. Do you have any particular comment with regard to this program?

Mr. ZUMWALT. Our public land development roads and trails program for 1967 provides for 118 miles of grading and 5 miles of surfacing. At the present time we have some 56,000 miles in our system and we are gradually working toward a total amount of about 120,000 miles which we feel will be necessary in order to carry out the proper management of the land resources. This is a gradual step toward that direction.

OREGON AND CALIFORNIA GRANT LANDS

Chairman HAYDEN. For fiscal year 1967 you propose an appropriation of $9,750,000 for the Oregon and California grant lands. There will be included in the record the justification which you submitted in support of this request.

(The justification follows:)

Oregon and California grant lands

Appropriation, 1966	$10,625,000
Supplemental 1966—Emergency road repair	6,320,000
Unobligated balance from prior years	9,674,707
Total available for obligation	26,619,707
Decreases:	
Construction and acquisition of access roads	12,331,729
Forest development and protection	1,785,254
Operation and maintenance	964,208
Emergency road repair	11,538,516
Total	26,619,707
Increases:	
Construction and acquisition of access roads	7,233,000
Forest development and protection	1,600,000
Operation and maintenance	917,000
Total	9,750,000
Budget estimate, 1967	9,750,000

Analysis by activities

Activity	Amount available, 1966	Fiscal year 1967			
		Unobligated balance from prior years	Budget estimate	Estimated total available	Total available 1967 compared to total 1966
1. Construction and acquisition	$12,331,729		$7,233,000	$7,233,000	−$5,098,729
2. Forest development and protection	1,785,254		1,600,000	1,600,000	−185,254
3. Operation and maintenance	964,208		917,000	917,000	−47,208
4. Emergency road repair	11,538,516				−11,538,516
Total	26,619,707		9,750,000	9,750,000	−16,869,707

Under this title, 25 percent of the gross receipts from sales of timber and other products on the revested Oregon and California railroad grant lands is appropriated, bringing together under one appropriation all reimbursable charges against the Oregon and California grant lands fund.

It provides for the construction, acquisition, operation and maintenance of access roads and improvements and for reforestation and protection on the revested Oregon and California railroad grant lands and on other Federal lands in the Oregon and California grant lands counties of Oregon.

Existing legislation provides that the O. & C. counties shall receive, in lieu of tax payments, up to 75 percent of the gross revenues from these lands. The Association of O. & C. Counties has recommended that one-third of the amount due from receipts, or 25 percent of the total gross receipts, be appropriated for access road construction and maintenance, reforestation, and improvements and be reimbursed to the Treasury from funds otherwise payable to the counties.

(*1*) *Construction and acquisition, $7,233,000*

The estimate of $7,233,000 is a decrease of $992,000 from the amount available for 1966, exclusive of carryover funds and emergency road repair and reconstruction funds. This is the program for construction of access roads and recreation facilities in the valuable timberlands in western Oregon.

(*a*) *Access roads.*—The amount of $7,008,000 is a decrease of $967,000 from the amount available for fiscal year 1966 and is based on anticipated receipts. These funds will be used for the construction, improvement, and acquisition of roads and bridges in support of the management of the O. & C. revested lands in western Oregon. This program also includes reconnaissance of future roads, survey and design, rights-of-way agreements, and acquisitions for future construction projects. In addition, roads to be constructed by the Forest Service on O. & C. lands administered by that agency are funded in this program.

The access road system is fundamental to and quite often the controlling factor in the development, protection, and management of forest lands. The continued expansion of this system into undeveloped areas of mature, overmature, decadent, and scattered salvage timber stands is essential to a well-balanced schedule of timber harvest. Failure to provide adequate access often results in prematurely cutting developed drainages of thrifty rotation-age stands and disrupts long-run, maximum timber yields. Providing access promotes bidding opportunities and competitive interest for all prospective buyers of timber products.

These roads are used in all forest management activities, including protection, rehabilitation, inventories, transportation of both Government and private timber, and, in addition, they provide public access for recreation and other purposes.

The program for fiscal year 1967 includes surfacing of 26 miles, grading of 41 miles, bridge construction, rock production for road repair and surfacing, and acquisition of 180 easements. At the end of fiscal year 1965 the Bureau had completed 518 miles of mainline roads and was constructing 34 miles. Acquisition of easements and rock production for surfacing are kept current to the timber sale program.

(*b*) *Recreation construction.*—The estimate of $225,000 is $25,000 less than the amount available for 1966, exclusive of carryover funds.

Through timber sales and the access-road program, the Bureau has opened many previously remote areas of high recreational value for general public use. Unregulated use of these areas by an increasing number of persons creates fire and pollution hazards which endanger both the resource and the using public. The continuing program minimizes or eliminates the hazards of unregulated use by providing potable water supplies and sanitary, picnic, campfire, and camping facilities in carefully selected areas.

Details of the construction and acquisition program are shown in the following tables:

Oregon and California grant lands, fiscal year 1966 program

Availability:	
Unobligated balance as of June 30, 1965, brought forward	$4,106,728
4th quarter fiscal year 1965 receipts warranted in July 1965	2,824,000
Estimated authorization, fiscal year 1966	8,225,000
Less estimated 4th quarter fiscal year 1966 receipts warranted in July 1966	−2,824,000
Available for 1966 program	12,331,728
Utilization:	
Bureau of Land Management:	
Planning, reconnaissance	518,723
Acquisition	452,000
Recreation	250,000
Other [1]	325,000
Total	1,545,723
Bureau of Public Roads:	
Surveys	215,000
Construction	8,280,060
Total	8,495,060
Forest Service, roads	2,290,945
Total, 1966 program	12,331,728

[1] Refunds, Pacific Northwest Disaster Relief Act, 1965.

Details of road construction program, BLM lands, fiscal year 1966

System	Project	Amount
Continuing work on going projects		$1,167,060
North Nestucca	Elk Creek, surfacing 5 miles	200,000
Do	Dovre Peak, surfacing 3 miles	120,000
Bummer Creek	Little Lobster, surfacing 4 miles	200,000
South Fork Alsea	South Fork Alsea, grading 6 miles	415,000
South Nestucca	Bald Mountain, surfacing 7 miles	188,000
West Siuslaw	Twin Sisters, surfacing 9 miles	340,000
Do	Buck Creek-Elk Creek, grading 5 miles	190,000
Lost Creek	Eagles Rest L.O., grading 7 miles	300,000
Deadman	Deadman, surfacing 5 miles	260,000
Cow Creek	Union Creek, surfacing 4 miles	160,000
South Fork Little Butte	Soda Creek, grading 6 miles	250,000
Applegate	Cantall, grading 5 miles	200,000
Glendale	West Fork Cow Creek, surfacing 2 miles	120,000
Do	Whiskey Creek, grading 7 miles	285,000
Do	Cow Creek "C," grading 3 miles	900,000
Galice	Hellgate Bridge	650,000
Grave Creek	Grave Creek, grading 15 miles	200,000
Upper Smith	Twin Sisters, surfacing 7 miles	280,000
Camp Creek	Upper Camp Creek, grading 6 miles	450,000
Rock production		1,175,000
Bridges and culverts		230,000
Total, 1966 road construction program, BLM lands		8,280,060

Oregon and California grant lands, fiscal year 1967 program

Availability:	
Estimated 4th quarter fiscal year 1966 receipts warranted in July 1966	$2,824,000
Estimated authorization, fiscal year 1967	7,233,000
Less estimated 4th quarter fiscal year 1967 receipts warranted in July 1967	−2,824,000
Available for 1967 program	7,233,000
Utilization:	
Bureau of Land Management:	
Planning, reconnaissance	500,000
Acquisition	1,375,000
Recreation	225,000
Total	2,100,000
Bureau of Public Roads:	
Surveys	295,000
Construction	3,713,000
Total	4,008,000
Forest Service, roads	1,125,000
Total 1967 program	7,233,000

Details of road construction program, BLM lands, fiscal year 1967

Road system	Project name	Amount
South Nestucca	Bible Creek, surfacing 6 miles	$168,000
Do	Bell Mountain, grading 15 miles	265,000
Lake Creek	Greenleaf Creek, grading 4 miles	305,000
Cow Creek	Union Creek, grading 4 miles	165,000
Rock Creek	Rock Creek, surfacing 5 miles	205,000
Do	Rock Creek, grading 5 miles	475,000
Glendale	Cow Creek "C," surfacing 3 miles	165,000
Do	Mount Reuben, grading 5 miles	125,000
S.F. Little Butte	Lost Creek, grading 4 miles	255,000
Upper Rogue	Goolaway Gap, grading 4 miles	155,000
Lower Smith	Smith River, surfacing 12 miles	125,000
Coos River	Dellwood log dump construction	255,000
Rock production		755,000
Bridges and culverts		295,000
Total 1967 road construction program, BLM lands.		3,713,000

(2) Forest development and protection, $1,600,000

(a) *Forest development.*—The estimate of $850,000 is identical to the amount available for 1966, exclusive of carryover funds. In fiscal year 1967, as in fiscal year 1966, forest development will be totally financed from this appropriation.

With the increased national demand for timber products, and in support of sustained yield forest management, all potential timber producing lands must be fully utilized. The amount requested for this program will provide for the reforestation of 21,150 acres. This will permit reforestation of areas harvested on O. & C. lands on a current basis. The reforestation backlog on intermingled public domain lands will be eliminated by the end of fiscal year 1967. This long-term investment will produce an estimated 10.5 million board feet of average annual timber growth, valued at current market prices at over $262,000.

Even under the most favorable conditions only one-half of the areas scheduled for reforestation could be expected to regenerate naturally in 10 years. If this course of action were taken, it could result in a growth loss value of over $1.5 million in that decade. In addition to the economic considerations if denuded areas are not reforested, critical topsoil loss may result through erosion with resulting siltation of streams and reservoirs and site deterioration.

The program includes 2,310 acres of site improvement work to prepare areas for planting and seeding. These areas, capable of producing valuable commercial timber, are presently overgrown by brush and grass which precludes natural reforestation. In addition, 520 acres of stand improvement to accelerate growth on selected young timber stands is planned.

(*b*) *Forest protection, western Oregon.*—The estimate of $750,000 is identical to that available in 1966, exclusive of carryover funds.

Contracts for fire protection on approximately 2.4 million acres of forested O. & C. and public domain lands in western Oregon are negotiated with the State of Oregon and the Forest Service. The contract is based on a rate per acre which is developed from the average cost incurred by the contractor during the last 5 years for fire suppression, maintenance, replacement, additional facilities and equipment, and the fire prevention program. The Bureau also must contribute to presuppression and control measures by removal of snags, slash disposal, and development of firebreaks and trails, thus reducing fire incidence.

Work to be performed by the Bureau will consist primarily of hazard reduction (snag felling and flash fuel disposal) on 600 acres. Also, the Bureau will construct and/or maintain 90 miles of firebreaks and trails to reduce the fire hazard in specific blowdown areas and in areas of heavily concentrated public use. Closer supervision of contracts for compliance to specifications is planned and, in addition, a more concentrated effort on investigation of man-caused fires and an expanded program of law enforcement is contemplated.

The acreage and estimated costs for fiscal year 1967 are:

	Contract cost
2,385,000 acres protected	$656,000
Snag felling, slash disposal, firebreaks, and trails	68,000
Supervision and inspection	26,000
Total	750,000

(*3*) *Operation and maintenance, $917,000*

The increase of $117,000 over the amount available for fiscal year 1966, exclusive of carryover funds, is needed to provide adequate protection and maintenance of constructed and acquired access roads and recreation facilities on Bureau lands in western Oregon.

An amount of $100,000 of the requested increase will be used to keep roads in a usable condition. Effective and regular road maintenance is essential in western Oregon to insure the movement of both Government and private timber and to avoid extensive repairs. These roads receive heavy logging use during the rainy season, and if they are inadequately maintained, these roads are highly susceptible to rapid deterioration. Washouts alone can entail considerable relocation of adjacent undamaged segments of the affected road, often requiring additional easement acquisition as well as increased capital investment. Temporary road closure due to improper maintenance can prevent replenishing depleted mill log inventories during the critical winter and spring months, with resulting hardship to loggers and mill operators.

In addition to maintenance performed with appropriated funds, road maintenance fees are paid by purchasers of Government timber as a condition of the timber sale contracts and by timber haulers who use the roads under permits.

An increase of $17,000 is requested to adequately operate and maintain new recreation facilities constructed during fiscal year 1965 and to perform additional maintenance on previously constructed facilities. Recreation use by the public has expanded. As the facilities become better known and are used more extensively, more operation and maintenance funds are required. Also, many of the recreation sites are within heavy rainfall areas and the interior roads and parking areas, etc., are subject to a high rate of deterioration if not properly maintained. In addition, this heavy rainfall necessitates extensive spring maintenance to prepare the facility for operation before the first visitors arrive. The total amount of $117,000 included in this estimate for maintenance of recreation facilities will be used for disposing of garbage, maintaining firewood supplies, servicing sanitary facilities, repairing and maintaining equipment, and testing water supplies.

(*4*) *Emergency road repair and reconstruction,*

Storms which struck the Pacific Northwest in December 1964, and January and February 1965, caused heavy damage to road systems on lands administered

by the Bureau of Land Management. This damage was unusually heavy on Bureau-owned roads in western Oregon. These damaged roads are significant to the movement of timber to mills in an area where the economy is heavily dependent upon the timber industry.

In the spring of fiscal year 1965 supplemental funds were appropriated in the amount of $8,500,000 on a nonreimbursable basis to initiate the necessary repair work. In fiscal year 1966 Congress appropriated an additional $6,320,000 for completion of the restoration of the storm-damaged roads. No funds are requested in fiscal year 1967.

Current estimates of damage and the application of appropriated and supplemental funds are summarized below:

Supplemental appropriations

Roads	Damage	Fiscal year 1965	Fiscal year 1966	Balance
Bureau systems	$16,100,000	$8,500,000	$5,600,000	$2,000,000
Cooperator	2,150,000	0	720,000	1,430,000
Timber sale	250,000	0	0	250,000
Total	18,500,000	8,500,000	6,320,000	3,680,000

The balance of cooperator and timber sale road repairs are estimates, which by their nature are subject to change in actual practice. These requirements will be met partially by various arrangements with cooperators and timber sale contractors and partially by use of presently available regular road construction funds (activity 1, this appropriation).

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$13,691,789	$26,619,707	$9,750,000	−$16,869,707
Unobligated balance available, start of year	−4,418,919	−9,674,707		+9,674,707
Unobligated balance available, end of year	9,674,707			
Appropriation	18,947,577	16,945,000	9,750,000	−7,195,000
Obligations by object:				
11.0 Personnel compensation	1,609,382	2,026,750	2,202,000	+175,250
12.0 Personnel benefits	129,954	143,000	154,000	+11,000
21.0 Travel and transportation of persons	201,476	243,000	210,000	−33,000
22.0 Transportation of things	48,849	46,000	43,000	−3,000
23.0 Rent, communications, and utilities	82,236	85,000	85,000	
24.0 Printing and reproduction	4,077	5,000	5,000	
25.1 Other services	577,986	625,000	570,000	−55,000
25.2 Services of other agencies	615,000	616,000	616,000	
26.0 Supplies and materials	523,674	558,000	552,000	−6,000
31.0 Equipment	19,808	25,000	25,000	
32.0 Lands and structures	9,879,347	22,246,957	5,288,000	−16,958,957
Total obligations	13,691,789	26,619,707	9,750,000	−16,869,707

Chairman HAYDEN. What comments other than in your opening statement do you have regarding the Oregon and California grant lands program?

Mr. BEIRNE. None, sir.

RANGE IMPROVEMENTS (RECEIPT LIMITATION) AND ADMINISTRATIVE PROVISIONS

Chairman HAYDEN. For the record I will include your statements on range improvements (receipt limitation) and administrative provisions.

(The statements follow:)

Range improvements (receipt limitation)

1965 appropriation	$1,396,668
1966 budget estimate	1,455,000
1966 appropriation	1,346,182
1967 estimate	1,448,000

JUSTIFICATION

Range improvements, Bureau of Land Management (receipt limitation)

Appropriation, 1965	$1,396,668
Appropriation, 1966	1,346,182
Estimate, 1967	1,448,000
Increase	101,818

Need for increase.—An increase of $101,818 is estimated based on increased grazing fee receipts.

This is an annual indefinite appropriation derived from grazing fee receipts in accordance with sections 3 and 10 of the Taylor Grazing Act (48 Stat. 1269), as amended. Included also are receipts from Bankhead-Jones Farm Tenant Act lands transferred from the Department of Agriculture by various Executive orders.

Plan of work.—Approximately 176 million acres of public grazing lands which include over 2,500,000 acres of Bankhead-Jones lands will require range improvements to preserve the forage resources.

The range improvement program involves the development of several major types of range improvement and facilitating projects which are designed to provide better use of the public lands and to maintain existing conservation and development projects. This program assists in improving livestock distribution and control and in improving wildlife habitat. The program is conducted largely in cooperation with livestock operators authorized to use the public land for grazing. The following table comparing the 1966 and 1967 planned accomplishments indicates the program contemplated:

Range improvement program by major practices

Practice	Units	Fiscal year 1966 planned accomplishments	1967 program
Water development	Number	416	276
Fencing	Miles	711	515
Revegetation	Acres	5,700	5,200
Undesirable plant control	do	2,000	6,900
Maintenance	Dollars	350,000	350,000

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$1,355,283	$1,495,472	$1,479,200	−$16,272
Unobligated balance available, start of year	−139,104	−180,490	−31,200	+149,290
Unobligated balance available, end of year	180,490	31,200		−31,200
Total program and financing	1,396,668	1,346,182	1,448,000	+101,818
Obligations by object:				
11 Personnel compensation	549,980	572,000	588,000	+16,000
12 Personnel benefits	21,746	41,000	42,000	+1,000
21 Travel and transportation of persons	31,333	32,000	52,000	+20,000
22 Transportation of things	53,687	62,000	62,000	
23 Rent, communications and utilities	3,469	4,000	4,000	
24 Printing and reproduction	2,234	3,000	3,000	
25 Other services	412,448	481,000	430,000	−51,000
26 Supplies and materials	263,897	277,472	275,200	−2,272
31 Equipment	16,489	23,000	23,000	
Total obligations	1,355,283	1,495,472	1,479,200	−16,272

ADMINISTRATIVE PROVISIONS

Passenger motor vehicles

Authorization is requested for the purchase of one station wagon for replacement only. The replaced vehicle will have met the standards as to age or mileage. This vehicle will be used principally by cadastral engineers where the job requirements involve extensive driving and the hauling of personnel, scientific instruments, and field equipment.

Vehicles to be purchased:	
Number	1
Gross cost	$1,950
Old vehicles to be exchanged:	
Number	1
Allowance	$500
Net cost	$1,450

Aircraft

Authorization also is requested for the purchase of one aircraft for replacement only.

Aircraft purchased by the Bureau are used only in Alaska. They are necessary for photogrammetric surveys, fire control, and for transporting firefighters, equipment and for transportation of forest management, cadastral survey, and field examiner personnel.

Aircraft to be purchased:	
Number	1
Gross cost	$25,000
Allowance	$5,000
Net cost	$20,000

LITTLE BEAVER PROJECT, N. DAK. AND MONT.

Chairman HAYDEN. Senator Young?

Senator YOUNG. I would like to ask a question about the Little Beaver project, on land in North Dakota and Montana. What is the current status of this program?

Mr. STODDARD. The office, you know, Senator Young, has been established in Bowman. We have a small field group there that are now doing the basic planning work on the public domain land so that the project can go on.

Mr. ZUMWALT. The projects that we have programed there total $221,000. We estimate at the present time we are about one-third completed.

Senator YOUNG. Would you be carrying the program at the present level, or do you have enough money in the budget?

Mr. ZUMWALT. Yes, sir; it would be carried on at approximately the same level as last year.

Senator YOUNG. You have money in the budget for that?

Mr. ZUMWALT. Yes, sir. We have $57,000 set up in the budget.

Senator YOUNG. Is that what you had last year?

Mr. ZUMWALT. That is about the same as last year.

Senator YOUNG. I better let well enough alone.

Mr. STODDARD. We can't tell, Senator Young, exactly what the planning work will show in the way of soil and water conservation projects needs as yet, but at this stage this is sufficient.

Senator YOUNG. It might answer some questions of land erosion and care over a wide area.

Mr. STODDARD. This is right.

Chairman HAYDEN. Several Senators have questions which they would ask had it been possible for them to be here. I hand you copies of these and ask that you prepare replies to be included in the record.

(The questions and answers, letter, and statement follows:)

QUESTIONS SUBMITTED BY SENATOR BIBLE

Question. Relative to State directors, what is the Bureau's present policy relative to their length of assignment to any one State? I am informed that it averages at the present time about 5 years. Would it not be more efficient to reduce the maximum assignment to about 3 years?

Answer. The Bureau has no fixed period of service at any point prior to rotation. The average is approximately 5 years which still places quite a financial burden on the persons being moved. The Bureau agrees that rotation is desirable to broaden their experience and make them more valuable to the Bureau and themselves. However, the period should not be fixed, but should be dependent on local circumstances.

Question. I note in your justifications that for fiscal year 1966 you allocated $13,400 for sanitation and protection facilities at Wildhorse Reservoir. Subsequent to our action on the fiscal year 1966 request, I was informed by the Bureau of Indian Affairs that Wildhorse Dam would have to be replaced and I have been working with them on this matter. In view of this I am wondering if you have fully coordinated with the Bureau of Indian Affairs and whether or not the $13,400 allocated in fiscal year 1966 is for facilities that will still be usable if the dam is moved downstream?

Answer. We have coordinated with the Bureau of Indian Affairs in reference to the Wildhorse Dam situation. Fiscal year 1966 moneys scheduled for sanitation and protection facilities around this reservoir have been rescheduled. No facilities will be built until it is known where they will be most usable relative to the new location of the Wildhorse Reservoir. Close coordination with Bureau of Indian Affairs will be continued.

Question. I also note in your justifications that you are asking for $100,000 for Red Rock Canyon for sanitation and protection facilities, as well as $125,000 grading the Little Owyhee access road. Please tell the committee a little about these two projects and just what is contemplated relative to these two projects?

Answer. The Little Owyhee access road will be located in Humboldt County, Nev. Twenty-two miles are scheduled for construction at a cost of $125,000. This is the first segment of a planned 62-mile main artery road which will allow all-weather access to approximately 360,000 acres of public domain. Located in the Beowawe project area, the road will provide access needed to carry out planned rehabilitation projects in range and soil and watershed development. Range management, mineral exploration, and fire protection will benefit from the construction of this road. It will also provide access to the general public for hunting, fishing, and other recreation uses—70 camping and picnicking units with appurtenant water and sanitation facilities will be constructed in the Red Rocks Canyon Area. The present heavy local and regional use has resulted in unsanitary conditions which makes this a critical need.

QUESTIONS SUBMITTED BY SENATOR MUNDT

Question. On page BLM 14 of the justifications you talk about completion of records improvement work in several States, including South Dakota. Can you provide a rundown on just what records improvement includes? Specifically, what was done as far as the South Dakota records are concerned?

Answer. The public domain land and resource status records for South Dakota have been modernized to the new status records systems being installed in the BLM State offices for the public land States. The status records for South Dakota are maintained in the Billings, Mont., office. The new records system consists basically of replacing the old status plats that were on copies of cadastral plats with status plats at a larger scale showing controlling land descriptors and all actions that affect current status, and replacing the old hand written tract books with a typed historical record in chronological order of all transactions that have affected the public lands and resources and are currently affecting them. The new system expedites the administration of the public interest since status for any particular tract can be determined in a matter of minutes. The new

records are on reproducible media so that copies can quickly be made upon request from other Federal agencies, private individuals, and State or county offices.

Question. On page BLM 29 you discuss deteriorated public lands found in the Bearpaw and Pierre Shale regions of the upper Missouri Basin. We have thousands of acres of Pierre Shale in western South Dakota. Do you plan any work or improvements any place in South Dakota?

Answer. All of the soil and watershed conservation work conducted on the Makotapi project will be on Pierre Shales in South Dakota. Due to the public land pattern in South Dakota most of the work will be in Butte County. Approximately $68,000 is proposed for this work in 1967 in the form of contour furrowing, reservoir construction, and fencing.

Question. On page BLM 57 of the justifications you discuss an annual maintenance plan developed for roads in each State. Could you furnish my office a copy of the South Dakota plan?

Answer. We will be glad to furnish your office with this information.

Question. If everything moving forward and do you have adequate funds in the budget for the Makotapi project in western South Dakota?

Answer. We are continuing to make good progress on the Makotapi project. There are no problems at the present time that would deter future progress. The present funding level for soil and water conservation is considered adequate; we propose to hold annual funding at this level until needs of the general area have been met.

A need does exist for sanitation and protection facilities to accommodate recreation use. The Makotapi recreation complex would require $32,000 initially

Questions by Senator McGee

I would like to determine at this time if the funds you have requested in the budget which is presently before this subcommittee are adequate for you to keep the Big Horn rehabilitation project going and on schedule. If additional funds should be made available by this committee and the Congress, would you be in a position to utilize them efficiently and effectively in the forthcoming fiscal year? What is the amount of additional funds that could be so utiiized and for what purpose would they be used if made available to you for fiscal year 1967?

Answer. The Big Horn project is progressing with no major problems encountered. However, in the Big Horn project an additional $30,000 could be used for improving wildlife habitat and soil and watershed conservation. Similar work in other areas in Wyoming could be expanded if an additional $90,000 were available. It would also be possible to develop recreational facilities at Sage Creek Reservoir and fire-control buildings on Green Mountain at a cost of $30,000.

Question. Last month you furnished me a status report on the so-called Big Horn Basin project in Wyoming covering your work there for fiscal year 1965 and the first one-half of fiscal year 1966. This report was most encouraging not only for the amount of work which is being done to rehabilitate the large acreage involved but also, and perhaps more important, for the manner in which this program has been received by the local ranchers and the cooperation you are receiving from them.

Questions Submitted by Senator Metcalf

Question. Which of the BLM's programs need more emphasis?

Answer. The wildlife program is our chief concern. Less than 1 percent of our total resource management effort is devoted directly to wildlife. At this rate we cannot continue to meet public demands for sport fishing and sport hunting which are increasing by 5.5 percent and 3 percent per year, respectively, in the West.

Question. To what extent do the public lands contribute to sport hunting and fishing?

Answer. Outside of Alaska resource inventories show that the public lands contain about 42 million acres of important big game habitat, 20 million acres of small game habitat, 470,000 acres of waterfowl habitat, and 5,300 miles of fishing streams. In addition there are more than 15,000 reservoirs varying in size from one-fourth to 400 surface acres that contribute to fish and wildlife production.

Pursuit of the 2 million big game animals and countless millions of small game animals and fish that are provided a year-long or seasonal home on these lands and waters resulted in an estimated expenditure of $150 million in 1960. They also

contributed to the recreational experience of millions of persons who do not hunt or fish.

Question. What can be done to increase wildlife populations on the public lands?

Answer. A. Inventories and studies: We need to intensify our efforts in identifying big game ranges, small game habitat, and habitat critical for rare and endangered species. We must expand studies to determine vegetative condition and trends of important wildlife habitat and indentify conditions that limit the ability of the habitat to produce wildlife. These will be generally a lack of permanent drinking water, a lack of interspersion of vegetative species that provide necessary food and cover, or a poor quality of year round or seasonal food species.

B. Water development and improvement: We need to develop additional permanent sources of water in Arizona, California, Nevada, New Mexico, Utah, and Wyoming. The ideal situation would obtain when wild animals would not have to travel more than 1½ miles to water.

Approximately 5,000 small water impoundments on the public lands should be enhanced as wildlife and fish habitat by fencing, stabilizing water levels, and by increasing the adjacent cover through seeding grasses and planting shrubs and trees. Projects of this nature are needed in Montana, Wyoming, Colorado, South Dakota, Idaho, and Oregon.

Waterfowl production can be increased on BLM-administered lands in northern Minnesota by blasting small potholes in bog areas to increase waterfowl breeding habitat.

C. Food and cover development: Past overuse by big game and domestic livestock has resulted in deterioration of important wildlife habitat. This is a particularly serious problem in game concentration areas. The removal of juniper and pinyon pine and reseeding with grasses and shrubs can help alleviate the problem. There is an immediate need for this practice to be carried out on 14,500 acres of winter ranges in Utah, Idaho, Colorado, Arizona, and New Mexico.

Question. Does the BLM coordinate its wildlife habitat programs with State wildlife agencies?

Answer. Since the States have regulatory authority over resident wildlife species and we have the responsibility to protect and enhance wildlife habitat on the public lands as well as provide public access to them, we must cooperate to insure a successful program. We consult with the States in planning all development projects that affect wildlife habitat, on proposed land exchanges where wildlife is involved and enter into cooperative financing in some wildlife benefiting projects.

Communication From Senator Mondale

U.S. Senate,
Committee on Agriculture and Forestry,
February 17, 1966.

Hon. Carl Hayden,
Chairman, Senate Committee on Appropriations,
New Senate Office Building.

Dear Mr. Chairman: As you know, Minnesota and Michigan are no longer major public land States. About 40,000 acres of lands still remain to be classified for management, exchange for lands which might be included in national forests or for disposal. The Bureau of Land Management is working closely with the departments of conservation of both States to develop a long-term program although there are no funds specifically assigned for this purpose.

Minnesota has over 11,000 lakes which contain thousands of islands which are still in the public domain but have never been inventoried. Michigan has several thousand islands in its inland lakes—many of which are still in the unsurveyed public domain. The original survey crews did not have the time nor funds to survey these small, difficult-of-access areas.

Today, although these islands represent great recreation and scenic values, they could be lost for public use or spoiled by squatter use. They are neglected; in fact, the administrative agency—the Bureau of Land Management in the Department of Interior—has no knowledge of the number, location, acreage, or quality of these islands.

During the past several years, the Bureau has been inventorying its recreational areas, concentrating its efforts in the West where most of its lands are located but omitted all of the Michigan-Minnesota inland lake areas. The value of these would be hard to estimate, but it is safe to say it is many millions.

It is important that these islands be identified and provision be made for their protection.

Two or three years of fieldwork of surveying, inventorying, and land-use planning should provide the basis for a program for the best use of these islands.

I would therefore respectfully request that the Senate Committee on Appropriations increase the appropriation for the Bureau of Land Management by $100,000, in order that a complete survey and identification of these natural resources be undertaken and completed at the earliest possible date.

Respectfully,

WALTER F. MONDALE.

DEPARTMENTAL STATEMENT

In Minnesota there are an estimated six to seven thousand islands which never have been surveyed and a smaller number in Michigan. Many of these islands appear to be used during the summer months. Within the funds available to the Bureau efforts have been centered in areas of large land concentrations, principally in the Western States. With the growing demand for recreation the islands in Michigan and Minnesota have assumed tremendous value.

The steps necessary for administration are—

1. identification of the islands;
2. field evaluation of their land use, recreational potential (public or private, protection, and development of management plans; and
3. physical survey.

The amount of $100,000 indicated by Senator Mondale would be adequate to permit initiation of this project and would approximate the annual requirements including the necessary management after the inventory has been completed.

Chairman HAYDEN. We thank you for your appearance.

Mr. STODDARD. Thank you, Mr. Chairman.

SUBCOMMITTEE RECESS

Chairman HAYDEN. The subcommittee will stand in recess until 10 a.m., Wednesday, February 23, when we shall hear the Bureau of Indian Affairs.

(Whereupon at 11 a.m., Monday, February 21, 1966, the subcommittee was recessed until 10 a.m., Wednesday, February 23, 1966.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

WEDNESDAY, FEBRUARY 23, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10, pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senators Bible, McGee, and Young.

DEPARTMENT OF THE INTERIOR

BUREAU OF INDIAN AFFAIRS

STATEMENTS OF PHILLEO NASH, COMMISSIONER; ROBERT L. BENNETT, DEPUTY COMMISSIONER; JAMES E. OFFICER, ASSOCIATE COMMISSIONER; FRED H. MASSEY, ASSISTANT COMMISSIONER, ADMINISTRATION; WILLIAM E. FINALE, ACTING ASSISTANT COMMISSIONER, COMMUNITY SERVICES; CHARLES P. CORKE, ACTING ASSISTANT COMMISSIONER, ECONOMIC DEVELOPMENT; L. MADISON COOMBS, ACTING CHIEF, BRANCH OF EDUCATION; MASON BARR, CHIEF, BRANCH OF HOUSING; DONALD G. KETHRO, ENGINEER; FRANCIS M. WILES, CHIEF, BRANCH OF BUDGET; WALTER KNODEL, CHIEF, BRANCH OF EMPLOYMENT ASSISTANCE; CHARLES ROVIN, CHIEF, BRANCH OF WELFARE; PERRY SKARRA, CHIEF, BRANCH OF FORESTRY; ROBERT TRIER, CHIEF, BRANCH OF ROADS; K. K. YOUNG, ENGINEER, BUREAU OF RECLAMATION; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

COMPARATIVE FISCAL STATEMENT

Chairman HAYDEN. The subcommittee will be in order.

The Bureau of Indian Affairs has supplied a comparative statement of fiscal year 1966 appropriations and the budget estimate for fiscal year 1967. The Bureau estimates its needs for fiscal year 1967 at $238,502,000. The statement will be printed in the record.

(The statement follows:)

Comparative statement of 1966 appropriation and 1967 budget estimate

Appropriations and activities	Fiscal year 1966			Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966			
	Appropriation	Transfers [1] and nonrecurring costs	Amount available		Total	Program savings [2]	Pay cost [3]	Programs
Education and welfare services:								
1. Educational assistance, facilities and services	$76,075,000	−$1,000	$76,074,000	$83,309,000	$7,235,000	−$589,000	$435,000	$7,389,000
2. Welfare and guidance services	13,513,000	−1,000	13,512,000	13,909,000	397,000	−35,000	20,000	412,000
3. Relocation and adult vocational training	14,522,000	−9,480	14,512,520	15,184,000	671,480	−44,000	31,000	684,480
4. Maintaining law and order	2,938,000		2,938,000	2,894,000	−44,000	−58,000	14,000	
Total	107,048,000	−11,480	107,036,520	115,296,000	8,259,480	−726,000	500,000	8,485,480
Resources management:								
1. Forest and range lands	5,278,000	−1,000	5,277,000	5,259,000	−18,000	−53,000	35,000	
2. Fire suppression	140,000		140,000	140,000				
3. Agricultural and industrial assistance	7,343,000		7,343,000	7,636,000	293,000	−191,000	44,000	440,000
4. Soil and moisture conservation	5,501,000		5,501,000	5,283,000	−218,000	−253,000	35,000	
5. Maintenance of roads	3,804,000		3,804,000	3,891,000	87,000	−6,000	4,000	89,000
6. Development of Indian arts and crafts	372,000		372,000	374,000	2,000		2,000	
7. Management of Indian trust property	6,903,000	−1,000	6,902,000	6,829,000	−73,000	−132,000	49,000	10,000
8. Repair and maintenance of buildings and utilities	12,744,000	−13,696	12,730,304	13,988,000	1,257,696	−353,000	37,000	1,573,696
9. Operation, repair and maintenance of Indian irrigation systems	1,280,000		1,280,000	1,211,000	−69,000	−70,000	1,000	
Total	43,365,000	−15,696	43,349,304	44,611,000	1,261,696	−1,058,000	207,000	2,112,696
Construction:								
1. Buildings and utilities	23,141,000	−20,714	23,120,286	46,664,000	23,543,714	−51,000		23,594,714
2. Irrigation systems	12,010,000	−13,140	11,996,860	10,500,000	−1,496,860	−69,000		−1,427,860
Total	35,151,000	−33,854	35,117,146	57,164,000	22,046,854	−120,000		22,166,854
Road construction (liquidation of contract authorization)								
1. Federal-aid highway roads	17,445,000		17,445,000	16,754,000	−691,000	−246,000		−445,000
General administrative expenses:								
1. Departmental office	1,351,300		1,351,300	1,380,600	+29,200		+11,200	+18,000
2. Field offices	3,271,700		3,271,700	3,296,400	+24,800		+24,800	
Total	4,623,000		4,623,000	4,677,000	+54,000		+36,000	+18,000
Menominee educational grants	44,000		44,000		−44,000			−44,000
Grand total	207,676,000	−61,030	207,614,970	238,502,000	30,887,030	−2,150,000	743,000	32,294,030

[1] Represents transfers to GSA.
[2] Program savings resulting from improved manpower utilization and cost reduction.
[3] To provide for increased pay costs for fiscal year 1966 positions.

PREPARED STATEMENT

Chairman HAYDEN. Commissioner Nash, if you care to summarize your statement you may do so and file your prepared statement for printing in the record.

Mr. NASH. Yes sir, I would like to do that if I may, sir.

(The statement follows:)

I appreciate the opportunity to appear once more before this committee to present the request of the Bureau of Indian Affairs for fiscal year 1967 appropriations. We are asking for fiscal year 1967 a total of $238,502,000, an increase of $30,887,000 over the fiscal year 1966 appropriation of $207,615,000.

We recognize that this is a large increase and I wish to assure the committee that it has been examined closely and is the minimum necessary in our judgment to continue the expanded education program approved by this committee over the past few years. Nearly all the increase is to construct additional school facilities or to fund the education of additional Indian students.

For the appropriation item "Education and welfare services," the estimate is $115,296,000, a program increase of $8,259,000. Increases are included to meet additional costs to public schools educating Indian children under Johnson-O'Malley plans; increased enrollment in Federal facilities; increased college scholarship aid; increased child welfare caseloads, notably in Indian communities located in economically depressed areas; and to provide for an increase in the number of Indian adults receiving vocational training.

For the "Resources management" appropriation item, we are requesting $44,611,000, a program increase of $1,262,000. The increase is requested for assistance to tribal housing authorities and for the maintenance of new educational facilities provided for in previous appropriations and coming into use in fiscal year 1967.

The request for "Construction" is $57,164,000 as compared with $35,117,000 for fiscal year 1966, an increase of $22,047,000. Of the $46,664,000 being requested for the construction of buildings and utilities, $25,929,000 is needed to provide school facilities for the rapidly expanding Indian high school population. The balance of the building and utility request is primarily to replace and expand inadequate and obsolete elementary boarding and day school educational facilities. The construction appropriation item also includes $6,498,000 for continuing construction of the Navajo Indian irrigation project, and $4,002,000 for the continuation of work on other Indian irrigation projects.

The estimate for "Road construction" is $16,754,000. These funds will be used to liquidate obligations incurred under the Federal-Aid Highway Act.

We are requesting $4,677,000 for "General administrative expenses," an increase of $54,000 over fiscal year 1966. The increase is primarily for increased pay costs.

Mr. Chairman, that is a quick summary of our dollar requests. With your permission, I would like to discuss briefly some of the program implications of this estimate.

The number of Indian children in our school system continues to increase rapidly. Our day schools and boarding schools must prepare to receive nearly 4,000 additional student enrollments in fiscal year 1967. Moreover, larger numbers of Indian students are entering the secondary levels of education. Thus, we anticipate a need for approximately 8,000 additional high school spaces by 1970. The bulk of these will be used by Navajo students and we wish to initiate construction of these projects promptly so that the facilities will be ready at the required time.

The same situation exists with respect to higher education. The number of Indian college students has doubled in the past 3 years and will double again by 1970. To keep pace with this demand we are again asking for increases in the funds available for higher education grants to needy Indian students.

The adult vocational training program which recently has been receiving very substantial increases, remains a popular program, but, it has had to give way to the pressing need for elementary and secondary education.

Educational costs continue to mount rapidly and this increase is reflected in the contracts with the States under the Johnson-O'Malley Act.

An item under "Resources management" which needs explanation is our proposal to transfer $912,000 from two other programs to the Indian housing program. Our experience with the mutual aid housing program has shown a need

MAY 23 1966

to provide additional housing development officers and construction superintendents in order that the housing will go up more quickly. Instead of asking for entirely new funds for this purpose, we have proposed that housing be assigned a higher priority than "Extension services" and "Adult education". Accordingly, we are requesting the transfer of $412,000 from adult education and $500,000 from agricultural extension services.

After basic education, which is the Bureau of Indian Affairs No. 1 priority program, we regard the provision of safe, sanitary, and decent housing as the greatest need of the Indian people. The existing programs of the Public Housing Administration, modified to suit reservation conditions and the nature of Indian life, have been applied to the reservation only recently. Our brief experience has shown us that the deplorable housing situation on the reservations can be remedied, but that we must move faster, for our program is small compared to the great need. The proposed transfer of funds will result in the Indian's receiving the benefits of public housing more quickly than at present.

In preparing our construction program, the Bureau of Indian Affairs has been attentive to the directive of this committee to request planning money for large projects 1 year in advance of seeking construction funds. Included in this category is the Albuquerque Indian School, which became a controversial item after our presentation to this committee last year. In renewing this request, I should like to emphasize that our Albuquerque Indian School proposal is intended to meet several objectives simultaneously:

First, certain buildings included in the existing Albuquerque Indian School have been given a life limit of 3 years by the most recent safety survey team. We recently had to move 100 boys and 100 girls from an old dormitory building that was condemned because of safety reasons. These children are currently being provided for on a temporary basis in other buildings on the campus.

Second, the present site location is unsuitable for expansion. Fortunately, the Government owns the site of the former Albuquerque Indian School farm on the outskirts of Albuquerque.

Third, approximately 800 students who now attend the Albuquerque Indian School are more than 1 year below their age-grade equivalent, and do not meet the criteria for bordertown children in the Albuquerque public school system.

Fourth, the Pueblos have long desired a post-high-school technical-vocational facility for Pueblo public high school graduates. Most of the Pueblo high school graduates who would attend the proposed facility are from outside the Albuquerque public school district.

Fifth, to the fullest extent possible we intend to provide high school facilities for Navajo high school students on the reservation close to home. However, water and suitable space are both in short supply. Furthermore, it appears to us that we should take advantage of the savings made possible by doubling the size of the Albuquerque Indian School replacement so as to provide for an additional 1,000 Navajo high school students. This savings is not a small amount; it is in the neighborhood of $4½ million.

Sixth, the Navajo children who are now attending the Albuquerque public schools will continue to be domiciled in the existing dormitories at the site of the present Albuquerque Indian School. These dormitories are of recent construction and are adequate for this purpose.

Seventh, we are asking only for planning money at this time. Pursuant to the report of the Senate Appropriations Committee for fiscal year 1966 plans for the operating of the proposed Albuquerque school will be made in conjunction with the State of New Mexico and the city of Albuquerque education authorities. One discussion session was held in December and another is scheduled for early 1966.

During fiscal year 1967 the Bureau of Indian Affairs anticipates increased activity on the reservations through the programs of the Office of Economic Opportunity. I have brought with me a summary of Indian participation in these programs to date which I will ask the chairman to receive for the record at an appropriate point in the proceedings. At this point I should merely like to say that some Indian people are receiving benefits under every title of the Economic Opportunity Act. Indian tribes and individuals are enthusiastic participants in all the programs from the Job Corps Conservation Centers to Operation Head Start, the Neighborhood Youth Corps, and the many other facets of the war against poverty.

I should also like to point out that these programs are supplementary to the Bureau of Indian Affairs programs and do not duplicate any of them. Thus, Operation Head Start is a preschool program, which we do not have in the Federal

Indian schools. The Neighborhood Youth Corps is a summer and year-round high school work-study program, of a type which we have been able to fund only in a small way. The Job Corps Conservation Centers have been warmly received by the Indian tribes and are doing important conservation work on the reservations, but they do not duplicate the adult vocational training program so popular with young Indian adults. The Job Corps Conservation Centers are physically located on Indian reservations, but the enrollment is designed for urban high school dropouts; Indian enrollment is small.

That concludes my statement, Mr. Chairman. I shall be happy to answer any questions the committee may have and to discuss our programs in detail.

1967 Budget Request

Mr. Nash. For the record I am Philleo Nash, Commissioner of Indian Affairs and I have with me this morning my associates from the Bureau.

With the chairman's permission I will make a very brief summary of the highlight statement which has been submitted for the record.

Mr. Chairman, we are asking for $238.5 million, an increase of $30.8 million over the 1966 appropriation. We recognize that this is a very large increase, but we want to assure the committee and the chairman that this has been very closely examined and that we have attempted to get any unnecessary items or unallowable items out of it, and practically every bit of this large increase is connected with education.

Education and Construction

It is particularly necessary to have the large increase in construction because, as a result of the extensive school building program which this committee and the committee on the other side have approved in the past few years, we are going to have a very large number of eighth grade graduates coming up in the next few years and we do not want to get into a situation where we don't have high school facilities for them.

They will be graduating from the eighth grade. They will want to go to high school, and, in addition to that, those who are coming out of high school are increasingly wanting to go on to college.

College Enrollments and Vocational Training

We have doubled the college enrollment in the past 3 years and expect to double it again in the next 3 years, so that we are asking for additional funds for construction, for higher education grants, for a small increase in adult vocational training, and for salaries to pay the people that are needed to look after the children and classroom teachers. We also need to increase the number of plant maintenance people where there are enlarged school plants, and some additional people to work on the housing problems so that we can take full advantage of the Public Housing Administration's programs and their funds that they are putting into Indian housing.

There are practically no increases other than that.

Chairman Hayden. You go no further than the high school, though?

Mr. Nash. So far as construction goes, this is correct. We are offering a grant program for the higher education and then we are buying technical education from the trade schools and to some limited extent in our own post-high school, Haskell.

ALBUQUERQUE INDIAN SCHOOL

There are one or two matters that I wanted to be sure to direct the committee's attention to. The one has particular reference to the Albuquerque Indian School which we discussed here last year and in my highlight statement, Mr. Chairman, I have directed attention to it. If you would prefer me to respond to questions later, I will do so, but I am eager to get our views on the Albuquerque School on the record.

SCHOOL CONSTRUCTION AND HOUSING

Chairman HAYDEN. I will question you later about it.

Mr. NASH. Yes, sir. With the emphasis on school construction, the additional students in boarding schools, and the fact that we must get on with this housing program, we have therefore figured to make some reductions in adult education and extension in order to put people to work on the housing program, those are about the only things that we are asking for increases in, even though it is a very large amount.

JOB CORPS CONSERVATION CENTERS

Chairman HAYDEN. What Jobs Corps activities are carried on by the Bureau of Indian Affairs?

Mr. NASH. For the Office of Economic Opportunity we are operating 6 Job Corps conservation centers, and will eventually have 10. The six that are in operation at the present time, Mr. Chairman, are Winslow with 200, Poston with 200, San Carlos with 200, Mexican Springs with 200, Neah Bay, which is in the State of Washington, with 100, and Kicking Horse in Montana with 100.

Four still remain to be activated and they are Fort Simcoe, which will have 200 trainees in the State of Washington, Eight Canyon with another 200 in New Mexico, Swiftbird in South Dakota which will be a small one, perhaps only 50 people, and Chippewa Ranch with 124 in Minnesota.

Chairman HAYDEN. You perform this activity for the Corps and the Corps provides the funds?

Mr. NASH. Yes, sir. This is a service performed by agreement with the Office of Economic Opportunity and they give us the money and the positions, too.

PROGRAMS OF CENTERS

Chairman HAYDEN. All these activities, I would assume, are promoting the program of the Bureau?

Mr. NASH. Yes, sir. We are very strong supporters of the conservation centers. The educational program is basically prevocational. It is very similar, in fact, to the prevocational program that we have in our own schools, and, of course, there is a good deal of conservation work on the reservations which is done by the enrollees.

NONRECURRING ITEMS

Chairman HAYDEN. I note throughout your budget presentation decreases under last year's appropriation which you describe as "nonrecurring item due to program savings resulting from improved manpower utilization and cost reduction actions."

Would you be good enough to place in the record with regard to each of the appropriations and activities where this type of a decrease is indicated a specific statement indicating the action which makes possible this budgetary decrease?

Mr. NASH. Yes, sir. We have that and we will submit it for the record.

By way of explanation may I say at this point that we undertook voluntarily as a management improvement and economy measure to reduce 450 positions and $3,150,000 in 2 fiscal years, 1966 and 1967, and that is what those items refer to, and the manner in which we are doing it will be submitted in detail for the record.

(The information follows:)

Program savings resulting from improved manpower utilization and cost reduction actions:

A review of all positions has been made in each activity and appropriation. Any position where the duties can be eliminated or absorbed by another position will be eliminated as it becomes vacant or when the incumbent is eligible to be transferred to another vacancy.

Statement of the application of improved manpower utilization as applied to the budget request for 1966 and base for 1967 estimates

Appropriation and activity	Total		Applied (in 1966 Estimate)	Balance in 1967 Estimate
	Positions	Funds		
Education and welfare services:				
Educational assistance, facilities, and services	161	$792,000	$203,000	$589,000
Welfare and guidance services	5	49,000	14,000	35,000
Relocation and adult vocational training	7	61,000	17,000	44,000
Maintaining law and order	10	82,000	24,000	58,000
Total	183	984,000	258,000	726,000
Resources management:				
Forest and range lands	10	82,000	29,000	53,000
Agricultural and industrial assistance	30	292,000	101,000	191,000
Soil and moisture conservation	47	387,000	134,000	253,000
Maintenance of roads	1	9,000	3,000	6,000
Management of Indian trust property	35	283,000	151,000	132,000
Repair and maintenance of buildings and utilities	59	499,000	146,000	353,000
Operation, repair, and maintenance of Indian irrigation systems	6	107,000	37,000	70,000
Total	188	1,659,000	601,000	1,058,000
Construction:				
Buildings and utilities	11	71,000	20,000	51,000
Irrigation systems	14	96,000	27,000	69,000
Total	25	167,000	47,000	120,000
Road construction (Liquidation of contractual authority): Federal-aid highway roads	54	340,000	94,000	246,000
Grand total	450	[1] 3,150,000	1,000,000	2,150,000

[1] Salaries, $2,862,375; employee benefits, $228,655; Alaska differential, $58,970; total, $3,150,000.

EDUCATION AND WELFARE SERVICES

Chairman HAYDEN. There will be placed in the record the justification statement for the budget estimate of $115,296,000 for education and welfare services in fiscal year 1967.

(The justification follows:)

The Bureau provides services and assists the States in furnishing services to Indians in the United States including the natives of Alaska in the fields of education, welfare, relocation, and law and order. Progress in education is basic to successful achievement of overall Bureau programs.

Education provides the base of understanding and skills that facilitates Indian acceptance of ideas and programs leading them to (1) maximum economic self-sufficiency; (2) full participation in American life; and (3) equal citizenship privileges and responsibilities. In the last few years the education program has been broadened to include adults as well as children of school age. Indian children attend public, Federal, private, and mission schools. In 1965 there were 134,064 Indian pupils, age 6 to 18 inclusive, enrolled in school, an increase of 1.1 percent over the year before. In addition, 10,304 Indian pupils, under 6 and over 18, were enrolled in school. Funds are requested for fiscal year 1967 to provide educational services for 3,108 additional pupils in boarding schools, approximately 750 additional pupils in 30 additional day school units; for the Federal Government's share of the increased costs and increased pupil load in public schools enrolling Indian children, and aid to Indian students attending college.

Wherever facilities are available to meet their needs Indians are enrolled in local public schools. The Bureau assists in financing some districts enrolling Indian pupils eligible for payment under the Johnson-O'Malley Act. When school districts educating Indian children are eligible for Federal aid under Public Law 874, 81st Congress (64 Stat. 1100), as amended, supplemental aid under the Johnson-O'Malley program is limited to meeting educational problems under extraordinary or exceptional circumstances.

When public school opportunities are not available, the Bureau operates schools for Indian children. In 1965 the Bureau operated 258 schools, enrolling 48,050 pupils and 19 dormitories housing 4,221 pupils attending public schools. In Federal schools the children develop basic academic skills, acquire an understanding of the social and economic world, learn improved standards of living, follow practices which assure optimum health, acquire vocational training to qualify for gainful employment, and obtain sufficient education to enter special schools and institutions of higher learning. The schools provided by the Federal Government for Indian children meet the instructional standards required by the States in which they operate and all secondary schools are accredited so that graduates may enter college on the same basis as public school graduates. In addition to the operation of Federal schools for eligible Indian children, the Bureau conducts a limited educational program for adult reservation Indians. In 1965, 192 communities were served by this program. Courses are planned to meet specific needs of individuals and community groups and range from the most elementary reading and writing to community problems, business skills, and citizenship training.

The Bureau's welfare program provides general assistance, child welfare, and other necessary social services to Indians for whom such assistance and services are not available through State or county welfare programs. An average monthly caseload of 20,200 persons is anticipated for 1967. This is at the same caseload as 1966. Child welfare care for 3,080 children is an increase of 230 over 1966.

The relocation program assists Indians from reservations to settle and secure permanent employment in communities with job opportunities, seeks to place reservation Indians in local employment, and assists in a program of industrial development on or near reservations to expand local job opportunities.

The act of August 3, 1956 (70 Stat. 986), as amended, authorizes a program of adult vocational training and education in the amount of $15 million annually. This program was initiated in 1958 on a limited basis. For 1967, we are requesting $12,145,000, which will provide for approximately 3,726 institutional trainees and 2,500 on-the-job trainees.

The protection of life and property is provided on the reservations by tribal courts, police detention facilities and by special officers of the BIA who are responsible for the enforcement of law and order. The Federal Government is constantly being asked to assume more of the financial responsibility for this program. The tribes are finding it extremely difficult to carry on this program without additional Federal help. Nevertheless, in view of the high priorities of other programs we propose to continue to maintain the law and order program at the 1966 level.

Education and welfare services

Appropriation, 1965	$95,868,500	
Supplemental appropriation, 1965	2,097,000	
Total appropriation, 1965		$97,965,500
Appropriation, 1966	$105,846,000	
Pay cost supplemental	1,202,000	
Total appropriation, 1966		107,048,000
Transferred to "Operating expenses, Public Building Service," General Services Administration		−11,480
Total available, 1966		107,036,520

SUMMARY OF INCREASES AND DECREASES, 1967

Educational assistance, facilities, and services:		
To provide for increased pay costs for fiscal year 1966 positions	+$435,000	
To provide for assistance to pupils in non-Federal schools	+1,596,000	
To provide for the operation of additional Federal schools	+6,205,000	
A decrease in the adult education program	−412,000	
Nonrecurring item due to program savings resulting from improved manpower utilization and cost reduction actions	−589,000	
		+7,235,000
Welfare and guidance services:		
To provide for increased pay costs for fiscal year 1966 positions	+20,000	
To provide for increased child welfare caseloads	+412,000	
Nonrecurring item due to program savings resulting from improved manpower utilization and cost reduction actions	−35,000	
		+397,000
Relocation and adult vocational training:		
To provide for increased pay costs for fiscal year 1966 positions	+31,000	
To provide for additional trainees in vocational training	+684,480	
Nonrecurring item due to program savings resulting from improved manpower utilization and cost reduction actions	−44,000	
		+671,480
Maintaining law and order:		
To provide for increased pay costs for fiscal year 1966 positions	+14,000	
Nonrecurring item due to program savings resulting from improved manpower utilization and cost reduction actions	−58,000	
		−44,000
Net increase, 1967		8,259,480
Budget estimate, 1967		115,296,000

Analysis by activity

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Transfers [1]	Amount available
1. Educational assistance, facilities and services	$70,132,081	$75,095,000	$980,000	−$1,000	$76,074,000
2. Welfare and guidance services	12,808,381	13,439,000	74,000	−1,000	13,512,000
3. Relocation and adult vocational training	12,117,097	14,428,000	94,000	−9,480	14,512,520
4. Maintaining law and order	2,713,581	2,884,000	54,000		2,938,000
Unobligated balance lapsing	194,360				
Total	97,965,500	105,846,000	1,202,000	−11,480	107,036,520

[1] Represents transfers to General Services Administration.

Analysis by activities

Activity	1965 amount available	1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Educational assistance, facilities and services	$70,132,081	$76,074,000	$83,309,000	$7,235,000	$435,000	+$6,800,000
2. Welfare and guidance services	12,808,381	13,512,000	13,909,000	397,000	20,000	+377,000
3. Relocation and adult vocational training	12,117,097	14,512,520	15,184,000	671,480	31,000	+640,480
4. Maintaining law and order	2,713,581	2,938,000	2,894,000	−44,000	14,000	−58,000
Unobligated balance lapsing	194,360					
Total	97,965,500	107,036,520	115,296,000	8,259,480	500,000	+7,759,480

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. Educational assistance, facilities and services

Subactivities	1965 amount available	1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
A. Assistance to pupils in non-Federal schools	$9,036,589	$10,054,000	$11,650,000	$1,596,000		$1,596,000
1. Public schools:						
(a) Navajo peripheral	1,354,744	1,410,225	1,521,222	110,997		110,997
(b) Other	6,439,520	7,243,775	7,930,778	687,003		687,003
2. Higher education	1,242,325	1,400,000	2,198,000	798,000		798,000
B. Federal facilities	$60,115,111	$64,919,379	$70,970,379	$6,051,000	$435,000	$5,616,000
1. Boarding schools	$45,223,436	$49,160,879	$54,338,879	$5,178,000	$347,000	$4,831,000
Number of pupils	35,930	39,460	42,573	3,108		3,108
2. Day schools	$11,297,419	$12,273,500	$12,996,500	$723,000	$63,000	$660,000
Number of pupils	16,341	16,516	17,266	750		750
Number of units	583	590	620	30		30
3. Special services	($2,759,118)	($2,535,000)	($2,685,000)	($150,000)	($25,000)	($125,000)
(a) Program direction	$1,969,511	$1,760,000	$1,785,000	$25,000	$25,000	
(b) Transportation of boarding school students	$747,265	$775,000	$900,000	$125,000		$125,000
(c) Museum	$42,342					
4. Summer programs	$835,138	$950,000	$95,000			
C. Adult education	$980,381	$1,100,621	$688,621	−$412,000		−$412,000
Total	$70,132,081	$76,074,000	$83,309,000	$7,235,000	$435,000	$6,800,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate of $83,309,000 is an increase of $7,235,000. The increase consists of: (1) A decrease of $589,000 due to program savings resulting from improved manpower utslization and cost reduction actions; (2) an increase of $435,000 for increased pay costs; and (3) an increase of $7,389,000 for program operations.

A. Assistance to pupils in non-Federal schools

The estimate for 1967 is $11,650,000, an increase of $1,596,000 over 1966. The increase consists of—

(1) Public schools: The estimate for 1967 is $9,452,000, an increase of $798,000 over 1966.

Need for increase.—This increase is to cover the Bureau's share under Johnson-O'Malley plans for the increased enrollment and additional costs in public schools.

Program of work.—This item covers subactivities as follows:

(1) Public schools: This item provides funds for the Johnson-O'Malley program which permits the Bureau to cooperate with States and local school districts in the education of Indian children. Local public schools are assisted with Johnson-O'Malley funds when the tax-free status of Indian lands within the boundaries of the school district creates unmanageable financial problems after all other financial resources to the district have been exhausted. Assistance is provided in accordance with formal State or district plans and at contracting time funds are adjusted to meet the exact amounts needed to finance each plan.

Prior to 1959 local public schools were ineligible for entitlement for Indian pupils under Public Law 874, 81st Congress (64 Stat. 1100) administered by the Health, Education, and Welfare Department. The act of August 12, 1958, amended Public Law 874 so that school districts educating Indian children may now receive payments for Indian children on the same basis as for other federally affected children. Bureau efforts are carefully coordinated with the Office of Education in the Department of Health, Education, and Welfare to insure no duplication of assistance for the same service. Public Law 874 requires a 3-percent impact and a minimum average daily attendance of 10 federally connected children to qualify. Some public schools enrolling Indian children do not qualify because of this provision. Johnson-O'Malley funds are used in these instances. Other public schools located on Indian reservations with little or no local tax resources are not able to operate at acceptable State standards without additional assistance over and above the funds they receive from State aids and their Public Law 874 entitlements. Johnson-O'Malley assistance is used to supplement these other available funds to permit operation at adequate State standards. Johnson-O'Malley aids are limited to financing needs under these and other extraordinary and exceptional circumstances, after all other aids to the district have been fully used.

Increased enrollment and increased educational costs call for substantially higher amounts of Johnson-O'Malley funds which are administered through the Bureau. The Bureau must be in a position to assist public schools in providing effective educational programs that are designed to meet the special needs of Indian children.

The Bureau meets the full per capita costs for the education of Navajo pupils domiciled in Federal dormitories and attending out-of-district public schools.

The following tables list the Johnson-O'Malley education contracts:

(*a*) *Navajo peripheral*

	1965		1966		1967		Change	
	Amount	Number of pupils	Amount	Number of pupils	Amount	Number of pupils	Amount	Number of pupils
Total	$1,354,744	2,379	$1,410,225	2,355	$1,521,222	2,355	+$110,997	----
Arizona:								
Flagstaff	168,750	308	180,958	300	198,455	300	+17,497	----
Holbrook	226,869	419	238,633	420	256,633	420	+18,000	----
Snowflake	148,218	229	157,960	240	170,460	240	+12,500	----
Winslow	137,032	290	146,601	300	158,601	300	+12,000	----
New Mexico:								
Albuquerque	193,418	363	205,031	350	220,031	350	+15,000	----
Aztec	79,343	128	80,751	120	86,751	120	+6,000	----
Manuelito Hall	330,670	513	333,666	500	358,666	500	+25,000	----
Utah: Richfield	70,444	129	66,625	125	71,625	125	+5,000	----

(b) Other

State and district	1965 amount	1966 amount	1967 amount	Change amount
Total	$6,439,520	$7,243,775	$7,930,778	+$687,003
Aberdeen:				
Nebraska State	150,000	125,000	125,000	
North Dakota State	225,000	225,000	225,000	
South Dakota State	495,000	530,000	630,000	+100,000
Minneapolis:				
Minnesota State	213,280	222,000	250,000	+28,000
Wisconsin State	125,000	140,000	160,000	+20,000
Iowa district	32,000	32,000	35,000	+3,000
Billings:				
Montana State	60,000	78,000	107,500	+29,500
Wyoming State	20,000	15,000	15,000	
Gallup:				
New Mexico State	1,213,477	1,298,079	1,401,925	+103,846
Colorado district	101,394	101,300	109,300	+8,000
Juneau: Alaska State	600,016	636,925	1,010,802	+373,877
Muskogee: Oklahoma State	460,000	520,000	500,000	−20,000
Anadarko: Kansas districts	11,300	11,300	15,000	+3,700
Phoenix:				
Arizona State	2,472,251	3,001,000	3,004,000	+3,000
Nevada State	60,000	80,000	86,000	+6,000
Oshrin Hospital		4,000	4,000	
Portland:				
Idaho State	118,000	124,000	139,500	+15,500
Washington State	72,000	91,251	102,751	+11,500
Seminole: Florida	10,802	8,920	10,000	+1,080

(2) Higher education: The estimate for 1967 is $2,198,000, an increase of $798,000 over 1966.

Need for increase.—The increase is requested for grants to Indian college students. Bureau scholarship funds provide assistance for students who cannot qualify for other types of scholarship aid and supplement partial aids students receive from other sources. Costs to students for higher education nationwide average $1,600 per student in public colleges. The increase requested will permit an average grant of $1,075 for 2,045 Indian college students.

B. Federal facilities

The estimate for 1967 is $70,970,379, an increase of $6,051,000 over 1966. The increase consists of—

(1) Boarding schools: The estimate for 1967 is $54,338,879, an increase of $5,178,000 over 1966. The increase consists of—

(1) An increase of $347,000 for increased pay costs.

(2) An increase of $4,831,000 for increased enrollment of 3,108 pupils.

Program of work.—This item provides funds for 80 boarding schools of which 58 are elementary and 22 are boarding high schools. The programs in these schools by virture of the criteria which control enrollment serve those Indian children and youth who stand in the greatest need of special help. These pupils are from the most improverished Indian homes, extensively from non-English speaking families, and from communities geographically and socially isolated. Many are from homes so inadequate that it is not in the child's best interest to remain in them, and most children are so educationally disadvantaged that they cannot profit from an ordinary public school program. Special attention is given to the teaching of English and ungraded programs are provided for pupils who are excessively over-age for their level of achievement.

All Bureau education is special education in the sense that it seeks to compensate for inadequacies not usually experienced by children in the general population.

	1965 amount	1966 amount	1967 amount	Increase (+) or decrease (−)
Boarding schools	$45,223,436	$49,160,879	$54,338,879	+$5,178,000
Number of pupils	(35,930)	(39,465)	(42,573)	+(3,108)

(2) Day schools: The estimate for 1967 is $12,996,500, an increase of $723,000 over 1966. The increase consists of—

(1) An increase of $63,000 for increased pay costs.

(2) An increase of $660,000 for increased enrollment in 30 additional day school units.

Program of work.—The Bureau operates 178 day schools in areas where public schools are either unavailable, or Indian children are unprepared to speak the English language, and local public school agencies are unprepared to provide the special programs required to meet the needs of this group of Indian children. For the most part, Federal day schools are small schools consisting of one to six classrooms. Eighty of these schools are located in arctic Alaska where transportation, communication, and operations are difficult and costly.

	1965 amount	1966 amount	1967 amount	Increase (+) or decrease (−)
Day schools	$11,297,419	$12,273,500	$12,996,500	+$723,000
Number of pupils	(16,341)	(16,516)	(17,266)	+(750)
Number of units	(583)	(590)	(620)	+(30)

(3) Special services: The estimate for 1967 is $2,685,000, an increase of $150,000 over 1966. The increase consists of—

(*a*) Program direction: The estimate for 1967 is $1,785,000, an increase of $25,000 over 1966 for increased pay costs.

Program of work.—This item provides for the salaries and expenses of the education employees rendering field supervisory service as well as the education personnel in the central office. These education specialists plan the overall academic and vocational program for Federal Indian schools and in cooperation with State and local officials develop plans for increased enrollment of Indian pupils in the public school system.

(*b*) Transportation of boarding school students: The estimate for 1967 is $900,000, an increase of $125,000 over 1966 for the increased boarding school enrollment.

Program of work.—This item provides for plane, bus, and rail fares and the incidental expenses of transporting pupils from their homes to and from boarding schools.

(4) Summer programs: The estimate for 1967 is $950,000. No increase is requested over 1966.

Program of work.—Summer programs provide remedial instruction to help Indian youth overcome academic deficiencies, and provide field trips, recreational and camping experience to broaden the background of the children from inadequate homes. Summer program activities in effect extend the school year and make maximum use of the school plant as recommended in the task force report of 1961 to the Secretary.

C. Adult education

The estimate for 1967 is $688,621, a decrease of $412,000 under 1966 due to program adjustment.

Program of work.—Adult education helps older Indian people remedy educational deficiencies of their youth. The program content ranges from instructions in basic arithmetic and language skills to continuation of elementary and high school education. Assistance is also provided in the use of local, State, and Federal community services. Support is given to such Bureau programs as relocation and employment assistance. Group activities are also included, leading to reservation community improvement and development.

A great need in community improvement is housing. With the application of the Public Housing Administration's program on Indian reservations, housing needs can be met only through assistance to local Indian tribal housing authorities by the Bureau of Indian Affairs. Because of this urgent need and the relationship between housing and community improvement and advancement, it is proposed to transfer the sum of $412,000 to the housing development program to make it possible for Indian tribal housing authorities to take advantage of the PHA housing program.

Examples of recent accomplishments—Public school education.—There has been an average increase of 5.1 percent over the past 5 years in the number of Indian children receiving their education in public schools in the States of their residence. States have been helped to assume this responsibility through the Johnson-O'Malley assistance provided by the Bureau of Indian Affairs, combined with the Public Law 874 (64 Stat. 1100) assistance provided by the Office of Education, Department of Health Education and Welfare. Bureau aids compensate State school systems for additional or unusual costs created by the enrollment in their systems of large numbers of Indian children. Through the combined efforts of local, State, and Federal aid programs, including Johnson-O'Malley assistance, 82,000 Indian children enrolled in public elementary and high schools in 1965.

Federal school education.—The Bureau's total education program is remedial and compensatory in nature to help educationally and socially deprived children overcome handicaps growing out of poverty and isolation. The long-range objective is to place Indian students on an equal footing with children from more stable environments and with those from English-speaking homes. In 1965, 52,271 Indian children enrolled in Federal schools with 71.7 percent of this enrollment in elementary grades and 28.3 percent in high school grades and special classes for the over-age.

The average daily attendance of Indian children in Federal schools nearly equals the national average of 89.9 percent and the retention rate (77.4 percent) has exceeded the national average of 73.7 percent of the ninth graders remaining to graduate. The basic problems are developing fluency in the English language and improvement of academic achievement, especially at the high school levels—problems growing out of substandard economic and social conditions of Indian homes. The percentage of high school students not achieving at their proper grade level ranges from 63.7 percent in the 9th grade to 54.8 percent in the 12th grade. This under achievement is closely tied to the learning of English as a second language, and is further aggravated by poor home conditions.

Summer programs.—Summer programs are carried out in cooperation with Indian tribes and in 1965 served approximately 21,000 Indian children as compared to 2,200 in 1960.

College education.—Grants are made to Indian students under the jurisdiction of the Bureau on a need basis when no other source is available, or other sources are inadequate to meet the total need of an applicant. During the past fiscal year 1,718 students enrolled in colleges and universities.

Adult education.—The number of adults participating in adult education programs has increased from 3,600 in 97 communities in 1960 to 32,800 in 192 communities in 1965.

Basic problems encountered by the Bureau in carrying out its education responsibility

1. By comparison with the increase of school age children in the general population, the Indian school population is increasing at a higher rate. This high rate of population increase adds to the nationwide problem of providing adequate school spaces and places an unusually heavy burden on existing Federal facilities. Where public schools are not available, the Bureau must provide additional space in Federal facilities.

2. Geographic and cultural isolation and lack of roads make continued Federal operations necessary. Many of these Federal operations because of isolation are boarding schools. As roads, bus routes, and adequate Indian housing can be developed, additional numbers of Indian children can attend on a day basis. This is one of the Bureau's educational objectives. A major obstacle at present is the lack of a good road system in many communities. The development and maintenonce of additional school bus routes is necessary to make more day schools possible.

3. Federal schools must be concerned with developing quality instruction to give Indian youths background and high level skills so they may take advantage of all employment opportunities.

4. Indians served by the Bureau are educationally handicapped because of extreme conditions of poverty, family breakdown, cultural and language differences, and lack of universal education in the past. Because of such conditions, they are undereducated by comparison with the general population. Bureau programs provide extra educational services to bring opportunities within their reach, so that they can function in the modern world.

5. How to bring about the rapid changes necessary to bridge the educational gap, without at the same time creating a disturbing cultural breach between parents and children is a major problem. Yet, the educational handicap of the

Indian people must be overcome quickly, if they are to succeed in the modern world.

2. Welfare and guidance services

Subactivity	1965 amount available	1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) General assistance	$6,031,463	$6,052,465	$6,052,465			
(Caseload)	(20,006)	(20,200)	(20,200)			
(b) Other Welfare assistance	2,818,297	2,674,292	3,086,292	$412,000		+$412,000
(1) Child welfare	(2,181,720)	(2,527,664)	(2,939,664)	(412,000)		+(412,000)
(Caseload)	(2,734)	(2,856)	(3,080)	(230)		(230)
(2) Miscellaneous assistance	(636,577)	(146,628)	(146,628)			
(c) Housing	499,223	996,500	996,500			
(d) Social services	3,459,398	3,788,743	3,773,743	−15,000	$20,000	−35,000
Total	12,808,381	13,512,000	13,909,000	+397,000	20,000	+377,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $13,909,000, an increase of $397,000 over 1966. The increase consists of—

(1) A decrease of $35,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $20,000 for increased pay costs.

(3) An increase of $412,000 for Child Welfare.

(a) *General assistance*

The estimate for 1967 is $6,052,465. No increase is requested over 1966.

Program of work.—It is anticipated that there will be sufficient development of additional employment opportunities through Bureau programs and other federally assisted programs to compensate for such factors as population increase and increased living costs, which in the past have resulted in steadily increasing general assistance caseloads and costs. General assistance will be provided to needy Indians on reservations who are not eligible for public assistance under the Social Security Act (old-age assistance, aid to families with dependent children, aid to the blind, and aid to the permanently and totally disabled), and for whom such assistance is not available from established welfare agencies or through tribal resources.

(b) *Other welfare assistance.*

The estimate for 1967 is $3,086,292, an increase of $412,000 over 1966. The increase consists of—

(1) Child welfare: The estimate for 1967 is $2,939,664, an increase of $412,000 over 1966.

Need for increase.—The increase of $412,000 will provide for foster care or necessary institutional care for approximately 230 additional Indian children and for increased costs of institutional and foster care for children for whom the Bureau is already providing such care. There is a gradual increase in the child population on reservations, and with improved case finding by social workers and greater awareness of children's needs by tribal courts, an increased number of neglected, handicapped, and dependent children come to the attention of the Bureau for whom care away from their homes must be provided.

Program of work.—Necessary foster care and appropriate institutional care will be provided for dependent, neglected, and handicapped Indian children on reservations for whom such care is not available through established welfare agencies.

(2) Miscellaneous assistance: The estimate for 1967 is $146,628. No increase is requested over 1966.

Program of work.—Burials for needy Indians and for other costs related to welfare programs, including arrangements with some needy tribes for meeting some of the costs of the surplus food commodities program for needy Indian families.

(c) *Housing*

The estimate for 1967 is $996,500. No increase is requested over 1966.

Program of work.—The housing improvement program is designed to provide adequate shelter for those Indian families who are unable to provide their own shelter or cannot participate in public housing programs because their income level is so low that they cannot meet the small monthly rental payments required under that program. Since the need for adequate housing is so great on the Indian reservations, it is necessary to determine priorities for inclusion in the projects. The care and best interests of children where serious adverse health or social conditions exist and the size of family groups, as well as low income, is considered in determining priority of need for new or rehabilitated home.

A simple core-type, panelized structure has been developed for use in the program which can either be constructed by contract with local Indian tribes or by force account. In either case the program is designed to provide the maximum of use of unskilled and semiskilled labor, which is the type of available labor usually found in the poorer regions of the Indian reservations. It is estimated that approximately 190 man-years of employment will be generated by the program requested in fiscal year 1967. Of this, it is estimated that 80 percent or 152 man-years will be local Indian labor.

Under this program, the Bureau will conduct surveys as necessary to ascertain (*a*) overall scope and requirements, (*b*) priorities, (*c*) estimates for individual work projects and long-range needs, (*d*) conduct site surveys, prepare plans, specifications, quantity surveys (bills of materials) (*e*) supervise and perform the actual work on individual home projects, and (*f*) obtain assistance from and/or coordinate the work and efforts of other Government agencies wherever possible in furthering program aims, such as Public Health Service participation in providing sanitary facilities under Public Law 86–121; obtaining surplus materials, etc.

Examples of recent accomplishments.—A total of 345 housing units will have been rehabilitated or constructed from the approximately $3 million made available in fiscal years 1964, 1965, 1966, and requested for 1967. The effect of this work at the 33 locations has produced much needed local employment, eliminated some of the most decrepit dwellings, and will provide the 345 families with shelter which, while modest, is safe, sanitary, and comfortable.

(d) *Social services*

The estimate for 1967 is $3,773,743, a decrease of $15,000 under 1966. The decrease consists of —

(1) A decrease of $35,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $20,000 for increased pay costs.

Program of work.—Applications and continuing eligibility for assistance will be appropriately investigated. Casework services will be provided to families and children in an effort to prevent family breakdown, to rehabilitate family members, to protect minors from harmful influences, and to provide opportunities for healthy growth and development. Staff services will be contributed to provide consultation to tribal courts in connection with problems of children and families to advance the following projects; housing improvements, antipoverty programs, and family plan programs for use of judgment funds.

3. Relocation and adult vocational training

Subactivity	1965 amount available	1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost[1]	Program
(*a*) Relocation services	$2,797,036	$3,039,000	$3,039,000		$10,000	−$10,000
(*b*) Adult vocational training	9,320,061	11,473,520	12,145,000	$671,480	21,000	+650,480
Total	12,117,097	14,512,520	15,184,000	671,480	31,000	+640,480

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate of $15,184,000 is an increase of $671,480. The increase consists of—

(1) A decrease of $10,000 in relocation services and a decrease of $34,000 in adult vocational training due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $10,000 in relocation services and an increase of $21,000 in adult vocational training for increased pay costs.

(3) An increase of $684,480 to provide the full range of adult vocational training services including employment following training for approximately 200 applicants currently awaiting this service.

Program of work.—These two programs provide financial assistance to Indians to enable them to become self-sufficient through adequate employment. The relocation services phase of the program provides services and financial assistance to Indians who are prepared to accept immediate employment. The adult vocational training program (Public Law 959) provides training which will lead to self-support. Relocation services will provide service and financial assistance to approximately 1,775 units (4,083 persons). The funds requested for adult vocational training services will provide services and financial assistance to 3,726 units (7,785 persons) in training. Financial assistance and services will also be available for approximately 2,500 units (8,250 persons) in on-the-job training.

4. Maintaining law and order

Maintaining law and order:	
1965 amount available	$2,713,581
1966 amount available	2,938,000
Fiscal year 1967 estimate	2,894,000
Decrease, 1967 compared with 1966:	
Total	−44,000
Pay cost [1]	+14,000
Program	−58,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $2,894,000, a decrease of $44,000 under 1966. The decrease consists of—

(1) A decrease of $58,000 program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $14,000 for increased pay costs.

Program of work.—Maintenance of law and order on Indian reservations is a Federal and tribal responsibility except in those areas where the States have assumed jurisdiction pursuant to congressional authorization. Where they are able tribes assume financial responsibility for law and order, and some of them are spending more than the Bureau. The resources of some tribes, however, are running low and their inability to carry the financial burden affects directly the quality of their law and order programs.

Criminal activity among both adults and juveniles on Indian reservations continues to increase steadily. Annual statistical reports for fiscal year 1965 reflect a total of 69,848 crimes occurring on Indian reservations, where law and order is maintained by Federal and tribal authorities. This is an increase of 2,820 over fiscal year 1964.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$97,771,140	$107,096,914	$115,296,000	+$8,199,086
Transferred to GSA (76 Stat. 956)		11,480		−11,480
Contract authorization (48 U.S.C. 50d-1)	−1,039,606	−1,100,000	−1,100,000	
Applied to contract authorization (48 U.S.C. 50d-1)	+989,683	+1,039,606	+1,100,000	+60,394
Unobligated balance lapsing	+244,283			
Appropriation	97,965,500	105,846,000	115,296,000	+9,450,000
Proposed supplemental due to civilian pay increase (79 Stat. 1111)		1,202,000		−1,202,000
Obligations by objects:				
11 Personnel compensation	49,743,770	53,934,000	55,765,000	+1,831,000
12 Personnel benefits	3,484,451	3,815,909	4,100,925	+285,016
21 Travel and transportation of persons	2,671,643	2,899,643	2,803,643	−96,000
22 Transportation of things	1,289,963	1,844,617	2,095,499	+250,882
23 Rent, communications, and utilities	2,298,968	2,397,906	2,898,956	+501,050
24 Printing and reproduction	36,327	29,969	29,969	
25 Other services	3,428,532	3,449,639	3,477,689	+28,050
Services of other agencies	611,942	679,375	710,375	+31,000
26 Supplies and materials	11,837,562	13,518,275	15,018,775	+1,500,500
31 Equipment	610,798	983,499	1,343,887	+360,388
41 Grants, subsidies, and contributions	23,196,276	25,188,285	28,695,485	+3,507,200
42 Insurance claims and indemnities	11,477			
Subtotal	99,221,709	108,741,117	116,940,203	+8,199,086
Deduct quarters and subsistence charges	1,450,569	1,644,203	1,644,203	
Total obligations	97,771,140	107,096,914	115,296,000	+8,199,086

NON-FEDERAL SCHOOLS

Chairman HAYDEN. For assistance to pupils in non-Federal schools you propose an increase of $1,596,000 over the amount appropriated last year. Of this increase, one-half of it, $798,000, is for public schools.

Would you advise the committee of how many more pupils this will take care of; and are they all covered in Johnson-O'Malley-type contracts?

Mr. NASH. Yes, sir. The $798,000 are all Johnson-O'Malley contracts and about half a million of this amount results from increased numbers in new programs in three States.

In South Dakota we are converting a Bureau school to a public school, jointly operated. We are entering into a new relationship at Nome, Alaska, where we built a dormitory and the State of Alaska has built a public school and we will have to provide funds for the education of the children in this William Belts Vocational School; and then in New Mexico our contract with that State calls for us to meet additional costs from year to year and those have gone up 8 percent and all the other States together amount to $222,000, making the total of $798,000.

REDUCTION IN FEDERAL AID TO FEDERALLY IMPACTED SCHOOLS

Chairman HAYDEN. The budget for the Office of Education proposes a reduction of $164 million in Federal aid to federally impacted schools, which I understand include Indian schools and others containing a certain percentage of Indian pupils. What will be the effect if the cut in Office of Education funds for federally impacted areas prevail?

Mr. NASH. According to the proposed change in Public Law 874 it can be assumed that many school districts, especially those with the smaller Indian enrollments, may lose most or in some cases all of their entitlement. Even the schools with the larger Indian enrollment will be hurt. Furthermore, rates for payment of Public Law 874 entitlement will no longer be based on National or State per capita costs. This will mean that in the case of accommodation school districts such as exist in Arizona, where school revenue from local sources is small, the entitlement could be reduced by as much as 75 percent. In a State like New Mexico where local effort is small and State support accounts for as much as 80 percent of school revenue the same reduction in school entitlement would prevail.

It is fair to assume that the proposed change would cause school districts enrolling Indian children to request additional Johnson-O'Malley support to maintain their present programs. The amounts needed would vary from district to district and State to State and in total amount would be very substantial.

IMPACT OF EDUCATIONAL ASSISTANCE PROGRAMS ON FEDERAL INDIAN SCHOOLS

Chairman HAYDEN. The President's budget calls for an increase in excess of $700 million for educational assistance programs to a total of $1.9 billion, largely as a result of legislation passed by the 88th and 89th Congresses. Do you have any figures to show to what extent Indian schools and other schools with Indian enrollment will benefit from this tremendous increase?

Mr. NASH. The Federal Indian schools to date do not participate in any direct benefits from any of this legislation. A task force made up of representatives of the Bureau of Indian Affairs, Department of the Interior, and Office of Education (HEW), has developed legislative amendments which may provide as much as $8 or $9 million of entitlement under the Elementary and Secondary Education Act of 1965 (Public Law 89–10) to be used for Indian children attending Bureau schools. Our budget, as submitted, is predicated on the assumption that these funds will be made available to enable the Bureau to provide its Indian enrollees the same type of opportunity for educational enrichment now available to all disadvantaged children under the provisions of this act.

We have very limited data on the total impact on Indians of Federal assistance programs not administered by the Bureau of Indian Affairs. We estimate that Indian families with incomes below the poverty line ($2,000 per year) produce an entitlement of up to $25 million for public schools under title I of the Elementary and Secondary Education Act. Indian students in public school systems undoubtedly benefit from other titles of the same act but we have no valid way of estimating the amount.

It is our belief that although Indian students are eligible to participate in the national defense student loan program and the work-study program that only a very few have benefited due primarily to the number of applicants and the competitive nature of the programs. We do not have adequate information on the impact other Federal education legislation will have on assistance to Indian students.

Higher Education

Chairman Hayden. This same increase, $798,000, is requested for higher education. How many more students will this permit you to send to college?

Mr. Nash. This will enable us, Mr. Chairman, to have an average grant of $1,075 to 2,045 college students, which is substantially higher than we have been able to do up to now and we expect this figure to increase in coming years.

Transportation of Boarding School Students

Chairman Hayden. An additional $125,000 is requested for transportation of boarding school students. How many more students will this care for and where is this additional transportation required?

Mr. Nash. Mr. Chairman, this $125,000 is needed to take care of three special situations and then some added costs for the other schools.

Recently the State of Washington notified us that they will not be able to pay the transportation any longer of the students from the State who are enrolled in our boarding schools for the reason that they have special needs that cannot be met in the public schools.

When there were just a few of those students the State took care of those costs and it has now reached the point where they think it is too much money and they have notified us that they can't do it. That is 138 students and the cost of transportation is $18,000.

Nome High School, Alaska

I referred a moment ago to the new operation at Nome. There will be 150 students at Nome High School, students in the northwestern part of Alaska, and they will have to be transported to that school so we are asking $15,000 for that purpose.

Then, as the Navajo school program, a building program, has progressed, more spaces are opened up at Chemawa and we are able to eat slightly into the backlog of Alaska native students who desire to go to high school but never had a place, so there were 240 more Alaskans in high school, in boarding school at Chemawa, and that costs $42,000.

The balance is for additional cost, meals, lodging, for 8,000 students that are now being transported.

Chairman Hayden. Do any States pay transportation such as Washington did?

Mr. Nash. That is the only one that I know of.

Mr. Finale. No, no others.

Mr. Nash. That was the only one. No others are paying.

Adult Education

Chairman Hayden. I note that you are reducing your budget request for adult education by $412,000. Does this indicate a reduced need for adult education or a reduction in the number of interested or eligible Indians?

Mr. Nash. No, sir; neither one. This is an example of our effort to comply with the President's directive that we examine our programs and, where possible, substitute programs of lower priority for programs of higher priority.

Adult education is very important. It has grown. The Indian people like it, but it is not as important in our minds as housing. In order to take full advantage of the Public Housing Administration's program we have found that we need superintendents of construction and housing development officers, and so we are proposing to take out some of our adult educators, and that reduction represents a transfer of those people from the adult education function to the housing development function.

Child Welfare

Chairman Hayden. Thank you.

You are asking an additional $412,000 for foster care or necessary institutional care for Indian children. Is the number of children for whom this type of care must be provided increasing? If so, how many more in 1967 than in 1966?

Mr. Nash. Mr. Chairman, the amount we are asking for child welfare will provide for 230 additional children: 160 children in foster care homes at $60 per month, and 70 children who need to be institutionalized who cannot be cared for in foster homes at $150 per month each. That accounts for $241,000 of our increase in child welfare.

In addition to that we are finding that the cost is going up a little bit all the time and we have 2,850 children currently receiving foster home care and we have an increase of $5 a month for each one of them and that makes $171,000 and these sums together make up the total of $412,000.

Home Improvement Program

Chairman Hayden. Is any of the $996,500 proposed for housing under "Education and welfare services" to be used for materials or labor?

Mr. Nash. This is a home improvement program, Mr. Chairman, and practically all of this will go for materials and supplies. This is a program in which we have endeavored to provide minimum dwellings for those people on the reservations who cannot be helped by any of the existing housing programs; that is, people who cannot pay back a loan, are incapacitated, cannot work on their own houses, and if we don't provide for them there will be no housing improvement program for them at all.

Unemployment Assistance

Chairman Hayden. How many unemployable Indians do you estimate there are; and what are the causes of this unemployability?

Mr. Nash. Mr. Chairman, during the fiscal year of 1965 there was a monthly average of 5,700 cases, slightly more than 20,000 persons, who were receiving general assistance and the branch of welfare tells me that slightly more than half of these, 56 percent, were cases in which the family head was unemployable and a little bit less than half, 43 percent, were cases where there was an employable family head but he was unable to find employment and the family came into distress.

Adult persons who are unemployable, generally speaking, are either ill—they have physical handicaps or mental handicaps—or are too

old to do the work which is available in the reservation vicinity, even though they are not yet 65, and, therefore, are not eligible for old-age assistance. The determination of who is unemployable and who is not is made by the social worker in the field on the basis of the best information that is available to him and represents a personal judgment of his.

Adult Vocational Training

Chairman Hayden. In fiscal year 1967 you are proposing a program increase of $650,480 for adult vocational training which you say will provide services of financial assistance to 7,785 persons in training as well as to 8,250 persons in on-the-job training.

How great an increase is this over the numbers for which you were able to provide with the $11,400,000 appropriated for this purpose in fiscal year 1966?

Mr. Nash. We will be able with this money to provide institutional vocational training for an additional 305 single persons and family heads, and 601 persons altogether when you count dependents, and on-the-job training for 500 single persons and family head, totaling 1,650 persons, including dependents. The combination of these in the whole adult vocational training program will result in an increase of 805 trainee units or 2,251 persons including dependents.

Maintenance of Law and Order

Chairman Hayden. For maintaining law and order in fiscal year 1967 there is an estimate of $2,894,000, a program reduction of $58,000. Where is this reduction to be accomplished?

Mr. Nash. This will be spread over a wide range of locations where the tribes need assistance with their law and order. I can provide for the record where we will program that. That is a very large number of places.

Chairman Hayden. That may be done.

Mr. Nash. Yes, sir.

(The information follows:)

Application of $58,000 Reduction in Law and Order

	Amount	Where applied
Aberdeen area	$40	
Standing Rock		$40
Billings area	22,920	
Area office		312
Blackfeet		3,700
Crow		2,900
Flathead		2,808
Fort Belknap		4,300
Fort Peck		4,000
Northern Cheyenne		2,200
Wind River		2,700
Minneapolis area	16,040	
Area office		6,656
Red Lake		9,384
Phoenix area	5,200	
San Carlos		5,200
Portland area	13,800	
Colville		13,800
Total	58,000	58,000

BEARING COSTS OF LAW AND ORDER

Chairman HAYDEN. What is the policy of the Bureau of Indian Affairs applicable throughout the Bureau as to whether law and order costs should be borne by the Federal Government or by the individual Indian tribes?

Mr. NASH. Mr. Chairman, our policy is to provide it ourselves unless the tribe is both financially able and ready to do it. There have been some changes over the years.

If I could enlarge on this just a little bit, in the final analysis the responsibility for law and order comes back to the Federal Government. If life and property are not being adequately protected on the reservations, by whatever the system of justice is, and some problem arises, eventually we have to take care of it. Consequently, I really think that this is a Federal responsibility.

My predecessors were of the opinion that this ought to be a function of local government and therefore the tribes as developing units of local government ought to be encouraged to take it over. The tribes rather like this idea. They feel that they are truly local governments if they can have their own law and order and they don't always feel too comfortable or happy with the law and order that they experience from their neighbors.

The result has been that a great many tribes have taken on this function when they couldn't really afford it and some tribes have taken it on when they had money, oil and gas income, for example, that didn't last, and so there was a time when they could afford it and later they couldn't.

Consequently, in my opinion there is only one tribe today which is providing its own law and order that is really financially able to do so and is operating on a scale that provides somewhere near adequate law and order. That is the Navajos, and they have a very large police force and a big budget, over $2 million, that they are putting into law and order down there.

Elsewhere, and I think this is true practically without exception, we have the tribes putting in what they can. We supplement it. What we provide isn't really enough. What they have to add to it isn't really enough.

Quite often they had jails or other places of detention that were very primitive and they were not satisfied with that and neither were we. Then we would build a modern facility and all of a sudden they would discover they had a white elephant. They have an expensive facility that they can't really afford to operate and then they turn to us and ask for financial help.

ASSUMPTION OF LAW AND ORDER COSTS BY FEDERAL GOVERNMENT

Chairman HAYDEN. Have you given any thought to assuming the total costs, or, on the other hand, to assuming none of the costs for maintaining law and order on the various reservations?

Mr. NASH. Yes, sir; we have, and when I first became Commissioner in 1961 we seriously considered coming in with a request to take over the cost of law and order 100 percent from those tribes that we knew at that time could not afford what they were attempting to put into law and order.

The sum we arrived at was $4 million, and in the general process of looking at priorities and trying to see what we could afford it seemed like such a large sum that we drew back from it. It would take considerably more than that today.

Federal Payments for Law and Order by Tribe

Chairman Hayden. Would you please place in the record a statement indicating the tribes for which the Federal Government pays the expenses of maintaining law and order, including in that information the amounts provided for this purpose? Please provide this information for both fiscal years 1966 and 1967.

Mr. Nash. Yes, sir; we have that and we will be glad to submit it.

(The information follows:)

Federal expenditure for law and order programs by tribes

	Fiscal year 1966	Fiscal year 1967
Phoenix area:		
Colorado River	$17,998	$17,998
Fort Apache	35,229	35,229
Hopi	63,083	63,083
Papago	100,279	100,279
Pima	90,866	90,866
Salt River	46,708	46,708
San Carlos	127,091	121,891
Truxton Canon	26,559	26,559
Nevada	82,187	82,187
Uintah and Ouray	14,478	14,478
Portland area:		
Fort Hall	67,099	67,099
Northern Idaho: Coeur d'Alene and Nez Perce	60,101	60,101
Warm Springs	33,064	33,064
Colville	30,989	20,109
Western Washington	154,709	154,709
Yakima	42,378	42,378
Aberdeen area:		
Cheyenne River	19,555	19,555
Pierre: Crow Creek and Lower Brule	90,012	90,000
Pine Ridge	166,484	166,484
Rosebud	110,442	110,440
Sisseton	16,228	16,220
Fort Berthold	63,659	63,650
Standing Rock	121,472	121,470
Turtle Mountain: Devils Lake and Turtle Mountain	130,337	130,330
Billings area:		
Blackfeet	44,750	40,550
Crow	46,385	43,485
Flathead	39,308	36,500
Fort Belknap	61,303	57,003
Fort Peck	59,651	55,151
Northern Cheyenne	63,615	61,415
Rocky Boys	21,923	21,923
Wind River	66,161	63,461
Minneapolis area: Red Lake	104,384	94,000
Gallup area:		
Jicarilla	18,423	18,423
Mescalero	33,468	33,468
United Pueblos	133,197	133,197
Zuni	59,352	52,352
Navajo	52,191	52,191
Consolidated Ute: Southern Ute and Ute Mountain	32,839	32,839

White Mountain Apache Tribe Law and Order Program

Chairman Hayden. In connection with maintenance of law and order, I have received a letter from the chairman of the White Mountain Apache Tribe in which he indicates a need for additional funds in order properly to carry out the law and order program.

I have received from your office an indication that between the Bureau of Indian Affairs and the tribe only $138,000 will be available,

but that $210,000 is required to carry out the full necessary program. I will place both of these letters in the record.

(The letters follow:)

WHITE MOUNTAIN APACHE TRIBE,
Whiteriver, Ariz., December 29, 1965.

Hon. CARL HAYDEN,
U.S. Senate, Washington, D.C.

DEAR SENATOR HAYDEN: The White Mountain Apache delegation to the National Christmas Tree Lighting was extremely disappointed that they were unable to meet with you during the week they were in Washington. We were greatly honored to be present and to be guests of the Pageant for Peace Committee, not only for the White Mountain Apache Tribe but for the whole State of Arizona.

While in Washington our delegation was quite concerned with attempting to obtain help to alleviate the pressing law and order problem here on the reservation. At the present time the tribe is spending approximately $100,000 per year in supporting a full-time police department and court system. While this is a very necessary part of tribal government it is an extremely costly one and at the present time we find we are in need of a probation officer to supplement our present staff, for which no funds are available. We discussed this matter with Mr. William Benge, head of the Law and Order Department for the Bureau of Indian Affairs who advised us that funds for law and order were cut back to the extent that they could not support one position, much less the full department. He suggested that we discuss this matter with you.

Accordingly I met with Mr. Joseph A. Ferstl who suggested that I put this matter in writing to you. We are concerned with the problem of law enforcement here on the reservation and feel that at the present time it could operate more efficiently and effectively if it were funded by and a part of the Bureau of Indian Affairs. Funds saved by the tribe by this action would then be used for education, training, and development of jobs for our people, thereby striking at the very heart of the factors that create burdensome law enforcement problems, the social/economic level of the people.

We would appreciate any help you might be able to give us in getting law enforcement funded through the Bureau of Indian Affairs.

Sincerely yours,

LESTER OLIVER, *Chairman.*

DEPARTMENT OF THE INTERIOR,
BUREAU OF INDIAN AFFAIRS,
Washington, D.C., January 21, 1966.

Memorandum to: Director of the Budget.
From: Commissioner of Indian Affairs.
Subject: Information requested by Mr. Paul Eaton in connection with law and order on the White Mountain Apache Reservation.

The Bureau has programed and will spend approximately $35,000 of Federal funds for law and order at Fort Apache during the current fiscal year to support three Bureau employees. At the same time, the tribe has programed and will spend $103,000 for the salary and operating expenses of 17 employees (3 judges, 1 clerk, 2 supervisory policemen, 6 journeymen policemen, 2 radio operators, and 3 police matrons). Construction of a new jail facility authorized last year will be completed in fiscal year 1967. Appropriate staffing of this jail facility will necessitate expansion of the law and order staff. The present combined Bureau-tribal police department is the minimum necessary for maintaining law and order. When the new jail facility is completed, it is estimated that an additional six employees (two cooks, four jailers) will be necessary. With the expanded staff, and the additional expenses that will have to be incurred in connection with the new jail, we estimate that it will cost approximately $210,000 to finance the program during fiscal year 1967. The Bureau currently has available $35,000 of this amount.

When the budget estimates for fiscal year 1967 were being formulated, consideration was given to including funds for the purpose of relieving the White Mountain Apache Tribe of its financial responsibility for law and order. However, in view of other more urgent needs, we were unable to include such funds in our estimates.

As indicated above, the tribe has budgeted $103,000 and the Bureau has budgeted $35,000 for law and order during fiscal year 1966. We plan to continue our

contribution of approximately $35,000 during fiscal year 1967, but will be unable at our present level of financing to increase our contribution in the event the tribe is unable to continue its contribution.

PHILLEO NASH, *Commissioner.*

FUNDS NOT INCLUDED IN BUDGET REQUEST

Chairman HAYDEN. Do you have any comment on this situation?

Mr. NASH. No, sir; we think this is a reasonable request from the tribe. The only reason we are not here asking for it ourselves is that we were trying to hold the budget down and we had these very large increases for education and it was merely a question of priorities.

We gladly support the request.

Chairman HAYDEN. Do you think you can do anything for them?

Mr. NASH. Not out of our present allowances.

SURVEY OF INDIAN EDUCATION

Chairman HAYDEN. Last year you testified that the survey of Indian education had been delayed because it was necessary for you to conduct the Bordertown School survey requested by the committee. Have you proposed any funds in the fiscal year 1967 budget to continue this survey?

Mr. NASH. No sir; we have not. We have conducted some discussions with the University of New Mexico looking toward the study which I indicated last year we would attempt to get into, pursuant to the committee's request for information as to where Indian students learned the best; and the College of Education at the University of New Mexico submitted a proposal which would run to just under $400,000 and which in the first year would run $159,000.

We will be talking to them again about this next week. When the proposal came into us last fall, and I would gladly offer this for the committee's examination if they desire, it seemed to me to be a lot of money to spend without a specific authorization and I was not at all certain without further discussions with our education specialists that the study would produce the answers the committee was looking for.

The survey of education has been very long delayed. Frankly, I have just not felt that at times when we were not able to buy all the textbooks we wanted, when we had teaching material centers that had shelves but did not have the filmstrips or the projectors of the tape recorders on them, that we ought to be putting money into the survey.

We are anxious to make the study and we would gladly do so. We would like to have funds provided specifically for this purpose.

RESOURCES MANAGEMENT

Chairman HAYDEN. I will place in the record the budget justification for your request amounting to $44,611,000 for "Resources management."

(The justification follows:)

The purpose of this appropriation is to promote the economic advancement of the Indians in the continental United States, including natives of Alaska, through the utilization of their resources.

To carry out this purpose, the Bureau of Indian Affairs is responsible for the management, development, improvement, and protection of resources and appurtenant facilities of Indians under the jurisdiction of the Bureau.

The long-range program objective is to improve the economic and social conditions among Indians to the point where Federal financing will no longer be required to develop and utilize their resources.

During the last fiscal year the Bureau carried out this objective through active management programs which were aimed toward increased Indian participation in the management of Indian-owned resources.

For fiscal year 1967, emphasis is being placed on the development phase of Indian resources while at the same time carrying on the custodial-type activities necessary for the protection and preservation of such resources.

Resources management

Appropriation, 1965	$40, 390, 000	
Supplemental appropriation, 1965	1, 031, 000	
Total appropriation, 1965		$41, 421, 000
Appropriation, 1966	42, 796, 000	
Proposed supplemental due to civilian pay increase	569, 000	
Total appropriation, 1966		43, 365, 000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration		−15, 696
Total available, 1966		43, 349, 304

SUMMARY OF INCREASES AND DECREASES, 1967

Forest and range lands:		
Decrease due to program savings resulting from improved manpower utilization and cost reduction actions	$−53, 000	
To provide for increased pay costs for fiscal year 1966 positions	35, 000	
		−18, 000
Agricultural and industrial assistance:		
Decrease due to program savings resulting from improved manpower utilization and cost reduction actions	−191, 000	
To provide for increased pay costs for fiscal year 1966 positions	44, 000	
Decrease in agricultural extension program due to program adjustment	−500, 100	
To provide for additional staff for mutual help and low-rent housing program	940, 100	
		293, 000
Soil and moisture conservation:		
Decrease due to program savings resulting from improved manpower utilization and cost reduction actions	−253, 000	
To provide for increased pay costs for fiscal year 1966 positions	35, 000	
		−218, 000
Maintenance of roads:		
Decrease due to program savings resulting from improved manpower utilization and cost reduction actions	−6, 000	
To provide funds for increased wage board costs	89, 000	
To provide for increased pay costs for fiscal year 1966 positions	4, 000	
		87, 000
Development of Indian arts and crafts: To provide for increased pay costs for fiscal year 1966 positions		2, 000

Resources management—Continued

SUMMARY OF INCREASES AND DECREASES, 1967—continued

Management of Indian trust property:		
Decrease due to program savings resulting from improved manpower utilization and cost reduction actions	−$132,000	
To provide for increased pay costs for fiscal year 1966 positions	49,000	
To provide funds to reimburse employee compensation fund	10,000	
		−$73,000
Repair and maintenance of buildings and utilities:		
Decrease due to program savings resulting from improved manpower utilization and cost reduction actions	−353,000	
To provide for increased pay costs for fiscal year 1966 positions	37,000	
To provide funds for increased wage board costs	253,000	
To provide funds for maintenance of new facilities	1,320,696	
		1,257,696
Operation, repair, and maintenance of Indian irrigation systems:		
Decrease due to program savings resulting from improved manpower utilization and cost reduction actions	−70,000	
To provide for increased pay costs for fiscal year 1966 positions	1,000	
		−69,000
Net increase, 1967		1,261,696
Budget estimate, 1967		44,611,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Transfers	Amount available
1. Forest and range lands	$5,221,068	$5,181,000	$97,000	$1,000	$5,277,000
2. Fire suppression	419,657	140,000			140,000
3. Agricultural and industrial assistance	6,297,409	7,221,000	122,000		7,343,000
4. Soil and moisture conservation	5,533,117	5,404,000	97,000		5,501,000
5. Maintenance of roads	3,586,203	3,794,000	10,000		3,804,000
6. Development of Indian arts and crafts	326,000	365,000	7,000		372,000
7. Management of Indian trust property	6,556,275	6,767,000	136,000	1,000	6,902,000
8. Repair and maintenance of buildings and utilities	11,769,594	12,645,000	99,000	13,696	12,730,304
Operation, repair, and maintenance of Indian irrigation systems	1,249,812	1,279,000	1,000		1,280,000
Unobligated balance lapsing	461,865				
Total	41,421,000	42,796,000	569,000	15,696	43,349,304

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Forest and range lands	$5,221,068	$5,277,000	$5,259,000	−$18,000	$35,000	−$53,000
2. Fire suppression	419,657	140,000	140,000			
3. Agricultural and industrial assistance	6,297,409	7,343,000	7,636,000	293,000	44,000	249,000
4. Soil and moisture conservation	5,533,117	5,501,000	5,283,000	−218,000	35,000	−253,000
5. Maintenance of roads	3,586,203	3,804,000	3,891,000	87,000	4,000	83,000
6. Development of Indian arts and crafts	326,000	372,000	374,000	2,000	2,000	
7. Management of Indian trust property	6,556,275	6,902,000	6,829,000	−73,000	49,000	−122,000
8. Repair and maintenance of buildings and utilities	11,769,594	12,730,304	13,988,000	1,257,696	37,000	1,220,696
9. Operation, repair, and maintenance of Indian irrigation systems	1,249,812	1,280,000	1,211,000	−69,000	1,000	−70,000
Unobligated balance lapsing	461,865					
Total	41,421,000	43,349,304	44,611,000	1,261,696	207,000	1,054,696

[1] To provide for increased pay costs for fiscal year 1966 positions.

Analysis by subactivities

1. Forest and range lands

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(*a*) Forestry	$3,315,846	$3,552,000	$3,548,000	−$4,000	$24,000	−$28,000
(*b*) Range lands	1,905,222	1,725,000	1,711,000	−14,000	11,000	−25,000
Total	5,221,068	5,277,000	5,259,000	−18,000	35,000	−53,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

(*a*) *Forestry*

Fiscal year 1965, $3,315,846; fiscal year 1966, $3,552,000; fiscal year 1967, $3,548,000; decrease, $4,000.

The estimate for 1967 is $3,548,000, a decrease of $4,000 under 1966. The decrease consists of—

(1) A decrease of $28,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $24,000 for increased pay costs.

Program of work.—The work objectives of the timber management program are (1) development of the full timber growing potential of the Indian-owned forest lands; (2) protection of the growing stock from destructive agencies, primarily fire, insects, windthrow, and trespass; and (3) improvement of the economic status of the Indian owners and communities on and near the reservations, through full use of the sustained-yield allowable cut of all commercial forest products. It is a function of the Bureau to relate these objectives of timber management to other uses of the forest under the multiple-use concept, such as grazing, recreation, and watershed protection.

Examples of recent accomplishments.—At some reservations, receipts from timber sales are the principal source of income to the tribes. It is estimated that every million board feet of timber sold creates from 5 to 10 man-years of employment on or near the reservations in the logging operations and manufacture of lumber. This employment tends to decrease with the trend toward greater mechanization, but employment can be increased through the establishment of integrated wood product plants and remanufacturing facilities. One objective, therefore, is to plan the timber sales so as to encourage the establishment of full integrated manufacturing facilities on the reservations.

Timber cut under contract, paid permit, and special allotment timber cutting permits

Fiscal year	Volume cut (thousand feet board measure)	Cash receipts
1962	545,513	$8,260,379
1963	546,028	8,564,459
1964	742,251	11,478,031
1965	749,691	12,290,867
1966 (estimate)	850,000	13,500,000
1967 (estimate)	850,000	13,500,000

Continuous forest inventory programs are maintained on many of the major timbered reservations. These programs provide volume, growth, mortality, and stocking level data for calculating allowable annual cuts, and for regulating the actual harvests.

Indian participation in the forestry program.—It is Bureau policy to encourage the tribes to make their funds available to finance part of the cost of forest management. In fiscal year 1964, 18 tribal groups participated in funding the forestry program; their contribution amounted to $377,021.

Repayment of appropriated Federal funds.—Under authority of the act of February 14, 1920 (25 U.S.C. 413), as amended, deductions are made from timber sale receipts to cover in whole or in part the cost of forest management. The deductions are deposited in the Treasury, as miscellaneous receipts, or to the appropriate tribal accounts, depending upon the source of expenditures. In fiscal year 1964, the deductions earned for deposit in the Treasury were $951,489. Deductions for deposit in tribal accounts were $154,418.

(*b*) *Rangelands*

Fiscal year 1965, $1,905,222; fiscal year 1966, $1,725,000; fiscal year 1967, $1,711,000; decrease, $14,000.

The estimate for 1967 is $1,711,000, a decrease of $14,000 under 1966. The decrease consists of—

(1) A decrease of $25,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $11,000 for increased pay costs.

Program of work.—The range management program provides for proper conservation and use of 40 million acres of Indian grazing land; the development of management plans for the grazing land of each reservation; the development of range water supplies; the granting of grazing privileges looking toward the highest return consistent with undiminished future use; and the encouragement of Indian use of Indian rangeland. Currently, Indian use is 88 percent of the 40 million acres. In addition, Indians use 4,708,713 acres of non-Indian-owned range.

Management plans provide for the division of the range into practical use units, determination of proper stocking and season of use, and for range improvement and betterment programs to obtain full use of the forage balanced with sustained production. Annual range condition and trend studies and utilization checks are made as the basis for adjustments in stocking rates, season of use, unit boundaries, and for the location of range water developments and other facilities. Provision is made for uniform distribution of livestock on the range to insure proper utilization and to prevent its destruction through localized overgrazing. Range water is increased through the development of deep wells, paved catchment basins, and pipelines in the arid Southwest in support of the range management program. Most Indian reservations are located in principal watershed areas of the Western United States. Proper use of the Indian range is essential in the multiple use concept of watersheds. Well-managed ranges provide excellent habitat for wildlife, encourage recreation development, and stabilize streamflows. In addition, a material contribution is made to a stabilized livestock industry by furnishing 7,009,082 animal unit months of grazing. Range inventories and other technical data indicate an average potential grazing capacity 50 percent greater than the current estimated capacity. This potential can be reached through an understanding and application of the basic principles of range management by the range users over a period of time, and after development of necessary physical range improvements. Assistance is furnished to the Indian tribes in the allocation of

grazing privileges to their members. Grazing privileges not needed for these allocations are advertised and permitted after competitive bidding.

The following table shows the extent and value of the use of Indian range as reflected by data for the calendar year 1964 for the major range areas:

	Animal unit months use	Cash receipts	Grazing value range used without charge	Annual gross value of livestock products from grazing land		
				Indian use	Non-Indian use	Total
Aberdeen	2,348,831	$2,145,936	$421,284	$7,954,053	$7,136,867	$15,090,920
Billings	982,187	1,251,217	312,449	5,083,936	5,131,420	10,215,356
Gallup	2,413,793	6,438	2,522,333	5,791,133	26,087	5,817,220
Phoenix	893,337	128,436	592,078	3,282,810	1,278,557	4,561,367
Portland	306,052	216,184	153,255	1,540,925	2,164,917	3,705,842
Sacramento	64,882	34,631	72,967	296,351	86,071	382,422
Total	7,009,082	3,782,842	4,074,366	23,949,208	15,823,919	39,773,127

2. Fire suppression

Fire suppression:	
Fiscal year 1965 amount available	$419,657
Fiscal year 1966 amount available	140,000
Fiscal year 1967 estimate	140,000
Increase (+) or decrease (−), 1967 compared with 1966:	
Total	--------
Pay cost [1]	--------
Program	--------

[1] To provide for increased pay costs for fiscal year 1966 positions.

Fire suppression.—Fiscal year 1965, $419,657; fiscal year 1966, $140,000; fiscal year 1967, $140,000; "no change."

Program of work

	Calendar years					5-year average
	1960	1961	1962	1963	1964	
Number of fires	1,467	1,629	1,130	1,405	1,072	1,341
Average acres per fire	94	76	59	38	31	62
Area burned (acres):						
Timberlands	25,577	15,379	23,952	9,758	9,560	16,845
Brush and grasslands	113,033	108,679	42,463	43,936	23,802	66,383
Total area burned	138,610	124,058	66,415	53,694	33,362	83,228
Estimated damage	$552,325	$1,179,050	$329,451	$255,594	$203,441	$503,972

A reasonable estimate of fiscal year 1967 fire suppression costs is not possible. The many variables, such as weather conditions, tourism and recreation, the effectiveness of hazard reduction programs, and the effectiveness of prevention, presuppression and suppression programs, have a marked effect on the number, location, and size of fires and the eventual cost of suppression.

Multiple use of the Indian forest has increased at a rapid rate in recent years. Funds have been insufficient to carry out adequate hazard reduction programs with a resultant annual increase in the buildup of flash fuels as well as heavy fuels. The combination of increased forest use and fuel buildup compound the risk of disaster fires.

3. Agricultural and industrial assistance

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Agricultural extension	$1,485,304	$1,762,000	$1,266,900	−$495,100	$5,000	−$500,100
(b) Credit operations	1,456,447	1,648,000	1,584,000	−64,000	12,000	−76,000
(c) Reservation programs	2,312,225	2,474,000	2,426,000	−48,000	18,000	−66,000
(d) Industrial development	685,297	694,000	650,000	−44,000	5,000	−49,000
(e) Housing development	358,136	765,000	1,709,100	944,100	4,000	940,100
Total	6,297,409	7,343,000	7,636,000	293,000	44,000	249,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

(a) *Agricultural extension*

Fiscal year 1965, $1,485,304; fiscal year 1966, $1,762,000; fiscal year 1967, $1,266,900; decrease, $495,100.

The estimate for 1967 is $1,266,900, a decrease of $495,100 under 1966. The decrease consists of:

(1) A decrease of $500,100 due to program adjustment.

(2) An increase of $5,000 for increased pay costs.

Program of work.—This decrease represents a proposed adjustment between programs resulting from the application of the administration's request to look to lower priority programs and to achieve the highest possible manpower utilization. This adjustment is proposed to provide assistance to Indian housing authorities to enable them to take advantage of the Public Housing Administration's program for low-income families which has been adapted to Indians living on reservations.

The fund adjustment in this program will be achieved by an in-depth review and evaluation of the effectiveness of the extension programs conducted for Indian people through the 15-State extension organizations of the land-grant colleges and of the extension programs carried out by Bureau personnel in the States of Alaska, Arizona, and Mississippi. Adjustments on a reduced basis or the discontinuation of extension services through State contracts will be determined by the findings of our review and evaluation. Adjustments in the extension services carried out by Bureau staff will be made on the same basis. In effecting these adjustments the possibility of rearranging and a redistribution of workloads to other staffs closely related to agricultural extension services will be evaluated in order to continue essential extension services to those Indian people whose livelihood and economy is closely allied to agricultural, livestock, and other phases of the extension program.

(b) *Credit operations*

Fiscal year 1965, $1,456,477; fiscal year 1966, $1,648,000; fiscal year 1967, $1,584,000; decrease, $64,000.

The estimate for 1967 is $1,584,000, a decrease of $64,000 under 1966. The decrease consists of:

(1) A decrease of $76,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $12,000 for increased pay costs.

Program of work.—Financing is basic in the program for the development and utilization of Indian resources. Operations are patterned to meet the requirements of expanding Indian participation and self-reliance in business ventures. The objective is to utilize Indian resources and enterprises in a manner that will insure maximum Indian employment, income, and training through management participation.

Activation of the Indian economic development program requires that financing be approached in many different ways. Every industrial, commercial, or business development requires planned financing, whether it is to be operated on an individual, tribal, or cooperative basis, or as a joint venture in association with non-Indian interests. Assistance is required: (1) to seek and obtain financing from private sources; (2) to determine the economic soundness of new ventures; (3) to insure the most businesslike operations; and (4) to minimize dependence upon Federal financing.

The Bureau's credit program requires Indians to exhaust all possible sources of private financing, and to utilize their own funds to finance developments,

before loans by the United States are considered. This is in accordance with the recommendations in the "Report of the Committee on Federal Credit Programs," of February 11, 1963.

(c) *Reservation programs*

Fiscal year 1965, $2,312,225; fiscal year 1966, $2,474,000; fiscal year 1967, $2,426,000; decrease, $48,000.

The estimate for 1967 is $2,426,000, a decrease of $48,000 under 1966. The decrease consists of:

(1) A decrease of $66,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $18,000 for increased pay costs.

Program of work.—The achievement of the major Bureau objectives of economic self-sufficiency, full participation in American life, and equal privileges and responsibilities for Indians requires the preparation and periodic updating of comprehensive reservation programs. Programs are based on past achievements, progress reports and experience, reservation resources and assets, and assessment of employment and human needs. These aims are directed to Indian development under specific reservation conditions and taking advantage of opportunities on the outside. They also take into account the principal economic and social barriers and the lessons of experience, and are designed to furnish continuing guidelines for improvement of operations. They assist tribes in keeping current their own planning and action efforts and selecting undertakings for maximum long-term benefits. Aid is given to tribes in developing their annual budgets and instituting administrative procedures for making maximum beneficial use of their own funds.

On the basis of the comprehensive programs, promising proposals are selected for action or for further economic study. Studies embody feasibility determinations based on analyses, finances, cost-benefit ratios, payout, sources of investment funds, operating capital and credit, adequacy of raw materials, transportation facilities and costs, markets and marketing, manpower requirements and availability, management and operating plans.

When fully developed, the plans encompass programs for economic and social development, land use, and public facility systems, including short- and long-term schedules and proposed financing. Since a substantial backlog of completed technical feasibility studies exists, concentration of effort will be placed on their implementation.

(d) *Industrial development*

Fiscal year 1965, $685,297; fiscal year 1966, $694,000; fiscal year 1967, $650,000; Decrease, $44,000.

The estimate for 1967 is $650,000, a decrease of $44,000 under 1966. The decrease consists of:

(1) A decrease of $49,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $5,000 for increased pay costs.

Program of work.—The Bureau of Indian Affairs will continue to assist in broadening the economic base of Indian reservations and communities through providing Indian people new opportunities for work experiences and training, permanent employment, individual and tribal income. To achieve these ends, light manufacturing plants, commercial and service facilities, and new commercial tourism and recreation enterprises will be encouraged to locate on or near Indian reservations.

Technical assistance and services in the specialized fields of marketing analysis, trade development, and plant operations will be provided an increasing number of enterprises, both tribally and privately owned, located or considering location on or near Indian reservations. Expanded technical services will be provided in effectively implementing individual and community efforts to utilize all new programs (Economic Opportunity Act, Public Works and Economic Development Act, new avenues of private financing and tribal funds being dedicated for industrial development programs) that can accelerate commercial and industrial development.

To achieve accelerated economic growth, continued emphasis will be placed on sufficiently preparing and suitably motivating reservation residents and areas to undertake the planning and establishment of programs of industrial development in its fullest context. Such programs embrace the creation of industrial foundations, dedication of industrial parks, solicitation and negotia-

tion with prospects, the creation of business and service enterprises and the development of commerical recreational and tourism enterprises.

To achieve the goals set forth in this plan, the Bureau will closely coordinate the efforts of Indian tribes, local non-Indian communities, State and county economic development organizations, private businesses, and other Federal, State, local, and private groups and agencies, giving consideration to the overall economic community and the utilization of the total physical and human resources of the areas.

(e) *Housing development*

Fiscal year 1965, $358,136; fiscal year 1966, $765,000; fiscal year 1967, $1,709,100; increase, $944,100.

The estimate for 1967 is $1,709,100, an increase of $944,100 over 1966. The increase consists of:

(1) An increase of $4,000 for increased pay costs.

(2) An increase of $940,100 to provide staff for mutual-help and low-rent housing program.

Need for increase.—It has been estimated that there is a need for 60,000 housing units on Indian reservations. The Bureau has requested that the Public Housing Administration program 10,000 units during the next 5 years. PHA has already earmarked funds for 3,200 units, and Indian tribes have under application to PHA an additional 2,000 units.

Construction superintendents are required for the supervision of each mutual-help project. An adequate staff of housing development officers at the field level to organize the Indians for mutual help, assist the tribal housing authority, and process the documentation required by PHA are also needed.

Program of work.—Under the mutual-help program the family contributes its labor in the construction of the home. The Public Housing Administration provides funds for materials and essential skilled labor. The Bureau, under an agreement with the PHA, provides organizing and supervision services during the design, construction, and management phases. The Bureau, under an agreement with PHA, also has agreed to assist tribal housing authorities in the development and management of conventional low-rent housing projects.

Seventy-three tribal councils have formed housing authorities. Nine hundred mutual-help and conventional low-rent developments are either completed or under construction. Twenty-three hundred are expected to be under construction in fiscal year 1967.

Additional dwelling units are available under the Housing and Urban Development Act of 1965. Oklahoma Indians will be eligible for public housing for the first time as a result of the Oklahoma Legislature's enactment of the Oklahoma Housing Authorities Act. To meet the need and the demand for decent housing it is essential to expand and accelerate the program during fiscal year 1967.

4. Soil and moisture conservation

Soil and moisture conservation:	
Fiscal year 1965 amount available	$5,533,117
Fiscal year 1966 amount available	5,501,000
Fiscal year 1967 estimate	5,283,000
Decrease, 1967 compared with 1966:	
Total	−218,000
Pay cost [1]	35,000
Program	−253,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

Soil and moisture conservation.—Fiscal year 1965, $5,533,117; fiscal year 1966, $5,501,000; fiscal year 1967, $5,283,000; decrease, $218,000.

The estimate for 1967 is $5,283,000, a decrease of $218,000 under 1966. The decrease consists of:

(1) A decrease of $253,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $35,000 for increased pay costs.

Program of work.—The soil and moisture technicians work directly with Indian people in an effort to teach them the advantages of conserving their soil, forage,

and water resources. This close working relationship makes it possible to do a better job of planning for the use and development of these resources. A high percentage of these technicians are members of the local tribe who understand local customs and the need for conservation. These persons are a part of work units which are often located away from agency and area headquarters, so that they are accessible to the Indian, the lessee, and close to the land with which they are concerned. These technicians have the closest possible direct contact with Indians in the area they serve. Conservation measures are designed to fit each set of soil, slope, and erosion condition and are needed to:

(1) correct ravages of erosion and depletion,
(2) protect still productive land against erosion and depletion,
(3) improve productivity of the soil.

The estimate of $5,283,000 will provide for the following major program features:

1. Land use investigations and planning		$1,641,000
2. Application of measures		2,774,000
(a) Soil stabilization and improvement	$1,466,000	
(b) Water management	1,308,000	
3. Operation and maintenance		868,000
Total		5,283,000

During 1967, the program will continue to provide farm, ranch, watershed, and reservation plans for the utilization and development of Indian soil, water, and forage resources. These plans will be based on information provided by soil and range inventories being made as a part of this program.

Emphasis will be placed on continuing the close working relationship with Indian people with specific guidance toward increasing the productive capacity of Indian resources. Greater Indian participation in the watershed protection and flood prevention program as authorized by Public Law 566, 83d Congress, 68 Stat. 666. The value of many Indian farms can be increased by being included in these projects.

The operation and maintenance program will provide for closer compliance checks to assure continued application of planned conservation measures resulting from the expenditure of soil and moisture conservation funds. Each year the cost of operation and maintenance increases because there are more applied practices to maintain.

5. Maintenance of roads

Maintenance of roads:	
Fiscal year 1965 amount available	$3,586,203
Fiscal year 1966 amount available	3,804,000
Fiscal year 1967 estimate	3,891,000
Increase, 1967 compared with 1966:	
Total	87,000
Pay cost [1]	4,000
Program	83,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

Maintenance of roads

Fiscal year 1965, $3,586,203; fiscal year 1966, $3,804,000; fiscal year 1967, $3,891,000; increase, $87,000.

The estimate for 1967 is $3,891,000, an increase of $87,000 over 1966. The increase consists of:

(1) An increase of $4,000 for increased pay costs.
(2) An increase of $83,000 to cover increased wage board costs.

Program of work.—An area budget classification breakdown of the program of work for 1967 follows:

	Total funds	Miles heavy traffic	Amount regular maintenance	Miles light traffic	Occasional maintenance	Amount heavy maintenance	Amount special maintenance	Amount airstrip maintenance
Aberdeen	$581,000	1,521	$504,000	590	$47,000	$15,000	$15,000	
Anadarko	105,000	142	47,000	281	33,000	10,000	15,000	
Billings	422,000	681	257,000	1,098	135,000	20,000	10,000	
Gallup	1,035,000	3,134	873,000	1,738	112,000	20,000	10,000	$20,000
Juneau	40,000	17	7,000	28	4,000	19,000	10,000	
Minneapolis	210,000	395	156,000	271	24,000	15,000	15,000	
Muskogee	111,000	276	85,000			20,000	6,000	
Phoenix	639,000	1,752	454,000	2,867	165,000	10,000	10,000	
Portland	521,000	1,196	341,000	2,188	160,000	10,000	10,000	
Sacramento	110,000	178	71,000	305	19,000	10,000	10,000	
Washington	117,000	76	62,000	77	30,000	15,000	10,000	
Total	3,891,000	9,368	2,857,000	9,443	729,000	164,000	121,000	20,000

(*a*) Regular maintenance, 9,368 miles of heavy traffic roads, $2,857,000; this sum provides for surface repair, blading, snow removal, ditch cleaning, removing rocks, trees, weeds, and maintaining bridges and culverts. Average cost of $304 per mile.

(*b*) Occasional maintenance, 9,443 miles of light traffic roads, $729,000; this sum provides for work required to keep secondary roads and trails open to travel, such as blading, removing slides, filling washouts, removing trees, and occasional shaping. Frequency of this maintenance varies with need and from monthly to not more than once a year on some of the lesser important trails. Average cost of $77 per mile.

(*c*) Heavy maintenance (major restoration), $164,000; this sum provides for reshaping roadbed, resurfacing, and major repairs to bridges and culverts.

(*d*) Special maintenance, $121,000; this sum provides for the repair of major damage caused by storms, fires, floods, etc.

(*e*) Flight strip maintenance, $20,000; this sum provides for surface blading of 20 flight strips which have been constructed in areas for emergency air transportation.

On 169 Indian reservations, in 21 States, there are 18,811 miles of local roads and trails that are not maintained by the States. These roads serve the nontaxable Indian lands, schools, health centers, community centers and as routes of transportation between the Indian home and market or place of employment.

It was necessary for the Federal Government to assume responsibility for the improvement and maintenance of these roads because county road service is not furnished. Generally, there is no local subdivision of State government capable of furnishing this road service on Indian reservations.

The mileage served by this program is a result of a recent survey of the road maintenance needs of the Indian reservations. The heavy traffic roads tabulated for this estimate to receive regular maintenance are the main roads of the reservation, which are mainly school access or schoolbus roads, and the more important schoolbus routes on the secondary roads. The light traffic roads generally include the secondary roads and the unimproved roads and trails into the semi-isolated prairie, mountain or timbered country which are occasionally used by the Indians, and also by Bureau personnel carrying out the duties of the Government as trustee. Work on these light traffic roads may vary from monthly to once a year, or as required, or justified, by the volume of traffic.

A considerable mileage of the system is still low-standard earth surfaced or gravel surfaced. The Bureau system consists mainly of low-standard roads, because on many reservations the local governments are willing to accept the transfer of responsibility for roads improved to adequate standards under the Bureau's road construction program. This transfer of improved roads reduces the mileage of the system but retains an average condition of low standard, which is costly and difficult to maintain.

The road maintenance work covered by this estimate is vital to the people and schoolchildren using the reservation roads; it is essential to the economic development of the reservations which is being accelerated by Bureau programs. The continued success of business enterprises on the reservations and the efficiency of Bureau activities, such as education, farming, and forestry, are dependent upon properly maintained roads. Brief interruptions of road travel, such

as occasionally brought on by blizzards or floods, have revealed the hardships and losses that result when travel is suspended for short periods.

6. Development of Indian arts and crafts

Development of Indian arts and crafts:	
Fiscal year 1965 amount available	$326,000
Fiscal year 1966 amount available	372,000
Fiscal year 1967 estimate	374,000
Increase 1967 compared with 1966:	
Total	2,000
Pay cost [1]	2,000
Program	

[1] To provide for increased pay costs for fiscal year 1966 positions.

Development of Indian arts and crafts

Fiscal year 1965, $326,000; fiscal year 1966, $372,000; fiscal year 1967, $374,000; increase, $2,000.

The estimate for 1967 is $374,000, an increase of $2,000 over 1966. This increase is for pay costs.

Program of work.—The function of the Indian Arts and Crafts Board is to encourage and promote the development and expansion of Indian arts and crafts so as to improve the economic status of the Indian people as well as asssit in preserving a valuable American heritage. The fieldwork of the Indian Arts and Crafts Board is conducted directly with the Indian artists and craftsmen by arts and crafts specialists located in strategic areas throughout the United States; namely, North Carolina, Florida, Oklahoma, South Dakota, Montana, Arizona, New Mexico, Oregon, and Alaska. They work with individuals in developing high standards of workmanship, developing new ideas which have good market potential, assisting in the development of production-marketing centers, and preparing exhibits to stimulate public interest in Indian craftsmanship. While the advice and assistance of the field personnel is available to individual Indian artists and craftsmen, experience has proven that it is through the organization of Indian owned and operated production-sales associations or guilds that the greater number of craftsmen are benefited and the most successful programs developed. The ultimate goal is for these Indian crafts groups to become self-sufficient in the operation and management of their craft organizations. The field staff assist these groups in developing such business practices, including all phases of production, marketing, publicity, and advertising, and in emphasizing the necessity of maintaining high standards of workmanship and design.

The Indian Arts and Crafts Board is also responsible for the operation and management of three museums with rare collections of Indian art and craft: Southern Plains Indian Museum and Craft Center, Anadarko, Okla.; Sioux Indian Museum and Craft Center, Rapid City, S. Dak.; and the Museum of the Plains Indian, Browning, Mont. Here a dual program is carried out; namely, conducting and supervising a museum program as well as assisting Indian artists and craftsmen. These three museums have achieved international recognition and are in the unique position of reaching a public interested in the finest of contemporary Indian crafts.

Within the past year, approximately 15 workshop programs for the Indian crafts people were conducted and have proven to be so successful that it is planned to expand the program and conduct workshops in more areas.

The demand for high quality contemporary Indian arts and crafts has well exceeded the supply, and coordinated information is being developed regarding the artists and craftsmen and their products to be used in directing potential buyers to the sources of supply. This then means there is a great need for strengthening the promotional program of the Indian Arts and Crafts Board, particularly through the three installations already in operation at Anadarko, Okla.; Rapid City, S. Dak.; and Browning, Mont., where exhibitions are being developed to the fullest extent to encourage greater production, orient the buying public, broaden services to the general public, and increase the services to Indian people living in and around these areas.

Much progress has been made in the Board's program in Alaska. The consolidation of its Juneau office with its Sitka office has resulted in the establishment of a demonstration workshop for the employment of native artists and craftsmen.

The Board, in a cooperative venture with the U.S. Park Service, is now housed in the Park Service's newly constructed visitor center in Sitka, where facilities are now available to artists and craftsmen for wood carving, jewelry, lapidary, stone carving, and painting workshops. The new visitor center will lodge extensive displays relating to the culture of the native people and the history of the area.

The Indian Arts and Crafts Board grantee program now in its third year of operation has opened vast opportunities in the development of the finest of Alaskan arts and crafts. Attracting outstanding craftsmen who are producing and developing new techniques and ideas and who work in a variety of media, it is the aim of the program to make these craftsmen self-sufficient, whether they continue to work in crafts on a full-time basis or rely on it only for a supplemental income. These craftsmen have acquired additional skill and competence in design, craftsmanship, quality of products and elementary business procedures. It is anticipated that these craftsmen will return to their villages ready to relay this knowledge to others.

7. Management of Indian trust property

Subactivity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Land management	$5,325,555	$5,563,000	$5,491,000	−$72,000	$41,000	−$113,000
(b) General trustee services	1,092,921	1,107,000	1,096,000	−11,000	8,000	−19,000
(c) Employee compensation payments	137,799	232,000	242,000	10,000	----------	10,000
Total	6,556,275	6,902,000	6,829,000	−73,000	49,000	−122,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

(a) *Land management*

Fiscal year 1965, $5,325,555; fiscal year 1966, $5,563,000; fiscal year 1967, $5,491,000; decrease, $72,000.

The estimate for 1967 is $5,491,000, a decrease of $72,000 under 1966. The decrease consists of:

Real property management

(1) A decrease of $59,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $31,000 for increased pay costs.

Real estate appraisal

(1) A decrease of $54,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $10,000 for increased pay costs.

Program of work.—To the fullest possible extent, real property management will continue to meet the needs of individual Indians and Indian tribes as landowners for requested real estate transactions, such as, surface leases, acquisitions, exchanges, partitions, sales and consolidation of fractionated interests into less complex title patterns. The Bureau will continue to work with the Indian landowners in planning ahead for development of real property resources.

The demand for Indian land for all purposes continues and will grow with the increased needs of the expanding national population.

Emphasis will continue on the development of improved management techniques to achieve higher productivity from the staff. There is a need for development in the Indian landowners of an increased awareness of the importance of property management to the economic life of the Indian community.

During fiscal year 1965, the work of administering surface leases of all kinds and oil and gas and other mineral leases constituted a substantial part of the workload. There were 57,523 leases of all kinds in effect at the close of the year. They produced income (rent, royalty, and bonus) totaling $55,989,000; 4,007,000 acres were under agricultural lease; 5,459,000 acres were under mineral lease. We continue to pursue the objective of reducing the annual carryover of unfinished business; 38,217 real estate cases were completed during the year and 24,000 remained on hand at the close of the year.

Program of work.—To the fullest extent possible real estate appraisal will continue to provide professional real estate appraisals and planning reports to assure a fair and equitable return and optimum use of Indian-owned resources. Fundamental economics developed in the appraisal process indicate that it is imperative to consolidate leases into management units consistent with modern land use methods. The additional income that can be gained from such plottage increment will be of major significance in the relief of poverty conditions of individual Indians.

During fiscal year 1965, the branch of real estate appraisal completed 11,817 appraisal reports on property having a fair market value of $99,778,478. The number of reports prepared is an increase of 1,146 over fiscal year 1964 and reflects improved management and the results of an intensified training program. Even though there was an increase in reports prepared our present staff is able to furnish reports on approximately 30 percent of the total real estate transactions that should be supported by professional value information. Priority has been given to appraisals of properties for sale or exchange. Where a very limited number of rental appraisals have been made the results in increased income to individual Indians and tribes are substantial.

(*b*) *General trustee services*

Fiscal year 1965, $1,092,921; fiscal year 1966, $1,107,000; fiscal year 1967, $1,096,000; decrease, $11,000.

The estimate for 1967 is $1,096,000, a decrease of $11,000 under 1966. The decrease consists of:

(1) A decrease of $19,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $8,000 for increased pay costs.

Program of work.—The Bureau is charged by various laws and regulations with the trust responsibility of accounting for and disbursing individual Indian monies which come into the custody of Bureau officials as a result of administering trust or restricted properties of individual Indians, through per capita payments, judgments, awards, and claims. Indian Service special disbursing agents are designated to carry out these responsibilities.

In addition, trustee management is required for minors and those Indians who are unable to manage their affairs because of the lack of training in business affairs and the difficulties of communication due to inability to speak English. Such management includes the disbursement of funds under a planned program for the care of minors, with portions set aside for investment purposes for future use.

This subactivity also finances positions of field representatives who serve as contact representatives with the Indians at the reservation level and who perform work connected with the activities concerned with administration of trust properties.

(*c*) *Employee compensation payment*

Fiscal year 1965, $137,799; fiscal year 1966, $232,000; fiscal year 1967, $242,000; increase, $10,000.

The estimate for 1967 is $242,000, an increase of $10,000 over 1966.

The increase consists of:

(1) An increase of $10,000 to reimburse employee compensation fund.

Need for increase.—The increase will provide funds to reimburse the employees' compensation fund for payments made on account of the injury or death of employees under the jurisdiction of this agency as required in section 209 of Public Law 86–767.

8. Repair and maintenance of buildings and utilities

Repair and maintenance of buildings and utilities:	
Fiscal year 1965 amount available	$11,769,594
Fiscal year 1966 amount available	12,730,304
Fiscal year 1967 estimate	13,988,000
Increase, 1967 compared with 1966:	
Total	1,257,696
Pay cost [1]	37,000
Program	1,220,696

[1] To provide for increased pay costs for fiscal year 1966 positions.

Repair and maintenance of buildings and utilities

Fiscal year 1965, $11,769,594; fiscal year 1966, $12,730,304: fiscal year 1967, $13,988,000; increase, $1,257,696.

The estimate for 1967 is $13,988,000, an increase of $1,257,696 over 1966. The increase consists of:

(1) A decrease of $353,000 due to program savings resulting from improved manpower utilization and cost reduction actions.
(2) An increase of $37,000 for increased pay costs.
(3) An increase of $253,000 to cover increased wage board costs.
(4) An increase of $1,320,696 for maintenance of new facilities.

Need for increase.—The increase of $1,320,696 is required to provide for routine and recurring repair and maintenance of 2,672,500 square feet of newly constructed buildings and attendant utilities and services, and to meet the normal increased cost of supplies, materials, and equipment.

Cost breakdown for increase of $1,320,696:

Repair and maintenance of newly constructed buildings	$778,696
Repair and maintenance of additional utilities and services	542,000
Total	1,320,696

Program of work.—The repair and maintenance of buildings and utilities is a continuing program. Funds requested are used to provide normal maintenance and repairs to Bureau physical plant facilities located throughout the conterminous United States and Alaska. These facilities include 9,634 individual buildings having a total floor area of 28,903,000 square feet and separate utility systems including the following:

(1) Five hundred and eighty water systems comprising 520 storage tanks having a capacity of 25,200,000 gallons; 540 wells with pneumatic systems, chlorinators, filters, clarifiers, water softeners, sump and settling tanks, sprinkler irrigation systems, fire hydrants and mains; and more than 9,100,000 lineal feet of water distribution systems;

(2) Five hundred sewage systems comprising 260 septic and Imhoff tanks, having a capacity of 2,500,000 gallons; 290 lagoons with a capacity of 22,500,000 gallons, storm sewers, filter beds, lift stations, sumps and pumps, cesspools, and 11,594,000 lineal feet of distribution lines; 75,426 plumbing fixtures including water closets, urinals, tubs, lavatories, sinks, fountains, etc.;

(3) Three thousand two hundred fuel systems comprising 775 liquified petroleum gas systems with a capacity of 4,108,000 gallons and 11,800,000 lineal feet of distribution lines, 2,506 oil systems with a capacity of 14,200,000 gallons and 975,000 lineal feet of distribution lines, 24 coal-storage bunkers with a capacity of 3,585 tons;

(4) Three hundred electrical systems with 260 electrical generators (diesel, gas, steam) with a capacity of 9,156 kilowatts; distribution lines approximately 500 miles in length;

(5) Four hundred and ninety-five communication systems comprised of 30 telephone systems having 900 telephones and 890 miles of distribution lines; and 330 radio systems with 2,218 receiver/transmitters; 341 intercom systems having 3,830 stations;

(6) Three hundred and seventy heating plants (oil fired, gas fired, high pressure) having capacity of 2,140,175,000 British thermal units per hour;

(7) Miscellaneous systems including 296,000 cubic feet of walk-in refrigeration with a capacity of 2,400 tons; 1,700 air-conditioning systems with a capacity of 145,600,000 British thermal units per hour; 545 individual locations having in excess of 45,153 acres of grounds with 27,235 improved acres; 2,268,000 lineal feet of sidewalks, curbs and gutters; 2,213,000 lineal feet of fences and walls; and other items, such as garbage dumps, land fills, air compressors, gasoline storage tanks, railroad sidings, docks, windmills, fire lookout towers, etc.

Commercial facilities are not available to serve the Bureau's isolated locations, therefore, complete services including heat, light, power, water, sewer, garbage, etc. required to operate schools, dormitories, kitchens, dining halls, quarters, office buildings, shops, garages, and other educational and recreational facilities, etc. must be operated and maintained by the Bureau.

Utilities maintained at most locations are equivalent to those of an average community and in many locations are much more extensive due to central plants which provide electrical power, hot water, steam, etc. In addition to normal operating requirements, these systems must be maintained on an uninterrupted 24-hour basis to insure the health and safety of Indian schoolchildren and Bureau personnel. Occupancy of most Bureau facilities on a 24-hour basis places in-

creased loads on plants which accelerates deterioration and requires more than the usual time and expenditures to keep Bureau buildings and utilities in operating conditions.

9. Operation, repair, and maintenance of Indian irrigation system

Operation, repair and maintenance of Indian irrigation systems:	
Fiscal year 1965 amount available	$1,249,812
Fiscal year 1966 amount available	1,280,000
Fiscal year 1967 estimate	1,211,000
Decrease, 1967 compared with 1966:	
Total	−69,000
Pay cost [1]	1,000
Program	−70,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

Operation, repair and maintenance of Indian irrigation systems

Fiscal year 1965, $1,249,812; fiscal year 1966, $1,280,000; fiscal year 1967, $1,211,000; decrease, $69,000.

The estimate for 1967 is $1,211,000, a decrease of $69,000 under 1966. The decrease consists of:

(1) A decrease of $70,000 due to program savings resulting from improved manpower utilization and cost reduction actions.

(2) An increase of $1,000 for increased pay costs.

Program of work.—The estimate of $1,211,000 is to cover annual operation and maintenance charges assessed against Indian owned lands included within various private and public irrigation districts and water user associations, annual contract payments authorized by the Congress; and annual operation and maintenance costs for those projects not included within private or public irrigation districts and water user associations.

There are approximately 300 irrigation systems on various Indian reservations west of the Mississippi River ranging in size from tracts of a few acres such as subsistence garden tracts to major projects of over 100,000 acres.

All collections are deposited in the operation and maintenance receipt account and are available for operating and maintaining the respective projects pursuant to the provisions of the act of August 7, 1946 (60 Stat. 895). These collections include payments by Indian and non-Indian water users and payments made on behalf of Indian water users who are financially unable to pay their assessment for current annual operation and maintenance. Collections from Indian water users for prior year assessments which have previously been paid from reimbursable appropriated funds are deposited directly into the Treasury to the "Miscellaneous receipts" account as a repayment of reimbursable indebtedness. Where non-Indians receive water services from Indian irrigation systems they are required to pay the full per acre cost. The above referred to irrigation systems and projects fall in the following categories:

1. Projects which are economically feasible on the basis that there is a sufficient quantity of water to supply the assessable area. The lands have characteristics which will produce crops under sustained irrigation and have repayment capabilities which will permit landowners and water users as a whole to pay the full annual cost of operating and maintaining the system. The assessment rates on these projects are fixed to return the full operation and maintenance cost. Any unpaid assessment becomes a lien against the land for which the assessment is not paid.

Funds requested for payment of assessments under this category will be used when necessary to pay into the "Collection" account that part of the uncollectible current annual per acre assessment against Indian-owned lands. Funds so paid into the "Collection" account to cover such unpaid assessments become reimbursable debts due the United States.

2. Projects where the repayment capabilities of the land will not permit payment to the full annual operation and maintenance costs. Assessment rates for Indian water users on these projects are based on the ability of the Indian to pay and therefore do not cover the full cost of operation and maintenance. All or any portion of any unpaid assessment becomes a lien against the land for which such assessment is not paid.

Funds requested for payment of costs under this category will be used when necessary to pay into the "Collection" account that part of the annual operation and maintenance cost on Indian-owned lands in excess of the annual assessment

and any part of the uncollectible annual per acre assessment against Indian-owned lands. Funds so paid into the "Collection" account to cover these costs become reimbursable debts due the United States when used to pay all or any part of the annual costs included in the assessment rate. Costs in excess of the assessment rate are nonreimbursable.

3. Irrigated areas, such as subsistence garden tracts and tracts of a few acres which do not represent economical units, but do provide Indian landowners with a means of supplementing their livelihood. Because of the low income of the Indian landowners and water users on these irrigated areas and tracts, it is not feasible from an economic standpoint to assess these lands. Accordingly, the operation and maintenance costs are nonreimbursable and do not become a lien against the lands benefited.

Funds requested for payment of costs under this category will be used when necessary to pay into the "Collection" account the total cost for operation and maintenance of these subsistance garden tracts and irrigated areas, or if no "Collection" account has been established and it is not desirable or proper to establish such an account, the funds will be expended when necessary directly from the appropriation account.

4. Irrigation systems and reservoirs serving Indian-owned lands located within and operated by various private and public irrigation districts and water user associations. Assessments for operation and maintenance of the irrigation systems and reservoirs serving these Indian-owned lands are made by the irrigation district or water-users association embracing and serving such Indian-owned lands.

Funds requested for payment of assessments under this category will be used when necessary to pay into the "Collection" account for payment to private and public irrigation districts and water users associations for operation and maintenance cost assessed for Indian-owned lands included within such irrigation districts and water-users association. Funds used for payment of assessments covering these costs are reimbursable and become debts due the United States except for those payments that are nonreimbursable by legislation.

5. Projects that are operated by this Bureau at no cost to the Indian landowners and water users as provided for under legislation.

Funds requested for payment of assessments under this category will be used when necessary to pay into the "Collection" account appropriated funds for irrigation projects operated by this Bureau at no cost to the Indian water users as required by legislation.

Summary by subactivity

Subactivity	Actual obligations, 1965	Amount available, 1966	Estimate, 1967	Increase (+) or decrease (−)
(a) Annual assessment payment	$128,420	$123,744	$125,978	+$2,234
(b) Annual water payments	40,000	40,000	40,000	
(c) Operation and maintenance of irrigation systems	1,081,392	1,116,256	1,045,022	−71,234
Total	1,249,812	1,280,000	1,211,000	−69,000

Funds required by categories, fiscal year 1967

	Total annual O. & M. cost	Anticipated collections, Indian lands	Total Treasury funds required	
			Reimbursable	Nonreimbursable
Category 1	$2,376,957	$1,627,940	$127,886	
Category 2	790,133	242,703	202,182	$259,444
Category 3	304,641			271,939
Category 4	270,028	93,884	25,800	150,344
Category 5	402,043	76,805		173,405
Total	4,143,802	2,041,332	355,868	855,132
Total estimate			1,211,000	

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$40,959,135	$43,349,304	$44,611,000	$1,261,696
Transferred to "Operating expenses, Public Buildings," General Services Administration (76 Stat. 956)		15,696		−15,696
Unobligated balance lapsing	461,865			
Appropriation	41,421,000	42,796,000	44,611,000	1,815,000
Proposed supplemental due to civilian pay increase (79 Stat. 1111)		569,000		−569,000
Obligations by objects:				
11 Personnel compensation	26,224,119	27,516,000	28,144,000	628,000
12 Personnel benefits	1,925,942	2,302,000	2,402,000	100,000
21 Travel and transportation of persons	1,718,948	1,705,000	1,697,000	−8,000
22 Transportation of things	954,423	984,000	1,004,000	20,000
23 Rents, communications, and utilities	1,036,820	1,037,304	1,068,000	30,696
24 Printing and reproduction	77,453	77,000	77,000	
25 Other services	+2,533,092	2,574,000	2,574,000	
Services performed by other agencies	300,699	301,000	306,000	5,000
26 Supplies and materials	3,928,344	4,736,000	5,481,000	745,000
31 Equipment	1,167,506	1,009,000	1,000,000	−9,000
32 Lands and structures	151,605	152,000	152,000	
33 Investments and loans	23,214	23,000	23,000	
41 Grants, subsidies, and contributions	1,461,116	1,515,000	1,265,000	−250,000
42 Insurance claims and indemnities	13,088			
44 Refunds	882	1,000	1,000	
Subtotal	41,517,251	43,932,304	45,194,000	1,261,696
Deduct quarters and subsistence charges	−558,116	−583,000	−583,000	
Total obligations	40,959,135	43,349,304	44,611,000	1,261,696

Study on Health, Welfare, and Education Needs

Chairman Hayden. Last year the Senate committee proposed that the Bureau of Indian Affairs and the Division of Indian Health study the situation with regard to the health, welfare, and education needs of Indians who have moved away from reservations to cities and towns. The committee has received your report, part I of which will be printed in the record.

(The report follows:)

Joint Report by the Division of Indian Health and the Bureau of Indian Affairs on Indians in Off-Reservation Communities

(January 1966)

GENERAL SUMMARY AND RECOMMENDATIONS

This joint report by the Bureau of Indian Affairs and the Division of Indian Health of the Public Health Service was undertaken in compliance with the instruction of the Senate Committee on Appropriations (S. Rept. 172, April 29, 1965, accompanying H.R. 6767, Interior and related agencies appropriation bill, 1966) to study the health, welfare, and education needs of Indians who have moved away from the reservations to cities and towns, thereby losing their eligibility for Federal services, but who are in need of support until they can achieve social and economic independence.

Indians relocating to the city—unused to urban ways and institutions—frequently need personal counseling and assistance in seeking employment. They often are unaware of the medical, welfare, and other social services available to them and do not understand the requirements which they must fulfill in order to obtain such services. Additionally, staffs of public and voluntary social service organizations sometimes lack personnel who possess firsthand knowledge of

reservation conditions and of the cultural and social backgrounds of the Indians who seek their assistance. Communities with large numbers of relocated Indians often find themselves handicapped, both financially and in terms of experience, in dealing with the social and economic problems created by viture of their Indian populations.

In setting out to do the present study, the BIA and the DIH selected the following communities: Rapid City, Yankton, and Pierre, S. Dak.; Minot, N. Dak.; Sioux City, Iowa; Minneapolis-St. Paul, Minn.; Billings and Great Falls, Mont.; Albuquerque, N. Mex.; Phoenix and Flagstaff, Ariz.; and Reno-Sparks, Nev. An attempt was made to choose communities located at some distance from reservations since needy Indians living in cities and towns at a reservation's edge commonly return to the reservation for brief periods to avail themselves of the Federal services dispensed there. Additionally, those who planned the study tried to select cities and towns of varying sizes and ones which had been known at one time or another during the past decade to have had special problems.

Fieldwork was performed during the fall of 1965 by area office personnel of the two cooperating agencies who conducted interviews with representatives of health, welfare, and educational organizations, both public and private, and wherever possible, with leaders of the local Indian communities. Officials of city and county school systems were asked to supply statistics on the number and percentage of Indian students enrolled. (Frequently, these turned out to be estimates since most schools in the sample did not keep records on enrollment by race.) Also sought was information about available Federal aids, and estimates of the locally met cost, if any, incurred as a result of special problems growing out of the Indian enrollment.

In the study of welfare assistance for relocated Indians, State, county, and city officials were asked to provide information about the number and amount of grants for both Indians and non-Indians receiving aid under the public assistance programs of the Social Security Act, as well as the number and amount of similar grants for general welfare assistance.

Sought in addition to the above was information on the number of indigent Indians authorized and refused welfare medical care, and the number referred to other welfare agencies. Eligibility criteria for Indians and others were also examined. Finally, local welfare authorities were queried concerning whether Indians imposed unusual demands on local services and what they considered the extra cost of these unusual demands to be.

With respect to health, the Division of Indian Health interviewers inquired about needs and services in five specific categories:

(*a*) *Hospitalization.*—Hospitals providing services to Indians were asked how many Indians were provided such services during the period January 1 through June 30, 1965.

Information was requested about the number of hospital admissions, number of outpatient visits, and number of hospital days.

Hospital administrators were also asked whether Indian patients were able to pay for their services and, if not, to provide an estimate of the amount of unpaid bills. Information was requested regarding difficulty in obtaining payment from the local welfare agency for medically indigent Indians and the major unmet hospitalization problems and needs of the Indians in the community.

(*b*) *Medical care services.*—Physicians in the community serving Indian patients were asked to estimate their Indian patient load and to indicate whether these patients were able to pay for their treatment. The physicians were also asked to comment on what they deemed were the major health needs of the Indians in their communities.

(*c*) *Health department services.*—The local health department in each community was asked to describe the preventive and environmental health services provided Indians and non-Indians. In order to evaluate the environmental conditions under which Indians live in the community, local health departments were asked to report whether the Indian population lives in separate communities and, if so, the type of water and waste disposal available to them.

(*d*) *Voluntary health organizations.*—Representatives of recognized voluntary health organizations in the selected communities were interviewed concerning the services provided the Indians and their general experience in obtaining services and the availability of such services for Indians.

(*e*) *Indian leaders.*—Wherever possible, Indian leaders in the community were interviewed. In some communities, however, there was no recognized Indian leadership. Generally, the Indian leaders were asked whether the Indian people were obtaining adequate and needed medical and health services in the community and what, in their opinion, were the major health problems in the community.

GENERAL OBSERVATIONS

Data assembled in the various communities reveal many common elements. In those towns where Indian populations are relatively small, the social and economic needs of the Indians can generally be met without undue strain on local financial resources. In some of the larger cities, notably Minneapolis, where living problems are complex, Indians arriving from rural areas find adjustment quite difficult. When problems of paying rent, buying groceries and obtaining medical care become acute, they turn for aid to relatives and friends as well as social service agencies.

Smaller cities, such as Rapid City, S. Dak., and Great Falls, Mont., which have sizable Indian populations with fairly high percentages of indigency face relatively heavy financial burdens if they expect to cope effectively with the problem.

A summary of general findings with respect to education, welfare, and health is given below:

A. Education.—Where the Indian enrollment is slight, city schools seem to sense no unusual teaching or administrative burdens. However, officials of Minneapolis and St. Paul reported that Indian students produce an additional annual cost of up to $30 each because of truancy problems and frequent movement from one school district to another. Great Falls and Phoenix cited the provision of school lunches and work books as items of additional expense where Indian students are concerned. Albuquerque school officials indicated that teachers sometimes have to assist dormitory dwelling Indian youngsters with such matters as shopping because of the students' lack of familiarity with city life. However, this was cited as an observation, rather than as a complaint. It was noted, however, by Albuquerque officials—as well as those in Flagstaff and Phoenix—that more counselors were needed to assist Indian enrollees. Poor attendance by Indian schoolchildren was reported as a problem nearly everywhere.

Several of the persons interviewed indicated that the Neighborhood Youth Corps program is beginning to have an impact on Indian dropouts and to influence older students to train themselves for employment. This, plus the Elementary and Secondary Education Act and the community action program of the Office of Economic Opportunity, are resources yet to be fully developed as a means of assuring the Indians a better future insofar as education is concerned.

B. Welfare.—As with education, it was often difficult to get exact figures on the number of Indians seeking and obtaining welfare services since many communities do not keep statistics by race.

Information obtained through interviews indicated that welfare needs of Indians in at least one place are not being met partially because of the tendency by local welfare officials to regard Indians as the responsibility of the Federal Government even where they may have resided away from the reservation for many years. Eligibility criteria for Indians and non-Indians were found to be the same—except for the difference cited in the preceding sentence—and it was not established that Indians in any of the cities were being singled out for exclusion. If financial resources of a community are adequate to meet the basic welfare needs of indigents, Indians get their assistance along with others. If these financial resources are inadequate, Indians suffer along with others. In communities such as Rapid City, S. Dak., where Indians constitute a disproportionate share of the indigents, it may at times appear that discrimination against Indians is being practiced, but closer examination of this situation reveals that the same eligibility criteria are applied to Indian applicants as to non-Indians.

Rapid City, S. Dak., and Great Falls, Mont., were two communities which reported that indigent Indians impose unusually heavy demands on local welfare resources.

From the point of view of the Indian going from one city to another, the variable criteria for general assistance create a problem, as does the "warning out" system practiced in Pennington County, S. Dak. Under the latter arrangement, an indigent person may be prevented from gaining legal residence (for purposes of receiving welfare assistance) even though he may live in Pennington County for many years.

C. Medical care and hospitalization.—Indians moving to the communities selected for study are provided with hospitalization and medical services by the Division of Indian Health for a period of 1 year from the day they leave the reservation. These health services are provided to assist an Indian to adjust to the community and to meet his needs until he gains residency in the community. Services provided Indians depend upon the facilities available in the community.

Generally, they are provided with health care in the private community hospitals and by private physicians under the Division's contract medical care program.

For the individual who has resided away from the reservation beyond the 1 year period and lost his Federal eligibility, if he is not financially able to provide for his own medical care, the community may provide health services. In some cases, the community considers the Indian as the responsibility of the Federal Government regardless of time of residency in the community.

The study indicates that relocating Indians, for the most part, does not impose a heavy burden on the available health resources in the community, receiving for the most part the same services and consideration provided other indigent citizens.

The primary basis for complaint against Indians regarding health services is the unpaid bills incurred in the local hspitals and with private physicians. These bills are incurred largely by medically indigent Indians requiring emergency care such as a result of automobile accidents. With the exception of Rapid City, S. Dak., these unpaid bills have not imposed an excessive burden on the local hospitals and private physicians. It is the general impression that the unpaid bills incurred by the Indians are not any greater than those incurred by non-Indians in a similar economic status.

The unpaid bills of the Indians in some communities obtain greater publicity because they are called to the attention of the Public Health Service for payment under the justification that the Indians are wards of the Federal Government. It is widely held that the Federal Government should be financially responsible for the medical care of the medically indigent Indians regardless of where they are located.

It is encouraging to note that most of the hospitals and physicians when asked questions about Indian patients responded that their patients have not been classified on the basis of race or ethnic origin. However, because of this, accurate statistical information was difficult to obtain.

RECOMMENDATIONS

A. Bureau of Indian Affairs

Although education officials cited certain special needs of the Indian students enrolled in their systems, nowhere did Indian enrollment in the public schools studied appear to create insurmountable problems. This is especially true with the availability of new programs administered by the Office of Economic Opportunity and the Office of Education. However, the agency and area education personnel of the Bureau of Indian Affairs will be instructed to work more closely than ever before with local public school officials to acquaint them with the new Federal programs available, and to encourage them to use such programs for the benefit of Indian students.

In the area of social welfare, special problems did appear to be present in certain communities because of a disproportionate number of indigent Indians. However, in most such cases, the Bureau of Indain Affairs believes that some alleviation is in sight through new Federal programs such as those cited above. It would prefer to assist communities in taking advantage of these programs, rather than to extend its present limited social welfare program beyond the reservation borders. However, special consideration could be given in extreme situations.

Of the cities studied only one, Rapid City, S. Dak. (with its Pennington County environs), appeared to fall into the category of a truly exceptional case. However, on the basis of the limited fieldwork undertaken in connection with this study, the Bureau does not propose to move into Pennington County with an elaborate program of Federal assistance to indigent Indians. Rather, it recommends the following:

(*a*) The immediate initiation of discussions between representatives of the Aberdeen, S. Dak., area office of the Bureau of Indian Affairs and officials of Pennington County and Rapid City concerning the need for supplementary Federal assistance to the city and county occasioned by the presence in the area of large numbers of indigent Indian families, together with a joint exploration of the kinds of Federal programs through which such help might be provided. Until the dimensions of the problems are defined more precisely than they have been defined in this study and until all supplementary sources of assistance have been considered, the exact amount of any contribution which might be made by the Bureau of Indian Affairs cannot be estimated. If the Bureau alone were to shoulder the entire unmet financial need, the cost might exceed $200,000.

(*b*) Consideration by representatives of the Aberdeen area office of the feasibility of extending to indigent Indians, recently arrived in Rapid City, the follow-

ing bureau services not now available to them: (1) Adult vocational training; (2) scholarships for higher education; and (3) enrollment in Bureau boarding schools of Indian youngsters from broken homes. The appropriations for these activities being sought for fiscal year 1967 should be adequate to make a start along these lines (limited space in boarding schools will still be a problem) and the experience gained in the first year will provide a basis upon which to estimate the appropriations needed in succeeding fiscal years.

(c) Extension of assistance to officials of Rapid City and Pennington County in developing programs under Public Laws 88–452 (Economic Opportunity Act) and 89–10 (Elementary and Secondary Education Act) from which Indians may benefit.

B. The Division of Indian Health

The study reveals that except for one community (Rapid City) the relocated Indian has not imposed a heavy or serious burden on the available welfare health resources of the communities studied. The relocated Indian, for the most part, receives the same medical and health services and consideration provided non-Indian citizens and when indigent, the Indian and the non-Indian fare alike.

In some communities, close to reservations, it is the prevalent feeling that medically indigent Indians are the responsibility of the Federal Government and that the Federal Government should stand the cost of medical care of Indians, irrespective of whether they have established legal residency in the community.

Unpaid bills incurred by medically indigent Indians in local hospitals and with private physicians are the primary basis for complaints regarding health services to relocated Indians. While most communities have been able to handle this burden without undue difficulty, Rapid City has found it impossible because of the large number of Indians who have relocated, their low socioeconomic state and the lack of opportunity for self-support.

ALTERNATIVES AND RECOMMENDATIONS

The following alternative actions in respect to the problem in Rapid City were considered:

1. That local community hospitals and physicians continue to bear the burden of handling emergency and other medical cases of the medically indigent Indians with very limited welfare assistance from Pennington County. This alternative would continue the present situation in Rapid City and result in little or no relief for the medically indigent relocated Indian family.

2. That the Public Health Service pick up the cost of medical care of the medically indigent Indian, based on the relocated Indian's need and regardless of his residency status, utilizing the Division of Indian Health's contract medical care program.

3. That the Public Health Service establish an outpatient clinic in Rapid City and assume responsibility for total health services to the Indian residents of Sioux addition and its environs in Rapid City under the same conditions and utilizing the same priority system under which services are provided to reservation groups.

The first alternative would mean the continuation of the present situation whereby the indigent Indian residents of Rapid City are without adequate medical services and a heavy burden of unpaid bills is imposed upon local hospitals and physicians who provide emergency care to Indian residents of the community. This situation imposes hardship upon (1) the Indians who need medical care; (2) hospitals and physicians who provide this care; and (3) the community health and welfare resources, including those of the voluntary welfare organizations. It inhibits the Indian family wishing to relocate from the reservation and prevents their progressing to self-sufficiency in the mainstream of American life.

The second alternative, while assuring medical care to all indigent Indians, goes contrary to the custom of placing the responsibility for welfare services to indigents upon the local community in which the individual has established residency. As a result, communities which are now meeting this responsibility for the relocated indigent Indian may be encouraged to withdraw their support and turn the problem over to the Federal Government. It would appear that the advantage of providing for the medical care of this specific group of indigent Indians under this alternative is outweighed by the disadvantage of the Federal Government establishing the precedent that it will assume responsibility for a community's medical indigent residents if the community is unable to fulfull its responsibility.

The third alternative would provide adequate care for the indigent Indians in Rapid City and its environs. With this alternative, the usual program priorities would be applied. As the Indian family becomes economically able to support its own medical care needs, it would be dropped to a lower priority for services from the Federal Government. This alternative promotes the objective of providing services in such a way as to encourage the Indian's becoming self-sufficient.

Adoption of this method which can be accomplished by administrative decision seems to be the best solution of a vexing problem. However, the implementation of this decision requires a sum of $408,000. It would not be feasible to absorb this amount with the resources currently available; hence an additional appropriation of this amount would be necessary.

PUBLIC ASSISTANCE, ELIGIBILITY, AND DEMANDS

Chairman HAYDEN. Would you care to comment on the report at this time?

Mr. NASH. Yes, Mr. Chairman, I would be glad to do so. Pursuant to the committee's request the Division of Indian Health and the Bureau of Indian Affairs made a joint study in the fall of 1965.

We conducted interviews from the area office staffs of our two organizations in the following cities: Rapid City, Yankton, and Pierre, S. Dak.; Minot, N. Dak.; Sioux City, Iowa; Minneapolis and St. Paul in Minnesota; Billings and Great Falls in Montana; Albuquerque in New Mexico; Phoenix and Flagstaff in Arizona; Reno Sparks Colony in Nevada.

Wherever possible, interviews were held with the representatives of local health, welfare, and educational organizations, with officials of city and county school systems, and with local Indian leaders.

We asked about the number and amount of grants for both Indians and non-Indians receiving aid under the public assistance programs. On the health side of the study we asked about eligibility criteria with respect to indigent Indians who might have been refused medical care. We also queried local authorities as to whether Indian people were imposing unusual demands.

In general, Mr. Chairman, we found that, with a few exceptions, the cities were pretty well able to handle the education and the welfare and the health needs, provided there was a favorable ratio between the size of the city and the number of Indian people moving into it.

ASSISTANCE PROGRAMS IN RAPID CITY, S. DAK.

In one particular situation, Rapid City, S. Dak., and to a lesser extent in Great Falls, Mont., we found that the number of Indian people who had taken up residence there was so large in proportion to the size of the community that it really represented costs that they could not handle.

Accordingly, the Indian health division has concluded that they will open up a health center in Rapid City, S. Dak., and this is a fairly expensive matter. My recollection is that that is going to come to about $400,000.

That is not part of our appropriation, Mr. Chairman, and from our standpoint we were very reluctant to come into Rapid City with a full-scale general assistance program when we have some unmet needs on the reservations.

We are, however, going to work much more closely, and that is one of the recommendations of the study, with the community leaders in

Rapid City, making certain that all resources are being used. If a small additional input on our part will improve the situation we will do so.

RELOCATION AND ESTABLISHMENT OF RESIDENCY

Senator YOUNG. May I ask a question?

Mr. NASH. Yes.

Senator YOUNG. There is one problem that has been with us for a long while that I don't think you have really answered.

When an Indian leaves the reservation and goes, say, to some city to work and later becomes unemployed he probably hasn't lived in that city long enough to establish residence to be eligible for financial assistance. He generally returns to the reservation when he needs help.

How do we meet this problem? Personally I think one of the real answers is to let these people obtain work off the reservations and if they need it, provide assistance to them just as if they were on the reservation.

Mr. NASH. Yes.

Senator, under our relocation and adult vocational training program, when we help an Indian person, single or family, to move to a new location we meet their needs until they are fully established and in such a way that they will not become a charge on the local community.

For example, in California, which has a 3-year relief residency requirement, we will meet, if they fall on bad days, 100 percent of the needs for the full 3-year period.

Senator YOUNG. By then they will be eligible for local assistance?

Mr. NASH. Then afterward they are citizens of the State and are eligible. I might say where we combine relocation with adult vocational training there are very few of these people who then are in need of assistance because they are able to get good jobs and hold them. This is a very succesful program.

Senator YOUNG. How long have you had this program?

Mr. NASH. Since 1959.

INAUGURATION OF RELIEF RELOCATION

Senator YOUNG. I mean providing assistance for them for say, 3 years in California until they become eligible for local assistance.

Mr. NASH. Mr. Knodel, we have done that since 1959, have we not?

Mr. KNODEL. With the training aspect, Commissioner, but the direct relocation was inaugurated in 1952.

Senator YOUNG. The program I have particular reference to is the one giving them welfare assistance off the reservation so they don't have to come back to the reservation.

SELF-RELOCATION

Mr. NASH. If the Indian person moves of his own volition—is self-relocated—it is true that we do not then provide that assistance again because we have so many unmet needs on the reservations.

Mr. Rovin, do you want to add anything to that?

Senator YOUNG. Now you are getting to exactly what I am concerned about, a matter of the Indian having to go back to the reservation every time he needs some help.

GUIDED RELOCATION PROGRAM

Mr. ROVIN. Senator, one of our problems there has been that if assistance is given through general assistance while the Indian may be off the reservation, this blocks his acquiring residence or getting assistance in that particular place.

In other words, after being there for a period of time he would then become eligible for assistance from the local government because most of the State laws provide, whatever the residence may be, that you have to be living there without securing assistance from State or Federal sources. The way we have tried to meet that in some way is that, no matter how long he may have been away—he may have been away for several years—if an Indian can't make it and is obliged to return to the reservation there is no residence requirement there at all.

He comes back and we will provide assistance for him there.

Senator YOUNG. In the case of California which Mr. Nash mentioned a minute ago, you don't give them assistance then for the 3-year period or if you do give them assistance then they aren't eligible in California.

Mr. ROVIN. No, this, sir, is not through our assistance program.

Mr. NASH. If I may interpose here a minute, I was trying, Senator Young, to distinguish between the relocation and adult vocational training program where we are responsible for the Indian person leaving home and moving to a new city, and here we undertake to provide him with backup so that he will have the best chance of being successful, including general assistance if he should happen to need it before he has established his residence and is eligible to get it from the community.

If, however, in the same situation a person moves to that city, but not as part of our guided relocation program—he just goes as any other American goes—then we just do not have the means to follow after him and meet his assistance needs. In this case he has to get it from the city the same as anybody else.

VOCATIONAL TRAINING, RELOCATION, AND ASSISTANCE

Senator YOUNG. I think there are two things that are of top importance if we are going to help the Indians.

One of them is the matter we were just discussing, the program to encourage the Indians to leave the reservation and to help take care of them once they leave and help them obtain vocational education.

There is no possible means of making a decent living on the reservations in North Dakota. That is why I am so concerned about a program to encourage and help them to leave the reservation.

Mr. NASH. Our program of adult vocational training accompanied by relocation is expanding all the time, and it is popular and has been very successful. It is doing what the Senator has suggested.

Now our general assistance funds, up to this point at least, have never been adequate for us to do the same thing for those people who are migrating on their own.

Senator YOUNG. I am sure you are making some progress, but I wonder if it is fast enough. I think the population on the reservation is probably at an alltime high.

Mr. NASH. Yes, sir; we are making progress, and it is not fast enough.

Senator YOUNG. Thank you, Mr. Chairman.

HOME DEMONSTRATION PROGRAMS

Chairman HAYDEN. The committee directed that the Bureau of Indian Affairs establish a pilot home demonstration activity on the Rosebud Reservation to provide instruction on cooking and using of surplus food commodities. What were you able to accomplish along this line?

Mr. NASH. I can make a progress report on that, Mr. Chairman, and we have communicated with Senator Mundt on this matter twice.

In the beginning we had a very poor and very small response to this program. The home demonstration agent, Mrs. Esther Fryer, is in charge of this program. Five meetings were held in the communities of White River, Parmelee, Spring Creek, Wood, and St. Francis, but when the program started the response was so minimal that only 6 to 10 somen came, and at St. Francis no one came to the first demonstration.

We worked with the tribal chairman to develop greater interest, but this also was not successful and we are now trying two new approaches which look a little more hopeful.

ROSEBUD-SIOUX RESERVATION

Currently, Mrs. Fryer is training 16 health aids as part of the community action program on the Rosebud-Sioux Reservation. This is an 8-week training program designed around the food services and food preparation. Currently, she is scheduling these demonstrations to coincide with the clinic days held by the field nurse of the Public Health Service so here you have women coming into the clinic in the morning and then they are invited to stay for the food demonstration in the afternoon and it looks as though this is going to work out a little bit better.

FIRE SUPPRESSION

Chairman HAYDEN. As usual your request for fire suppression funds is only $140,000; and you will be expected to request a supplemental appropriation to cover whatever additional is needed. What kind of a fire year have you had this time?

Mr. NASH. Mr. Skarra, do you care to report on the fire year?

Mr. SKARRA. We had a very fortunate fire year in calendar year 1965. We are compiling at the present time the results from the reports from the field for the last calendar year, but preliminary indications are that it was even better than calendar year 1964, which was also a good year on Indian forest lands.

Chairman HAYDEN. How much 1966 supplemental will it be necessary for you to have?

Mr. NASH. For a supplemental we are asking for fire $186,000.

AGRICULTURAL AND INDUSTRIAL ASSISTANCE

Chairman HAYDEN. For agricultural and industrial assistance your fiscal year 1967 budget is $7,636,000, a reduction of $500,100. Where will this decrease under last year's appropriation take place?

Mr. NASH. If the committee approves it will begin to take place on the 1st of July, at the beginning of the fiscal year.

Chairman HAYDEN. And where?

Mr. NASH. It will have to be done mainly, and to some degree in all the States, where we have extension contracts.

The Chairman may recall that in Arizona and Alaska and in part of New Mexico the Bureau does its own extension work with its own employees. Elsewhere we operate through an agreement with the Department of Agriculture and contracts are made with the various State extension services.

This program decrease of a half million dollars is again part of our push on housing. We need superintendents of construction and we need housing development officers. The only place we know where we can get them under the present tight ceiling is by transfer from other activities.

Accordingly, we are proposing to reduce our total extension activity by $500,100.

HOUSING PROGRAM

Chairman HAYDEN. What programs or activities will suffer?

Mr. NASH. The whole extension activity will suffer to some degree. The housing program will gain. We are not in any way opposed to the extension services. It is simply a question of priority of programs. Yes, it will hurt extension, but with the community action programs and the many new things that are coming up through the Office of Economic Opportunity we feel that the extension activity can stand to give up a half million dollars better than any other.

Chairman HAYDEN. If this amount is to be made available to housing program, just what use will be made of it?

Mr. NASH. With this money we will hire superintendents of construction and housing development officers who will work in the mutual aid housing program.

This is a program in which the Public Housing Administration provides the cost of the material for construction; the Indian Health Division provides for the water and the waste; and the Bureau of Indian Affairs provides the supervision and the housing development officers. Then the people who are going to live in the dwelling do the common labor themselves—that is, the unskilled labor, and some semiskilled labor.

Each family puts in about a thousand hours of work on a two-bedroom modern dwelling of simple but adequate construction. There is between $15 and $20 million worth of housing money that has been made available for this purpose by the Public Housing Administration, and by reducing these other two programs we will accelerate the building of these dwellings and make better progress in alleviating the terrible housing conditions on the reservation.

AGRICULTURAL ASSISTANCE LOSS IN 1967

Chairman HAYDEN. Will any tribe lose agriculture assistance in 1967 which it has in 1966?

Mr. NASH. Yes, sir, I am afraid that that will be the case.

Chairman HAYDEN. Which ones and how much?

Mr. NASH. We have sent our queries out to the field to ask them how they would propose to meet this cut. We will have their recommendations. We will send this query out following this hearing, get their recommendations and work it out with the areas in the field in such a way as to do the least damage possible to the extension program.

RESERVATION PLANNING PROGRAMS

Chairman HAYDEN. With respect to funds for reservation programs the amount of $2,426,000, are these programs overall plans affecting each reservation or are they plans which are made as specific problems arise?

Mr. NASH. These are reservation by reservation plans. Mr. Chairman, when the Area Redevelopment Administration was set up they asked for economic development programs by the areas that were applying for aid.

About 2 years ago Secretary Udall met with our superintendents at Santa Fe and at that time he asked for each reservation to develop a 10-year planning report reservation by reservation.

We had at that time in existence a branch that was concerned primarily with the OEDP's, that is, with overall economic development programs for the reservations.

In order to meet the Secretary's request, we have recently enlarged that function, although we have not added either additional money or additional positions, so as to keep the 10-year plans updated and to make live things of them and not just have them sit on the shelves.

That is the Office of Reservation programs and Mr. Officer, Associate Commissioner, is generally in charge of it, if you would like to ask him any questions about it, sir.

Mr. Officer is at the end of the table.

INDUSTRIAL DEVELOPMENT

Mr. OFFICER. Senator Hayden, at the reservation level the individual who is designated the programs officer is the person primarily responsible for working with the Indians in stimulating tribal enterprises, in helping to get industrial projects, and works very closely with our industrial development program generally which does not have people placed at the reservation level.

This is the economic catalyzer, we might say, at the reservation level and we consider at the present time a very important part of our attempt to get economic development going within the reservation.

Chairman HAYDEN. What success have you had?

Mr. OFFICER. We have some pretty good luck, sir.

Chairman HAYDEN. Thank you, sir.

Mr. OFFICER. Both in terms of industry and in terms of tribal enterprises.

Chairman HAYDEN. Are there any Indian reservations for which there are no specific programs?

Mr. OFFICER. Some have been slow in developing their programs, but we have a program of sorts for everyone. Some are in a considerably better stage of development than others.

Chairman HAYDEN. How is your program to encourage industrial development on or near reservations which will be beneficial to the Indians' progressing?

Mr. NASH. We are very pleased with the program. We, of course, would like to move much faster and we would like to get plants that have larger numbers of employees. However, I can say that at the

present time, as a result of industrial development activity, there are 65 plants in operation on the reservations and another 15 under construction, and the 65 that are in operation have 1,800 Indian employees in round numbers. These are jobs that did not exist before these small manufacturers were induced to locate plants on the reservation.

Chairman HAYDEN. What are they making?

Mr. NASH. A very wide variety of things. I have a list here: electronic components, precision gears, food processing, burlap bag renovation, plastic pipe, molding plastic toys, solid state electronic components, archery equipment—this seemed to cause a little laughter a while back because somebody was going to teach the Indians to make bows and arrows, but, as a matter of fact, there is a small plant which is making laminated bows for hunters that want to hunt with bows and arrows and they are employing some Indians to do it—ladies garments, aluminum culverts, furniture frames, tableware and accessories, cedar fencing. It is a very wide variety.

Chairman HAYDEN. It is a very wide variety.

HOUSING DEVELOPMENT ON INDIAN RESERVATIONS

I note your statement that you have asked the Public Housing Administration to program 10,000 units of housing on Indian reservations during the next 5 years. On which reservations and how many units on each reservation have been proposed?

Mr. NASH. That is a rather lengthy statement and we will provide that for the record.

Chairman HAYDEN. Please do that.

(The statement follows:)

The Public Housing Administration had approved and earmarked funds for the construction of a little over 3,000 housing units for Indians under their authorization prior to June 30, 1965. The 3,000 units represent only a very small percentage of the estimated need of 60,000 homes on Indian reservations throughout the country.

With the passage of the Housing and Urban Development Act of 1965 providing for 240,000 housing units over a period of 4 years, the Bureau requested the PHA to earmark 10,000 units for Indian housing. This figure was based on the assumption that many of the tribal housing authorities which have received loans for mutual-help and low-rent programs will apply for more homes. The units presently authorized do not come anywhere near meeting the need on these reservations. In addition there are probably 30 tribes which have taken no action up to this point but which undoubtedly will in the future. In addition, the State of Oklahoma passed enabling legislation to permit Oklahoma Indians to qualify for public housing for the first time.

Since Indian communities have been able to participate in the public housing program only since 1961, although the legislation had been effective for other segments of the population since 1937, and because 9 out of 10 Indian families are living in seriously substandard housing which represents a proportion far greater than other segments of the population, 10,000 units represent a reasonable step toward meeting this need.

It has not been possible to program the 10,000 units for specific reservations because we do not know at this time how much additional expansion will be requested by reservations where programs are presently underway. In addition, there are a number of reservations which have not participated up to this point but which are expected to take positive action in the near future.

INDIAN ARTS AND CRAFTS DEVELOPMENT

Chairman HAYDEN. For development of Indian arts and crafts you ask $374,000, an increase of $2,000 over last year's appropriation.

The increase covers pay costs. Would you indicate the duties and responsibilities of the Bureau of Indian Affairs in the development of Indian arts and crafts?

Mr. NASH. Yes, sir. This is a duty primarily of the Arts and Crafts Board, which is an independent Board operating under its own statute, located in the Interior Department and reporting directly to the Secretary.

The Board consists of five, I think it is, very distinguished people in the field of arts and crafts and they have a general manager. The general manager is responsible for operating the program. We merely do their housekeeping; that is, we are not making the policy. The Board is independent and makes its own policy. They operate, Mr. Chairman, primarily by helping the craftsmen on the reservation get full value for their work.

They set standards. They help introduce new materials. They help form cooperatives and guilds so that the craftsman on the reservation, instead of being an isolated individual just selling his product as best he can, is helped by business methods and practices, group purchasing and group selling.

ARTS AND CRAFTS BOARD STAFF

Chairman HAYDEN. How much staff is devoted to this activity?

Mr. NASH. There are 29 positions in the Arts and Crafts Board and they are located all over the country.

Chairman HAYDEN. Are grants-in-aid made to individual Indians?

Mr. NASH. No, sir; no grants-in-aid to the individual Indian.

Chairman HAYDEN. Senator Bible.

WILD HORSE DAM, DUCK VALLEY IRRIGATION DISTRICT, NEVADA

Senator BIBLE. Mr. Chairman, I appreciate your courtesy in allowing me to ask three or four questions at this time.

Mr. Commissioner, I note in your justifications that you are requesting the sum of $200,000 in this next fiscal year 1967 for the Wild Horse Dam in the Duck Valley Irrigation District of Nevada.

It is indicated this money will be used for design work.

Under date of February 18, 1966, I received a status report from the Bureau which I had requested. The status report sets forth the alternative proposals and concludes with the statement that the Bureau of Reclamation is ready to move forward with the design as soon as someone advises them of the site location and the reservoir elevation.

Would you please inform the committee when these decisions will be made so that if the funds requested are appropriated work can start on this program?

Mr. NASH. Yes, sir.

Senator BIBLE. I don't know if you can answer that without reference. I see you have adequate staff, so maybe someone around here could assist you on that.

Mr. NASH. I would like to answer it generally and then call on Mr. Corke.

Senator BIBLE. All right. Very fine.

Mr. NASH. We are ready to move promptly. The only complication is that the tribal council having an interest in the Skull Creek

location has gone on record as preferring it and not being sure that the location up the canyon is the right one.

They have an interest in the recreation area. The engineers tell me that this is simply not practical and that the right place to reconstruct this dam, which, as the Senator knows, is in a damaged condition——

Senator BIBLE. There is no question about the need?

Mr. NASH. Or the location, either one, sir; and we will simply have to go ahead in the location in Wild Horse Canyon and make the best explanations we can to the tribal council.

SITE LOCATION

Senator BIBLE. What you are telling me then, Commissioner Nash, is that the actual site location has been made?

Mr. NASH. Has been chosen and we will go ahead——

Senator BIBLE. At that site?

Mr. NASH. At that site.

Senator BIBLE. Will you supply that for the record descriptionwise?

Mr. NASH. Yes, sir. It is just below where the existing dam is.

Senator BIBLE. How much below?

Mr. NASH. Mr. Corke?

Mr. CORKE. About half a mile.

Senator BIBLE. About a half mile below. I think this is what you originally told us as to where you were going to locate, about a half mile downstream from the present damaged dam.

Mr. NASH. Yes, sir.

BATTLE MOUNTAIN INDIAN COLONY

Senator BIBLE. Thank you very much.

Now, a second question. I have been in touch with Mr. Baldwin, the Superintendent of the Nevada Indian Agency at Stewart, Nev., relative to conditions at Battle Mountain Indian Colony.

Under date of February 1, 1966, Mr. Baldwin furnished me with quite a lengthy report of what improvements were intended to be made. I have no doubt that Mr. Baldwin will carry through on his plans provided he has the full support of his superiors.

Therefore, my reason for raising the matter at this time is to invite that support, Mr. Chairman, and I request that my exchange of correspondence between the chairman of the Lander County Board of Commissioners and Mr. Baldwin be made a part of the record at this point.

Chairman HAYDEN. Without objection, that will be done.

(The correspondence follows:)

FEBRUARY 17, 1966.

Mr. LEROY A. STRESHLEY,
Chairman, Lander County Board of County Commissioners,
Austin, Nev.

DEAR MR. STRESHLEY: Supplementing my letter of January 20, I am enclosing a letter received from Mr. Dale Baldwin, Superintendent of the Nevada Iudian Agency at Stewart, outlining the programs being considered for the Battle Mountain colony. It is self-explanatory.

I hope this information will help you is your efforts to provide aid to the Indians in Lander County. Please be assured of my support at this level for all programs of assistance to Nevada Indians.

Cordially,

ALAN BIBLE.

DEPARTMENT OF THE INTERIOR,
BUREAU OF INDIAN AFFAIRS,
NEVADA INDIAN AGENCY,
Stewart, Nev., February 1, 1966.

Hon. ALAN BIBLE,
U.S. Senate, Washington, D.C.

DEAR SENATOR BIBLE: This letter is in reply to your inquiry of January 20, 1966, in which you request a report on programs for the Battle Mountain Indian colony.

Indian colonies such as the one at Battle Mountain are generally situated on small parcels of land and many of the Bureau programs are not adaptable. The population of these colonies is made up of Indian people who have chosen to establish residence in an urban environment. The people have chosen to locate in these colonies in order that they might avail themselves of the facilities and opportunities generally provided by such communities, and to derive their livelihood there rather than on the reservation for which Bureau programs are primarily directed.

The programs for the colonies are generally the community improvement type programs. They are programs in which we encourage the people to do for themselves, and for which appropriations are not available.

A factor which hinders progress at Battle Mountain colony is the absence of a duly elected governing body which can represent the people. We are presently working with the various groups of Western Shoshone Indians, including the Battle Mountain colony, in an effort to bring about an adequate governmental organization. Once this organization has been achieved there will be an organization with which the Bureau of Indian Affairs, the U.S. Public Health Service, and various State, county, and local organizations can communicate in order to develop and more effectively carry out programs of mutual concern. We are hopeful that an acceptable plan of governmental organization can be presented for approval by the Secretary of the Interior in the very near future.

Paving of the roads in all Indian colonies in Nevada is planned. Our schedule calls for the paving of the streets in Battle Mountain colony, funds permitting, in calendar year 1967. We propose to do work around the colony this spring or summer to place the streets and roads in better condition until the more permanent measures can be taken.

We realize that the condition of some of the houses in the Battle Mountain colony leaves much to be desired. When the organizational problems have been worked out the people may apply for assistance in housing betterment under programs of the Public Housing Administration with Bureau of Indian Affairs and Public Health Service cooperating. We are not encouraged that the present mutual help housing program can be adapted to colonies with such small populations. For the most part, the houses at Battle Mountain colony were constructed about 30 years ago and ownership was turned over to the tribe. As in any community, rehabilitation and improvement are responsibilities of the occupants and/or owners. However, we have had made available to us some paint which we will give to the members of the colony for use on their buildings.

During fiscal year 1962 construction of a community water supply and individual septic tanks was undertaken at the colony by the U.S. Public Health Service under the provisions of Public Law 86-121.

Our employment assistance program is available to the people of the Battle Mountain colony as it is to all the other Indian people of our jurisdiction. Services have been made available to all eligible and interested individuals on a continuing basis. As a result of this program there are presently residents from the Battle Mountain colony working in Oakland and Los Angeles.

The children from the colony attend the Lander County public schools. The Bureau of Indian Affairs has a program wherein qualified high school graduates may receive educational grants for higher education at nonsectarian schools. For those not qualified for this program, educational loans and working scholarships may be available.

While no final plans have been made, the possibility of establishing a trailer park of high quality as a commercial enterprise on colony land has been discussed. This development would increase tribal community funds to carry out community improvement projects.

We hope that by working with the Indian people we might jointly arrive at other worthwhile methods which will increase the revenue to the colony and enable them to improve their standard of living.

We acknowledge that because of the long distance to Battle Mountain from our headquarters at both Stewart and Owyhee, we have concentrated our efforts in working directly with the Indian residents of the colony and may have not made adequate contact with other interested persons and groups. For that we are sorry, and will in the near future have representatives make better contacts with the board of county commissioners. We shall try to bring together, as well tribal leadership with county leadership, in order that new resources might be encouraged to meet needs that usual Federal programs do not supply.

Sincerely yours,

DALE M. BALDWIN, *Superintendent.*

JANUARY 20, 1966.

Mr. LEROY A. STRESHLEY,
Chairman, Lander County Board of County Commissioners, Austin, Nev.

DEAR MR. STRESHLEY: This will acknowledge and thank you for your letter of January 12, which I received on the 17th.

I have requested from Mr. Dale M. Baldwin, at the Nevada Indian Agency at Stewart, a report on plans for improvements at the Battle Mountain Indian colony. I will be in touch with you again as soon as his report arrives.

It would be helpful to me if you would furnish me a more detailed report on existing problems at the colony. You may be assured that I will do all I can, in cooperation with the Nevada Indian Agency, to facilitate needed improvements at the Battle Mountain colony.

Cordially,

ALAN BIBLE.

JANUARY 20, 1966.

Mr. DALE M. BALDWIN,
Nevada Indian Agency, Stewart, Nev.

DEAR MR. BALDWIN: I have received a letter from Mr. Leroy A. Streshley, chairman of the Lander County Board of County Commissioners, complaining of conditions at the Battle Mountain Indian colony. I would appreciate a report on your plans for the Battle Mountain colony. I have also requested from Mr. Streshley a more detailed report on the problems involved.

Cordially,

ALAN BIBLE.

LANDER COUNTY BOARD OF COUNTY COMMISSIONERS
Austin, Nev., January 12, 1966.

Senator ALAN BIBLE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR: We noted that several Indian colonies in the State of Nevada were visited by representatives of the Bureau of Indian Affairs a few months ago. We also noted that the Indian colony in Battle Mountain was ignored.

On January 20, 1965, after a request from the Lander County Board of County Commissioners we had a visit from the Nevada Indian Agency, Stewart, Nev. At that time we were assured of some increase in services to the Battle Mountain colony.

The condition of the premises of the colony at Battle Mountain is a disgrace. The buildings need painting, repaired, and completely rehabilitated. The fact that the colony is located on U.S. Highway 40, and is witnessed by all the people traveling on this highway forcibly calls to their attention the policies maintained by the Bureau of Indian Affairs. If there was ever an example of abject poverty and complete lack of responsibility to the needs of citizens it is here, and condoned by the U.S. Department of the Interior.

We know that you would wish this called to your attention and earnestly request that some program be initiated to alleviate this deplorable situation.

Yours very respectfully,

LEROY A. STRESHLEY, *Chairman.*

HOME IMPROVEMENT AND COMMUNITY CENTER

Senator BIBLE. And I would be interested in hearing any comments that you might have, Commissioner Nash, on this particular problem and if you don't have this immediately at your fingertips would you furnish it for the record?

Mr. NASH. I think we can go ahead with it right now, sir, and also provide more for the record if the Senator wishes.

Senator BIBLE. Yes; very fine. This is a rather pathetic Indian colony. We have a number of them, unfortunately, in Nevada, but this is one of the worst.

Mr. NASH. There are about a hundred residents at the Battle Mountain Indian colony and, as small as they are, they have developed one of these 10-year planning reports which we spoke about earlier and their plan calls for home improvement, for new home construction, and for a community center.

COMMUNITY DEVELOPMENT WORKERS

Federal Highway No. 40, is apparently about to be rebuilt and we will do everything we know how to see to it that some of these people get employed on it. There is a labor force of 29 persons and 6 of them are unemployed.

The problem of doing something for a small colony of this size is the general problem of our forces being spread as thin as they are in the State of Nevada. We would like to have a resident community development worker in every one of these colonies and it is possible, with the growth of the Office of Economic Opportunity programs, that that might come to pass. I think this is quite possibly the best help that these communities could get and we will support it, believe me.

PYRAMID LAKE RECREATIONAL FACILITIES

Senator BIBLE. I appreciate that comment and the testimony you have given, Commissioner Nash.

On a third problem, and it is one that directly I think has been under the supervision of Mr. Fryer and I don't see him around this morning.

Mr. NASH. Mr. Fryer was not able to come with us this morning.

Senator BIBLE. He wrote me the day before yesterday and transmitted a report received from the Phoenix area office on a problem which I have discussed with you personally a number of times and that is the status of bids for recreational facilities at Pyramid Lake. It was a very full report and I thought generally a very good report, but it laid emphasis on the fact that the lack of travel funds available to your Bureau personnel to personally contact companies or groups who might be interested was one of the deterrents in moving this forward.

This seems to be on dead center and we can't seem to get anything operational as far as Pyramid is concerned, and I know you have firsthand knowledge of it and I am wondering if there is any relief that can be afforded in this regard.

Mr. NASH. This is a high priority program and the Senator and I have discussed this on a number of occasions. If travel funds are what are standing in the way we will take them away from something else and put them on this.

Senator BIBLE. I am glad to hear that because this was a report that Mr. Fryer furnished to me that came to him from Phoenix and they said, "Well, we could have done a better job. Maybe we could have secured a concession near Pyramid Lake except we didn't have the money to go out and sell the project," and I think this has great possibility, but it just doesn't seem to get anywhere.

PROPOSALS RESULTING FROM ADVERTISING

Mr. NASH. As the Senator knows from my previous discussions with him, the last time we advertised there were four or five proposals that came in. Technically only one of them was a bid.

The tribe rejected this one, but among the other proposals there is some pretty live interest and we will continue working with them. The tribe is very anxious that negotiations continue and that they not be stopped just because these proposals didn't qualify technically as bids. We are continuing these negotiations. I think despite this limitation of travel funds that there are some live prospects there and I think something is going to happen.

Senator BIBLE. Do you have any timetable on it? That is a difficult question, I know.

TURNING PROPOSALS INTO CONTRACTS

Mr. NASH. This is a difficult question to answer. I would say if we do not get some active interest with some of the proposals turning into negotiated contracts and where we can see the color of some money, that we should readvertise, and I would not wait very many months.

Senator BIBLE. Talking in terms of 3 or 4 months, something like this?

Mr. NASH. Yes, sir.

Senator BIBLE. This report also indicated that this wasn't the time of the year to pursue this most intensely. The best time of the year was the spring, May and June. Because of weather conditions and the areas being more attractive at that time, there should be an all-out campaign in those particular months. I can appreciate that.

REDUCTION IN SOIL AND MOISTURE CONSERVATION FUNDS

I have one last question, Mr. Chairman, and this can be furnished for the record.

In your justifications relative to Nevada, I notice that practically all of your items are kept at about the same level as last year, fiscal 1966, but I do note a cutback in your resource management, your soil and moisture conservation.

The reduction isn't too big a reduction, but it is a reduction of $33,200 on resource management—soil and moisture.

Could you indicate to me why the item is being reduced?

Mr. NASH. Yes. I will tell you what it is and then we could perhaps submit the details for the record.

Chairman HAYDEN. You may do that.

Mr. NASH. This is that particular activity's share of the reduction in costs that we voluntarily entered into and which I referred to earlier in my testimony to the chairman. We agreed voluntarily to

reduce 450 positions and save $3,150,000 in salaries over 2 fiscal years, 1966 and 1967. It is a cost reduction program that we entered into, and in order to be evenhanded about it as far as the activities were concerned, every activity was asked to take a small share. This happens to be the share that was assigned to this activity in the State of Nevada.

(The statement follows:)

REDUCTION OF $33,200 IN SMC FUNDS FOR NEVADA IN 1967

Even though these funds have been cut Bureau-wide for 3 consecutive years, Nevada is to receive approximately the same as they did at the beginning of fiscal year 1966.

We did allot Nevada $35,000 to build a lake at Duck Valley later in fiscal year 1966. This $35,000 financed a nonrecurring type of work.

COST REDUCTION PERSONNEL PROGRAM

Senator BIBLE. And this relates to a cutback in personnel?

Mr. NASH. Yes, sir, not to anything else.

Senator BIBLE. Thank you, Mr. Chairman.

Chairman HAYDEN. Senator McGee, have you any questions?

Senator MCGEE. I think I will suspend my questions and just submit them, Mr. Chairman. I find it difficult to compete with the galaxy of names like Wild Horse Dam, and Duck Creek, and Battle Mountain. I would rather wait until that cools off before I pose my problems.

Senator BIBLE. We are a very colorful State, Mr. Chairman.

WIND RIVER, WYO.

Senator MCGEE. The best I can do is offer Wind River and that is what I wanted to talk about, but let me submit these short statements with questions attached to each and perhaps they can be made a part of the record. It will serve our purposes here and not take up the time of the committee. I would like just to go ahead and proceed with the rest of the testimony.

Chairman HAYDEN. That may be done.

Mr. NASH. We will supply the answers promptly, sir.

(The questions and answers follow:)

Question. Mr. Commissioner, it was with great concern that I learned that some programs which have been carried on by the Bureau of Indian Affairs by contract with the Agriculture Extension Service of several States are being placed in jeopardy as a result of budget limitations. In my own State of Wyoming a contract which you have had for several years with the Extension Service is being threatened because of lack of funds for the forthcoming fiscal year. While this has been a modest program involving only about $30,000 per year, it has been a most successful one from my point of view. This program is showing some results in the low-income families within the Indian tribes primarily in the field of agriculture and home economics.

First, I would like to ask you if you share my views that this program has been beneficial and worth while?

Answer. Yes, Senator, I feel this program is beneficial and worth while in those areas you mention as well as being extremely beneficial to the Indian youth who participate in 4–H and other youth programs.

Question. Did the Bureau request money in its fiscal year 1967 budget to allow it to carry on such programs as the one I have discussed in Wyoming? If so, what happened to the request and at what stage of the budget process was this done?

Answer. Yes, sir. The initial request to fund the extension activities came from the field and would have provided a total of $3,500,000 for both the Bureau of Indian Affairs direct extension program and the contract extension program. The Division of Economic Development of the Bureau of Indian Affairs felt it could allow only $2,665,000.

A request to fund the housing program at a higher level was sought from the Interior Department Budget Review Task Force. Recognizing the urgent need to improve Indian housing, the task force agreed to the increase but require the Bureau to absorb it.

At this point a decision was made within the Bureau of Indian Affairs, was submitted to the Department and ultimately to the Bureau of the Budget to reduce the extension activity $500,000 below the 1966 level to help fund a higher priority program (Indian housing) and still remain within the ceilings imposed on us with respect to both money and personnel.

Question. If this committee and the Congress see fit to restore the funds that were requested for this purpose and that were deleted, would the Bureau be in a position to go forward with these various extension contracts?

Answer. Yes, sir.

Question. What additional amounts, over and above what is requested in your budget which is presently before this committee, could be effectively and efficiently used for this purpose in fiscal year 1967?

Answer. The restoration of $500,100 would restore the extension program to the 1966 level.

Any amount over that figure would be used to increase some contracts where more staff is needed to work with Indian people. This would also be used to enter into contracts with two States which have requested contracts that have none.

Minnesota	$20,000	Additional people	2
Idaho	10,000	Additional person	1
Washington	20,000	Additional people	2
New Mexico	20,000	Additional people	2
Alaska	40,000	Additional people	2
Oklahoma	20,000	Additional people	2
Total	130,000	Total	11

There is a great need to increase the Bureau of Indian Affairs extension services to the Indians of Arizona, New Mexico, and Mississippi. More impetus could be given to the reindeer program in Alaska by a planned budget for predator control work. At this time, the extension program funds are used to enforce fish trap regulations at Metlakatla, Alaska, and to reimburse the Fish and Wildlife Service for the use of one man and one airplane for predator control work.

Alaska	$65,000	Additional people	3
Arizona	20,000	Additional people	2
New Mexico	40,000	Additional people	4
Mississippi	25,000	Additional person	1
Total	150,000	Total	10

The total amount that could be effectively used over the 1966 budget level would be $280,000 or a total 1967 appropriation of $2,047,100.

Question. Mr. Commissioner, on page 602 of the proposed 1967 budget in reference to an appropriation of tribal funds for several enumerated purposes including the acquisition of land, title of which is to be taken in the name of the United States in trust for the tribes, it is provided that no part of such appropriation may be used for the acquisition of land or water rights in Nevada, Oregon, Washington, or Wyoming if such acquisition would result in such property being exempted from local taxation.

Would you comment on the history and background of this restriction and what circumstances gave rise to its being included in the appropriations bill each year. Do you know if it has served to prevent the acquisition of any properties which would have been beneficial to the tribes?

Do you feel that it is necessary or beneficial to have this restrictive language retained in this bill this year?

Answer. The history on restrictions, in one form or another, against the use of tribal funds for the acquisition of lands dates back many years. For instance, as far back as 1948 when a restriction was included which prohibited the use of tribal funds for the purchase of land in the States of Montana, Nevada, Oregon,

South Dakota, and Washington. The provision that is proposed for fiscal year 1967 has been carried in the same form in appropriation acts since fiscal year 1952. The main reason for the inclusion of this provision is to prohibit the purchase of lands by the tribes and placing title to the land in a trust status and thereby removing the land from State and local tax rolls. We do not recall any specific instance where this provision has prevented the acquisition of any properties which would have been beneficial to the tribes. However, several tribes have obtained special legislative relief from the restrictive language.

So far as the Bureau of Indian Affairs and the Indian tribes are concerned, we do not feel that this restriction is necessary or beneficial; however, some of the States and local governments might take a different view of this matter.

CONSTRUCTION

Chairman HAYDEN. For construction in fiscal year 1967 your budget is $57,164,000, an increase of over $22 million above the amount appropriated last year. The justification for this estimate will be placed in the record.

(The justification follows:)

Appropriation, 1966		$35, 151, 000
Transferred to General Services Administration (76 Stat. 956)		−33, 854
Appropriation (adjusted)		35, 117, 146
Unobligated balance from prior years		21, 424, 512
Total available for obligation		56, 541, 658
Decreases:		
Buildings and utilities	$41, 555, 266	
Irrigation systems	14, 982, 831	
Land acquisition	3, 561	56, 541, 658
Subtotal		
Increases:		
Buildings and utilities	$46, 715, 000	
Irrigation systems	10, 569, 000	
Less savings resulting from improved manpower utilization and program adjustments	−120, 000	57, 164, 000
Budget estimate 1967		57, 164, 000

Analysis by activities

Activity	Fiscal year 1966, amount available	Fiscal year 1967			Total available, 1967, compared to total available, 1966
		Unobligated balance from prior year	Budget estimate	Estimated total available	
1. Buildings and utilities	$41, 555, 266		$46, 664, 000	$46, 664, 000	+$5, 108, 734
2. Irrigation systems	14, 982, 831		10, 500, 000	10, 500, 000	−4, 482, 831
3. Land acquisition	3, 561				−3, 561
Total	56, 541, 658		57, 164, 000	57, 164, 000	+622, 342

1. BUILDINGS AND UTILITIES, $46,664,000

Construction of facilities.—This estimate of $46,664,000 includes a decrease of $51,000 due to program savings resulting from improved manpower utilization and program adjustments.

This estimate includes funds for the construction of 2 new 1,020-pupil high schools on the Navajo Reservation and for the expansion of the Mount Edgecumbe High School in Alaska. In addition, planning funds are included for the expansion and replacement of the present old facilities at the Albuquerque Indian

School and for 2 more 1,020-pupil high schools at locations to be selected on the Navajo Reservation. The need for additional high school seats is of the utmost importance, thus the emphasis in this estimate for these spaces. The needs of an increasing school-age population are provided for through new construction, the replacement of facilities where unsafe conditions exist, and the expansion and replacement of obsolete school facilities.

In addition to the need for these school facilities, this estimate included funds for the construction of employee housing, for urgently needed gas, water, and sanitary facilities, and for the advance planning of other additional large school projects.

NEW CONSTRUCTION

Buildings and utilities construction program, fiscal year 1967—Summary of projects by States

	Estimated cost
Alaska:	
Akiachak Day School	$914,000
Barrow gas line	490,000
Chalkyitsik Day School	278,000
Kodiak-Aleutian Vocational School	2,876,000
Kotzebue Elementary School addition	250,000
Mount Edgecumbe High School (I)	7,369,000
Newhalen Day School	253,000
Toksook Bay Day School	248,000
Total, Alaska	12,678,000
Arizona:	
Gray Hill High School	8,930,000
John F. Kennedy Day School	444,000
Many Farms High School	8,930,000
Navajo High School (advance plan)	350,000
Rock Point Elementary School	2,400,000
Santa Rosa Boarding and Day School	2,573,000
Total, Arizona	23,627,000
California: Sherman Institute facilites (advance plan)	90,000
Kansas: Haskell Institute Shops (advance plan)	75,000
New Mexico:	
Albuquerque School (advance plan)	700,000
Institute of American Indian Arts (advance plan)	55,000
Navajo High School (advance plan)	350,000
Wingate Elementary School kitchen and dining hall (advance plan)	15,000
Total, New Mexico	1,120,000
North Dakota: Twin Buttes water system	232,000
Oklahoma:	
Carter Seminary	893,000
Eufaula Boarding School (advance plan)	37,000
Total, Oklahoma	930,000
South Dakota:	
Pierre School facilities (advance plan)	60,000
Porcupine Day School	1,352,000
Total, South Dakota	1,412,000
Bureauwide:	
Quarters, various	700,000
Water exploration	300,000
Advance planning	500,000
Total, new construction	41,664,000
Major alterations and improvements	5,000,000
Grand total	46,664,000

Quarters, various, Bureau-wide, $700,000

The availability of housing for employees at most agency and school locations is one of the most critical situations facing the Bureau. Many, indeed most, of the agencies and schools being operated by the Bureau are located in isolated areas at considerable distances from urban centers. Because of these distances from cities and towns, there are few, if any, rental houses or salable houses available for employees. All types of accommodations are resorted to in order to provide employees with some form of shelter. Many are unsatisfactory and as a result, it is most difficult to recruit and retain competent employees. The lack of adequate housing is one major factor contributing to a large employee turnover. The funds proposed will construct approximately 31 houses to relieve the most critical housing situations.

Locations and housing proposed.—Blackfeet, Mont., four 3-bedroom quarters; Mescalero, N. Mex., five 3-bedroom quarters; Warm Springs, Oreg., three 2-bedroom and three 3-bedroom quarters; Cheyenne River, S. Dak., ten 3-bedroom quarters; and Crownpoint, N. Mex., four 3-bedroom and two 2-bedroom quarters.

Estimated cost:

Building construction	$550,000
Utilities and site improvements	110,000
Engineering plans and surveys	40,000
Total	700,000

Water exploration and development, $300,000

In planning for Bureau facilities, it is essential that the availability of water be known. In the arid regions of the Southwest United States, and in the permafrost regions of Alaska where water is scarce, and where an adequate supply of potable water is at times unavailable, an advance determination must be made in order to locate plant facilities. Water exploration and testing work must be carried on before any extensive planning of future construction projects is undertaken. Funds are requested for conducting investigations, drilling test wells, and performing other exploratory work at locations where schools and other facilities are proposed for construction, but where the water supply is not known.

Estimated cost:

Exploration work	$285,000
Engineering plans and surveys	15,000
Total	300,000

Advance planning, Bureau-wide, $500,000

An expanded advance planning program for future projects is essential to the development and administration of a sound construction program of the magnitude needed by the Bureau to provide adequate classroom spaces for the ever-increasing number of Indian children. The preparation of advance planning programs for schools and related facilities will permit the Bureau to reach logical conclusions regarding the type of program needed at each location, and to design the plant facilities to satisfy these needs. The advance planning of projects permits the preparation of preliminary and working drawings, specifications, and cost estimates for these projects. In this way, construction projects can be started and completed in the shortest period of time.

Major alterations and improvements—Bureau-wide, $5,000,000

The major alterations and improvements program is designed to: (*a*) correct unsafe and unsanitary conditions in Bureau facilities which are to be continued in use for a period of at least 10 years; (*b*) correct functional deficiencies in existing Bureau facilities because of changing program requirements, technological advances, etc., and (*c*) the modernization of obsolete facilities in existing plants. Since the 1959 safety survey, high priority has been given to the correction of unsafe and unsanitary conditions with primary emphasis given to conditions existing in school and dormitory facilities. Funds for new construction, have been used to the extent possible to correct and eliminate the major deficiencies as reported in the 1959 survey. Some of these deficiencies, however, still remain to be corrected. This program does not include the correction of deficiencies in buildings which have been scheduled for replacement under the construction program.

1. *Correction of unsafe and unsanitary conditions.*—This category includes items of work falling within the major alterations and improvement program based on the criteria established in 1959 safety survey, such as, enclose open stair wells;

provide adequate fire exits and escapes; remodel unsanitary kitchens, toileting, etc.; eliminate structural deficiencies; replace unsafe wiring and electrical equipment; correct by replacing unsanitary sewer and water treatment, storage and disposal facilities, etc. The total program for fiscal year 1967 is $2,400,000.

2. *Correction of functional deficiencies.*—This category includes items of work falling within the major alterations and improvement program to overcome functional deficiencies, such as poor arrangement of rooms; inadequate or limited spaces; structural and utility changes to accommodate the replacement of deficient equipment, where required in existing facilities; expansion of sewer, water, electrical, communications, and other utilities; construction of ice cellars; replacing chemical toileting with modern toilet facilities; providing heated vehicle storage space in northern zones; providing additional office space for expanding or new activities within existing office buildings; converting heating plants to promote operation efficiencies; construction of garbage and refuse disposal facilities and work of a similar nature. The total program for fiscal year 1967 is $2,280,000.

3. *Modernization of existing facilities.*—Work under this category consists of the modernization of existing facilities scheduled for use for 10 or more years, including installation of modern kitchens, bathroom, lighting fixtures, heating systems, etc., which are not unsafe or unsanitary, but are obsolete due to age or for other reasons. The total program for fiscal year 1967 is $320,000.

Major alterations and improvements

	Fiscal year 1966		Fiscal year 1967	
	Backlog	Programed	Backlog	Programed
1. Correction of unsafe and unsanitary conditions	$13,080,000	$2,110,000	$10,970,000	$2,400,000
2. Correction of functional deficiencies	22,167,000	1,550,000	20,617,000	2,280,000
3. Modernization of existing facilities	19,741,000	1,340,000	18,401,000	320,000
Total	54,988,000	5,000,000	49,988,000	5,000,000

2. IRRIGATION SYSTEMS, $10,500,000

This estimate of $10,500,000 includes a decrease of $69,000 of program savings resulting from improved manpower utilization and cost reduction actions.

These funds will provide for the continuation of irrigation development work on existing and approved irrigation projects on Indian reservations located in the arid and semiarid West where the conservation and development of lands and water for agricultural irrigation are of fundamental importance to enable the Indian to become self-supporting and to make proper use of his land and water resources. The development and extension of irrigation projects on Indian reservations are primarily for the benefit of resident reservation Indian families. The facilities, however, also directly benefit the surrounding community, as well as non-Indian-owned lands included within the projects. Most Indian-owned land is devoted to growing supplemental feed for the 41 million acres of rangelands. The success of stockraising is largely dependent on an adequate supply of winter feed which can be produced on irrigated land. The early completion of new and existing-continuing projects will make possible the determination of final per-acre construction costs for reimbursement purposes and will greatly facilitate the program and policy of the Bureau in transferring the responsibility for operation and maintenance of the systems to the water users.

The type of work proposed is the construction, extension, rehabilitation, and betterment of irrigation systems, land clearing and leveling, and surveys and investigations.

The major structures and canal systems are completed, or nearing completion, on many of the existing projects. The work now proposed on these projects will consist primarily of extending canals and laterals, land clearing and leveling, extension of drainage systems, and the rehabilitation and betterment of existing irrigation projects.

There was initiated during the fiscal year 1961 a program for the preparation of rehabilitation and completion reports for all existing and authorized projects and feasibility reports for new and unauthorized projects. When completed

these reports will provide a complete and up-to-date inventory of project acreages, irrigation facilities and needs and requirements for long-range planning.

(*a*) *Annual contract payments, $17,154.* This provides for payment of annual installments for reservoir storage.

(*b*) *Irrigation construction, $9,024,910.*—This estimate provides funds for the construction and extension of authorized and existing projects. The work consists primarily of extending canals and laterals with necessary structures, land clearing and leveling, and extension of drainage systems.

(*c*) *Surveys, investigations, plans and reports, $120,000.*—This item represents the amount required for the continuation of surveys, investigations, studies and plans started in the fiscal year 1961 for the preparation of feasibility, completion (definite plan) and rehabilitation and betterment reports to be made for all existing Indian irrigation projects under the jurisdiction of the Bureau of Indian Affairs. This work is necessary in order to establish a program for completing existing Indian irrigation projects presently authorized, developing additional Indian irrigation resources, and for the rehabilitation and betterment of existing irrigation works with a view to transferring the operation and maintenance of the projects from the Government to acceptable water user organizations. This item also provides funds for surveys and investigations and the preparation of detailed plans and specifications for construction of irrigation projects and the extension and improvement of existing projects. The program includes the study of water supplies and water rights; surveys for damsites for storage and diversion purposes; canal and lateral system location surveys; soil and sampling analysis and hydropower studies and the protection of Indian water rights.

(*d*) *Rehabilitation and betterment, $866,056.*—This estimate provides funds for making major repairs, improvements and replacements of irrigation facilities on existing projects.

(*e*) *Engineering and supervision, $471,880.*—This item represents the amount required to pay salaries, office rent, travel expenses, and miscellaneous expenses incidental to executing the irrigation program proposed for the fiscal year 1967. Staff employees engaged in irrigation activities are located in the central or Washington office and five area offices, located in Phoenix, Ariz.; Billings, Mont.; Portland, Oreg.; Sacramento, Calif.; and Gallup, N. Mex.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase(+) decrease(−)
Program and financing:				
Total obligations	$45,086,342	$56,541,658	$57,164,000	+$622,342
Transferred to "Operating expenses, Public Buildings Services," General Services Administration		33,854		−33,854
Unobligated balance available, start of year	−12,591,854	−21,424,512		+21,424,512
Unobligated balance available, end of year	21,424,512			
Appropriation	53,919,000	35,151,000	57,164,000	+22,013,000
BUREAU OF INDIAN AFFAIRS				
Obligation by objects:				
11 Personnel compensation	8,318,703	8,426,000	8,443,000	+17,000
12 Personal benefits	412,406	460,000	461,000	+1,000
21 Travel and transportation of persons	599,926	675,000	645,000	−30,000
22 Transportation of things	693,044	637,000	637,000	
23 Rent, communication, and utilities	667,482	652,000	660,000	+8,000
24 Printing and reproduction	87,877	108,000	114,000	+6,000
25 Other services	1,506,710	2,671,000	1,799,000	−872,000
Services of other agencies	777,888	404,000	385,000	−19,000
26 Supplies and materials	3,741,449	4,118,000	3,225,000	−893,000
31 Equipment	1,700,741	2,119,000	2,720,000	+601,000
32 Lands and structures	21,736,214	27,512,748	30,951,000	+3,438,252
41 Grants, subsidies, and contributions	12,507	777,000	12,000	−765,000
42 Insurance claims and indemnities	2,458	1,000	1,000	
Subtotal	40,257,405	48,560,748	50,053,000	+1,492,252
Quarters and subsistence charges	82,012	76,000	76,000	
Total, Bureau of Indian Affairs	40,175,393	48,484,748	49,977,000	+1,492,252

Itemization of estimate—Continued

		Actual, 1965	Estimate, 1966	Estimate, 1967	Increase(+) decrease(−)
	ALLOCATION ACCOUNTS				
11	Personnel compensation	$954,020	$1,183,000	$1,289,000	+$106,000
12	Personal benefits	71,760	89,000	96,000	+7,000
21	Travel and transportation of persons	69,750	76,000	72,000	−4,000
22	Transportation of things	17,311	8,000	8,000	
23	Rent, communications and utilities	18,989	24,000	27,000	+3,000
24	Printing and reproduction	5,404	10,000	10,000	
25.1	Other services	285,936	35,000	75,000	+40,000
25.2	Services of other agencies	30,487	46,000	45,000	−1,000
26	Supplies and materials	22,625	29,000	33,000	+4,000
31	Equipment	21,703	15,000	17,000	+2,000
32	Lands and structures	3,412,423	6,539,910	5,513,000	−1,026,910
42	Insurance claims and indemnities	541	2,000	2,000	
	Total allocation accounts	4,910,949	8,056,910	7,187,000	−869,910
	Total obligations	45,086,342	56,541,658	57,164,000	+622,342
	Obligations are distributed as follows:				
	Bureau of Indian Affairs	40,175,393	48,484,748	49,977,000	+1,492,252
	Bureau of Reclamation	4,867,934	8,043,910	7,187,000	−856,910
	Corps of Engineers	43,015	13,000		−13,000

Indian Construction Program

Chairman Hayden. Would you please discuss your construction program for the committee?

Mr. Nash. Yes, sir. This very large construction program is necessary primarily to anticipate the demand for high school seats that will be coming up as the eighth graders come out in the next 3 to 5 years as a result of our expanded elementary school construction program.

We also have some obsolete facilities of great age which are unsafe and unsanitary and we are proposing to replace some of those. We also have some construction needs that are not related to buildings and utilities.

Gasline at Barrow, Alaska

As an example I might give the gasline at Barrow, Alaska. Thanks to the actions of the Congress the gas and petroleum reserve No. 4 is now available to the people of the village of Barrow as well as to the Government agencies. I was up there just this fall and saw for myself the wonderful change this has made in the lives of the people at Barrow.

Every one of those dwellings in the village of Barrow had a gas heater in it when I was up there in November. It is, of course, much cheaper than hauling fuel oil on the *North Star* and it has just completely transformed the life of that community. But the gasline is improvised and it has no backup.

We are building more and more schools and other facilities at Barrow, and a hospital, and other Government agencies are putting in expensive facilities. We are gradually getting to a situation where many millions of dollars of construction is dependent for heat in that arctic climate on a 4-inch gasline which runs several miles across the tundra and where the pipes are simply laid on the tops of old steel oil drums and then rest on the tundra and the permafrost.

PROPOSED AUXILIARY GASLINE INSTALLATION

Part of this line, not a part that goes to our facility, was washed out in the big storm of 2 years ago, showing us what can happen in that climate if you don't have a hundred percent backup. So included in our construction request is enough money to put in an auxiliary gasline and to mount it properly on posts that are set into the permafrost and set to follow a different route.

CONSTRUCTION FUNDS FOR HIGH SCHOOLS

Chairman HAYDEN. Last year rather than appropriate construction funds, Congress provided planning funds for the Mount Edgecumbe High School, the Gray Hill or Moenave High School, and the Many Farms High School.

Has this planning been completed now so that you do have firm estimates for the construction appropriations which you request?

Mr. NASH. Yes, sir, they have.

Might I call on Mr. Kethro for the details of that?

Mr. KETHRO. Yes, the final planned program was completed several months ago and actual preparation of working drawings and specifications will be done by the end of June; in time to go out for bids shortly after the beginning of this fiscal year.

CHALKYITSIK DAY SCHOOL, ALASKA

Chairman HAYDEN. One of the schools for which you ask funds is the Chalkyitsik Day School in Alaska. Your justification indicates that the enrollment in this school will increase from 32 in the 1964–65 school year to 52 in the 1971–72 school year and therefore you indicate a need for a two-classroom school building with adequate facilities.

How long does it take to construct a two-classroom school?

Mr. NASH. In the Arctic, Mr. Chairman, considerably longer than it would down below. The present school there at Chalkyitsik is a log cabin, uninsulated, containing one 500-square-foot classroom, a cloakroom, and a storage closet. It was built by the villagers themselves. Nobody knows exactly when. It is in a very, very poor condition, and the 32 children that are there already exceed the pupil per room standards of the States down below. As a rule you have to allow up to 3 years from funding to completion of construction in the Arctic even if it is very simple because of the transportation problem.

ADVANCE PLANNING FOR NAVAJO HIGH SCHOOLS

Chairman HAYDEN. With regard to the proposals that $350,000 be appropriated for advance planning of a Navajo high school in Arizona and a like amount for another in New Mexico, you say that the schools, as to be at locations which have not yet been selected; and that the new spaces are for "a future year."

I have two questions. The first is, how long in the future do you think it will be before these spaces are needed; and the second is, how can you really plan a school if you don't know at least generally the location of the site?

Mr. NASH. Let me take the first part of that question first, if I may, Mr. Chairman. We will need these spaces by 1970 at the latest, and then with respect to the second half of it, when we ask for these

amounts for planning we are asking for the entire amount which is carried in our schedule for engineering plans, surveys, and design.

In other words, that amount of planning money will carry the plans all the way through to the detailed drawings and the specifications for putting out bids. We would want to do that in order that the minute the money is made available we would be able to advertise right away so as to get construction started.

Mr. Kethro, do you want to add anything?

Mr. KETHRO. It might be pointed out that we have 11 tentative locations for 4 high schools on the Navajo. On the Navajo we have a very difficult problem, getting a site which has adequate water. Part of the advance planning will be to drill for water and to make our program surveys and select a site.

ADVANCE PLANNING FOR INDIAN SCHOOL IN ALBUQUERQUE, N. MEX.

Chairman HAYDEN. I note that $700,000 is asked for advance planning of an Indian school in Albuquerque. Last year, the Senate committee in approving planning funds for this high school asked that you review and discuss with Albuquerque School District officials the possibility of an integrated school. I realize that the funds added by the Senate were not finally approved. However, I would like to know what discussions you have had with the Albuquerque school officials and what you have determined as the result of those discussions?

Mr. NASH. Mr. Chairman, we had one meeting with the New Mexico and Albuquerque school people in December—it was an all-day session at Santa Fe—in which we discussed not only the Albuquerque school, but all the problems of planning and programing school construction in New Mexico.

On the 1st of March there will be a second meeting in Santa Fe which will relate specifically to the Albuquerque Indian School. I might say that in this connection we have tried to make it clear to the school authorities in both the State of New Mexico and in the city of Albuquerque that we are not intransigent as far as this school is concerned, that we think well of the Albuquerque school system. There are some facts about the present school and about the education needs of the children that go to it that still need further discussion, and our conferences in December showed that that was the case.

LIFE LIMIT OF EXISTING SCHOOL BUILDING

For example, the existing Albuquerque Indian School has been given a life limit of 3 years by our most recent safety survey team and I am concerned enough about the safety of the children in that school so that we give it a thorough going over by safety engineers every year.

Just this fall their report was negative enough so that we moved 100 children out of each of 2 dormitories and managed to crowd them into the dormitories where the children are living who are going to the Albuquerque public schools.

We are right up against it on replacement of this facility, Mr. Chairman, because I don't think that we can continue this present facility past the time limit that you get with the funding and construction.

In other words, 3 years from last fall if we do not have a replacement for the present Albuquerque Indian school I think we are going to have to close it and send the children somewhere else.

PROPOSED SITE OF NEW BUILDING

Chairman HAYDEN. What kind of a site do you have for the new school you are requesting?

Mr. NASH. The Government owns the site of the former Albuquerque Indian school farm, going back to the days when we had school farms. This is a large acreage on the northwest side of town across the Rio Grande.

It is a very fine school site and one which is capable of a good deal of expansion. Mr. Kethro mentioned the water problem in providing for high schools and other schools on the Navajo reservation. One of the things which we have had some difficulty in explaining to the New Mexico school authorities is the fact that if we are to replace the present Albuquerque Indian school and put the children who are in it out on the school farm and in modern buildings—and these children are not eligible for enrollment in the Albuquerque public schools under the present criteria because they are more than 1 year behind grade—then, instead of building a separate 1,000 student high school on the Navajo, by combining the utilities we can save $4½ million.

We would then have a 2,000 student establishment and it seems to me that we ought to make that saving even though it does involve educating 1,000 Navajo high school students in an off-reservation school.

PUBLIC SCHOOL ATTENDANCE IN ALBUQUERQUE

Chairman HAYDEN. Do you have any pupils in public schools there?

Mr. NASH. Yes, sir. We have 350 children living in the dormitories on the grounds of the Albuquerque Indian school who attend the public schools of Albuquerque.

Chairman HAYDEN. Will some pupils be kept at the present site?

Mr. NASH. Yes, our plan calls for continuing the dormitories that these students, Navajos, are living in now. They will, of course, continue to go to the Albuquerque public school. If we get the new school we would plan to demolish the old and dangerous structures.

DINING FACILITIES OF INDIAN HEALTH DIVISION SCHOOL

Chairman HAYDEN. Will the move interfere with the dining arrangements for the practical nurses school on the old grounds?

Mr. NASH. No, sir, it will not. We will be able to continue the kitchen-dining arrangements there so that the Indian Health Division will be able to continue its school. I may say that once the site is cleared we would anticipate then enlarging those dormitories as more and more students are able to take advantage of the public school facilities in Albuquerque, that is, as more up-to-grade students arrive through the betterment of our education program.

ADVANCE PLANNING THROUGHOUT THE BUREAU

Chairman HAYDEN. In addition to advance planning for specific buildings which are included in your budget, you are asking $500,000

for advance planning throughout the Bureau. This is $100,000 more than was appropriated last year, exclusive of the planning funds for specific schools. Please explain how and where you propose to use this fund.

Mr. NASH. Yes, sir. We have in Alaska a boarding school at Wrangell, Wrangell Institute, which fulfills the function somewhat similar to that of Mount Edgecumbe, but at the elementary school level. There are some children in Alaska, I am sorry to say, whose parents are not able to take care of them adequately and properly and for them we have an elementary boarding school.

It is antiquated and we would like to get it into our construction schedule and we would use some of this advanced planning money for that purpose.

There are other schools: in Arizona, the Bountiful Valley School under the Chinle Subagency; in New Mexico, Toadlena; in the Shiprock Agency; in Oklahoma we should do some preliminary studies on the Fort Sill dormitory. Chilocco has not been rehabilitated and we ought to do some advance planning there. The committee on the other side has expressed a good deal of interest in a school in the Northwest that would meet some of the needs that are not now being met for the children in the three Northwestern States and in helping curb the dropout problem in the public schools.

OFF-RESERVATION SCHOOL FACILITIES

Chairman HAYDEN. Senator Young, do you have any questions?

Senator YOUNG. Yes. My questions are in further reference to education of Indian children. I have been interested in this subject for a long while, especially education in schools off the reservations, which I think is the best place to educate them.

Fortunately, in North Dakota, and I believe every other State, there is no objection on the part of non-Indians. In fact, Indian children are welcomed in these schools. They want to help them. We have a continual problem with inadequate buildings at the schools on the edge of the reservations that have a high percentage of Indian children.

ST. JOHN HIGH SCHOOL, N. DAK.

My first question is with reference to St. John, N. Dak. I understand that School District No. 3, St. John, N. Dak., is presently faced with a critical shortage of adequate facilities. The district has little ability to meet construction costs since they have already bonded to within $30,000 of their capacity and almost 40 percent of the land in the district is owned by the State or Federal Governments. Forty-four percent of the school enrollment is Indian children and it is my understanding that about 100 more Indian children living in the district have to go to school elsewhere because of the lack of facilities. Are you familiar with the problem?

Mr. NASH. Yes, sir, I am.

Senator YOUNG. Has any study been made into the costs of providing adequate educational facilities at St. John?

Mr. NASH. Mr. Kethro, we haven't gotten that far, have we?

Mr. KETHRO. No.

Mr. NASH. I am familiar with the need at St. John's and I agree with the Senator's observation about it, but we have not carried it to the point where we have any estimates.

Senator YOUNG. I wish you would do that because I believe they intend to testify before the committee here and will be making a request for funds.

Mr. NASH. That will be done, and I will submit information for the record.

(The information follows:)

Dr. Melvin Gruwell of the University of North Dakota made a survey of this area and his report dated January 1960 is virtually the same situation as exists today. This survey recommends that the high school students in the St. Johns area attend the high school at Rolla, N. Dak., a distance of approximately 6 miles. The road is mostly hard surfaced and in good condition. The elementary children under the survey proposal attend school at St. John. This is in keeping with the general school district reorganization plans of the State of North Dakota. The tax valuation of the St. Johns school district is approximately one-half million dollars; however, there is considerable State- and Indian-owned land in this area. There are approximately 75 Indian high school students in the St. John high school at this time.

The St. Johns Public School District has requested the construction of a high school adequate for approximately 200 students. The following facilities would be included: Five classrooms, physical education room, practical arts room, library, principal's office and guidance office, mechanical equipment room, storage room and all utilities. The school district received a cost estimate of $538,000 from a contractor in Bismarck, N. Dak., for the above facilities. The contractor's estimate includes funds for equipping the proposed school and for preparation of the necessary architectural-engineering services.

BENSON COUNTY AGRICULTURAL AND TRAINING SCHOOL

Senator YOUNG. I have another similar situation in North Dakota. I understand that there is no high school on the Fort Totten Reservation. Boys and girls attending high school must go off the reservation to nearby schools or mission schools in North and South Dakota. A sizable number of these students are attending the Benson County Agricultural and Training School at Maddock with the result that this school is faced with a critical shortage of space and facilities. Are you familiar with the needs for space at Maddock?

This is an agricultural school. They teach mechanical trades there, too.

Mr. NASH. No, sir, I am not. This is a new one to me.

Mr. Coombs?

FORT TOTTEN RESERVATION HIGH SCHOOL

Mr. COOMBS. Yes, sir, I know that arrangement is being made. There was an effort I believe when the high school at Fort Totten was discontinued, the Bureau high school, to get the children into public schools.

Senator YOUNG. Is it true that there is no school on the reservation for education at the high school level and that these children have to go off the reservation?

Mr. COOMBS. To towns nearby. I believe this is the case.

Senator YOUNG. I wish you would look into this because I am sure these people, too, will be making a request. I would like to have all the information I can.

Mr. NASH. May I add one comment on to this, Senator?

Senator YOUNG. Yes.

Mr. NASH. I have been at Fort Totten, as I have now most of the reservations. It is true that they feel very strongly about the need for facilities right on the reservation.

SCHOOL BOARDING FACILITIES

However, as the Senator knows, this is a very impoverished group and I think that there is a real need for boarding facilities to take care of the children. The economic assistance that this reaps to the family is one that the families need and will seek even if there is a day facility on the reservation.

In other words, until we can do better than we are on the problem of Indian poverty I think there is a real need for some kind of boarding facility.

Senator YOUNG. I wish you would look into that possibility. This is one of the few agricultural schools in the State at the high school level and they have a pretty good trade school there, too, which I think would be very helpful to Indian children.

Mr. NASH. Very well, sir. I will provide information for the committee.

(The information appears on p. 2060.)

ESTABLISHMENT OF SEPARATE AGENCY AT FORT TOTTEN

While on the subject of Fort Totten, have any plans been made to establish a separate agency at Fort Totten?

Mr. NASH. Yes, sir; we have been working on it and I think we will have some rapid progress.

Senator YOUNG. You may be establishing a separate agency there?

Mr. NASH. Yes, sir. I have thought for some time it ought to have its own superintendent. For reasons of economy I would still like to have the housekeeping performed at Belcourt, but there is no reason within available funds why they could not have their own superintendent reporting directly to the area and they would feel much better about it.

Senator YOUNG. That is good news, Mr. Nash.

COMMUNITY CENTER BUILDING AT FORT YATES, N. DAK.

One more question on the community center building at Fort Yates. The existing building was destroyed by fire a year ago and the community is in need of a replacement as a meeting place, a center for the operation of community action programs and to handle other activities.

Are you familiar with the need for a community center building at Fort Yates on the Standing Rock Reservation?

Mr. NASH. Yes, sir, I know of the need, but I don't know where it stands in the schedule.

Mr. KETHRO. It is not on this list of projects and I don't know where it is either. I am not familiar with that.

Senator YOUNG. It burned down a year ago. Would you look into this as to what the cost of such a facility would be?

Mr. NASH. Yes, sir.

Senator YOUNG. Thank you, Mr. Chairman.

(The following statement was subsequently submitted:)

The structure used by the people of the Fort Yates community for tribal meetings, social programs and similar activities was destroyed by fire in 1965. At this time there is no building in Fort Yates which can be used for these purposes. A new community building containing meeting room for 200, toilets, kitchen, storage, stage and mechanical room is needed. It is estimated that the cost of constructing this facility would be $130,000.

NAVAJO INDIAN IRRIGATION PROJECT, N. MEX.

Chairman HAYDEN. For the Navajo Indian irrigation project in New Mexico the budgeted amount for the coming year is $6,498,000. Do you have any particular comments upon the progress of the work on this project?

Mr. NASH. Mr. Chairman, pursuant to the statute this project is under the direction of the Bureau of Reclamation and Mr. Young of that Bureau is here this morning.

Could I call on him?

Chairman HAYDEN. Yes.

Mr. YOUNG. Progress is going along very well, sir. We have two principle contracts for the first two sections of the main canal. The first tunnel, which is about 2 miles long, is about 50 percent completed.

The next tunnel, which is about 5 miles long, is about 30 percent completed, so the progress is going very well.

Chairman HAYDEN. Thank you.

EXTENSION OF LATERAL A 90

The Chairman of the Colordao River Indian Tribes has sent me and Senator Fannin a letter and a resolution adopted by the Colorado River Tribal Council urging an addition of $615,000 to your budget to extend Lateral A 90. This material will be placed in the record.

(The letter and resolution follow:)

COLORADO RIVER INDIAN TRIBES,
COLORADO RIVER RESERVATION,
Parker, Ariz., January 31, 1966.

Hon. CARL HAYDEN,
Senate Office Building,
Washington, D.C.

DEAR SENATOR HAYDEN: In reference to our discussion with you while in Washington, D.C., concerning irrigation construction funds for the Colorado River project we would like to submit the following information to you which will show the serious effect the proposed cut in irrigation construction funds will have on the economy of the Colorado River Indian Tribes and the Parker area.

The amount scheduled at the present time for the Colorado River project is $400,000 for the building of a substation in connection with the Colorado River power project which is necessary due to the increased power load in the area.

The amount scheduled for irrigation construction is only $135,000 which is a cut of $615,000 from the amount available for fiscal year 1966.

We strongly urge you to add $615,000 to the irrigation construction budget for the 1967 fiscal year. The Colorado River Agency has informed us that with this amount of money we could expect the following direct benefits to the tribes and the Parker area:

> Lateral A–90 would be extended 2 plus miles and 5 miles of a new lateral off A–90 would be built. This would allow development of 17,780 acres of new lands. The new lands leased through development leases would mean an average annual income to the tribes of approximately $270,000 and would facilitate capital improvements by the lessees of $5,350,000.

The development leases would provide at least 80 full-time jobs to Indians plus a number of jobs to non-Indians. (This is based on the Bruce Church lease of 6,000 acres that now is providing jobs to 27 Indians.) This also would provide the Bureau of Indian Affairs with approximately 60 man years of work or provide full and part-time employment to 75-plus Indian families and 10 non-Indian families.

The Colorado River Agency has also informed us that if we only receive the proposed $135,000 for irrigation construction, the work force will be cut down to about 3 to 6 permanent positions. At the present time the Bureau of Indian Affairs is employing 73 Indians and 18 non-Indians on irrigation construction. With the cutback to $135,000 we would lose 90 full- and/or part-time jobs, and this, plus the 80 jobs from lessees, would mean a loss of 170 jobs and would have a tremendous effect on the economy of the Colorado River Tribes as well as the entire Parker area. In dollars-for-wage loss it would mean a loss of $330,000 under the Bureau of Indian Affairs and a long-time loss of wages from lessees of up to $320,000 annually.

The Colorado River Reservation is an eligible poverty area and with this cut the loss of jobs alone would have a terrific effect on the reservation as well as the area economy. These funds also would not be a grant as is the OEO program but would be charged to the land. Also the tribes are making every effort to make beneficial use of their water allocation.

With the addition of the 17,780 acres of land to the project at least 8 new jobs in Operation and Maintenance will be made available and will be paid from O. & M. charges paid by the lessees.

We shall sincerely appreciate and forever be thankful for your help and assistance in adding $615,000 to the 1967 fiscal year budget for the Colorado River Indian Tribes. This will mean so much to our Indian people and the Parker area. We must continue the development of our lands.

For 100 years we have been striving to develop the lands and make use of the Colorado River water that flows through the length of our reservation. We honestly pray that you will not let us down at this time.

We wish to thank you for the interest you have shown in the development of our resources which also is a credit to the development of our great State of Arizona.

Please note the articles pertaining to our reservation and the Parker area in the February issue of Arizona Highways.

Sincerely yours,

HERMAN D. LAFFOON, Sr., *Chairman.*

A resolution to request an additional amount of $615,000 be added to the irrigation construction budget for the Colorado River project for fiscal year 1967.

Be it resolved by the Tribal Council of the Colorado River Indian Tribes, in special meeting assembled on January 31, 1966.

Whereas there is a proposed cut to $135,000 in irrigation construction funds for the Colorado River Project for fiscal year 1967, and

Whereas this cut would curtail the development of the lands of the Colorado River Indian Reservation and would seriously affect the economy of the Colorado River Indian Tribes and the Parker area; Now, therefore, be it

Resolved, That the Colorado River tribal council on behalf of the Colorado River Indian Tribes strongly urge and request an additional amount of $615,000 be added to the irrigation construction budget for the Colorado River Project for fiscal year 1967; be it further

Resolved, That this resolution supports the position stated in the Chairman's letter dated January 31, 1966, which was sent to all members of our Arizona congressional delegation; and be it finally

Resolved, That copies of this resolution be sent to our Arizona congressional delegation and to officials of the Department of the Interior and Bureau of Indian Affairs.

The foregoing resolution was on January 31, 1966 (special) duly approved by a vote of 8 for and 0 against, by the Tribal Council of the Colorado River Indian Tribes, pursuant to authority vested in it by section 1(a), article VI of the constitution (or bylaws) of the tribes, ratified by the tribes on July 17, 1937, and approved by the Secretary of the Interior on August 13, 1937, pursuant to section 16 of the act of June 18, 1934 (48 Stat. 984). This resolution is effective as of the date of its adoption.

COLORADO RIVER TRIBAL COUNCIL,
By HERMAN D. LAFFOON, Sr., *Chairman.*
AGNES SAVILLA, *Secretary-Treasurer.*

STATUS OF PROJECT

Chairman HAYDEN. Can the Bureau of Indian Affairs economically do this work?

Mr. NASH. Not within the present appropriation structure, Mr. Chairman. This is a distressing situation to us. In 1967 that project will be 100 years old and when I became Commissioner it was 35 percent complete.

Thanks to a number of fortunate circumstances that came together all at once, the water entitlement was present and it was possible to enter into development leases. In the last few years we have been putting in comparatively small amounts of irrigation construction money and combining them with development leases. By this means many thousands of acres have been brought under irrigation that were just desertland before.

Now we would like to continue that. I have been in touch with the chairman of the tribe and the case that he makes is a good case; but it is a fact that in order to get the work done on the main stem of Lateral A90 we have had to take money away from other projects in other tribes. This is a very, very desirable development situation, a 12-month growing season. It is one of the great agricultural centers of the United States.

I have to be Commissioner of all the tribes and have to meet the needs of all the reservations and so, when ceiling limitations were placed on us this year and we have a $400,000 substation which has to be built for that power project or the whole thing will get into bad shape, we felt we had no alternative except to reduce the irrigation construction item this year to $135,000. This is a big decline. It was $750,000 last year. So this is a big drop and I do not blame the chairman of the tribe for feeling very put out about it.

Chairman HAYDEN. Would this committee be justified in increasing that a little bit?

Mr. NASH. Yes, sir.

REQUEST TO THE BUREAU OF THE BUDGET

Chairman HAYDEN. Did you propose funds in this or a similar amount for this work? How much do you have in the bill now?

Mr. NASH. What we have in the bill is $135,000 for irrigation and $400,000 for the substation.

Chairman HAYDEN. Did you propose to the Budget any additional money for this purpose?

Mr. NASH. Yes, sir. We went to the Bureau of the Budget for $415,000 for irrigation and $440,000 for the substation, and we received an allowance from the Bureau of the Budget of $135,000 for irrigation and $400,000 for the substation.

Chairman HAYDEN. Then the reduction was a Budget action?

Mr. NASH. Yes, sir.

ROAD CONSTRUCTION

CONTRACT AUTHORIZATION AND LIQUIDATION PROGRAM

Chairman HAYDEN. Your request for a cash appropriation to liquidate contract authorization for road construction in fiscal year

1967 is $16,754,000. The justification for this request will be printed in the record.

(The justification follows:)

	Contract authority available	Obligations	Unliquidated obligations prior year	Obligations	Expenditures	Unliquidated obligations carried forward
Fiscal year 1965:						
Federal-aid highway roads	$19,183,996	$18,399,075	$7,110,646	$25,509,721	$16,737,267	$8,772,454
Navajo-Hopi roads, Routes 1 and 3	293,688	187,029	826,101	1,013,130	880,909	132,221
Total	19,477,684	18,586,104	7,936,747	26,522,851	17,618,176	[1] 8,904,675
Fiscal year 1966:						
Federal-aid highway roads	17,235,921	17,235,921	8,772,454	26,008,375	18,892,304	7,116,071
Navajo-Hopi roads, Routes 1 and 3	106,660	106,660	132,221	238,881	238,881	
Total	17,342,581	17,342,581	8,904,675	26,247,256	19,131,185	[2] 7,116,071
Fiscal year 1967: Federal-aid highway roads	20,024,000	20,024,000	7,116,071	27,140,071	16,754,000	10,386,071

[1] Available cash for liquidation is $1,686,185; balance of $7,218,490 is unfunded.
[2] Unfunded obligations.

Status of cash appropriations for liquidation of contract authorization

	1965	1966	1967
Appropriation	$18,000,000	$17,445,000	$16,754,000
Unexpended balance brought forward	1,304,361	1,686,185	
Total available	19,304,361	19,131,185	16,754,000
Loss expenditures	17,618,176	19,131,185	16,754,000
Unexpended balance	1,686,185		

JUSTIFICATION

Road Construction (Liquidation of Contract Authorization), $16,754,000

LIQUIDATION PROGRAM (CASH)

Liquidation of contract authorization (cash program)—1965, $17,618,176; 1966, $19,131,185; 1967, $16,754,000.

The estimate for the road construction cash program for fiscal year 1967 is $16,754,000. This amount is required to liquidate $7,116,071 of unfinanced prior year obligations that will come due for payment during fiscal year 1967, as well as the 1967 obligations ($15,754,000 under the regular program, and $1 million under the Navajo-Hopi highway program) that will come due for payment during the 1967 fiscal year. This leaves $10,386,071 of unpaid obligations at the end of the 1967 fiscal year.

CONTRACT AUTHORIZATION PROGRAM (OBLIGATIONS)

Federal-aid highway roads—1965, $18,586,104; 1966, $17,342,581; 1967, $20,024,000.

This estimate for the road construction obligational program for fiscal year 1967 is $20,024,000, which includes the $18 million authorized for the 1967 fiscal year and the $2,024,000 which was placed in budget reserve from that authorized for the 1966 fiscal year.

The Federal-Aid Highway Act of 1964 authorized, "For Indian reservation roads and bridges, $18 million for the fiscal year ending June 30, 1966, and $18 million for the fiscal year ending June 30, 1967." These sums are authorized to be appropriated for the purpose of carrying out the provisions of title 23 of the United States Code. Section 101 of that code provides the definition of Indian

reservation roads and section 203 provides that "funds authorized for Indian reservation roads shall be available for contract on a date not earlier than 1 year preceding the beginning of the fiscal year for which authorized;" * * *. Also, "the Secretary of the department charged with the administration of such funds is granted authority to incur obligations, approve projects and enter into contracts under such authorizations and his action in doing so shall be deemed a contractual obligation of the United States for the payment of the cost thereof and such funds shall be deemed to have been expended when so obligated."

1. Federal-Aid Highway Act—Regular program $16,000,000

The objective of the road construction program is to improve roads on the Bureau's designated road system to standards of adequacy that are commensurate with transportation needs. The need of dependable transportation facilities has increased with the expanded school building, education, economic development, and health programs. If available benefits are to be realized from the Bureau's social and economic development programs, road construction must keep pace and provide good all-weather roads to schools, Indian communities, tourist and industrial developments, and to the trade centers.

Tax-free Indian lands are not served adequately by State and county roads. There are reservations where county governments do not exist, and many instances where counties are not financially or administratively able to carry out the road function. As a result, Congress has recognized that the improvement and construction of roads and bridges serving Indian lands is a Federal responsibility and has authorized annual programs in the Federal-Aid Highway Acts. The following is a detailed description of the 1967 fiscal year regular program for Indian reservation roads:

(*a*) Grading and draining, 357.3 miles	$7,486,000
(*b*) Surfacing, 597.9 miles	6,575,000
(*c*) Bridge construction, 1,087.0 running feet	502,000
(*d*) Surveys and plans, 537.9 miles	1,437,000
Total	16,000,000

(*a*) *Grading and draining, $7,486,000.*—This feature covers clearing rights-of-way, installing drainage structures, and constructing a roadbed by excavating high ground and filling low ground. This results in a well-drained earth embankment with easy grades and flat curves, built so that the wind will sweep off the snow and so that it will not be softened by ground water. The stabilized roadbed will provide a firm foundation for the surface course. The estimate covers 357.3 miles of grading and draining. The average estimated cost per mile is $20,952.

(*b*) *Surfacing, $6,575,000.*—This estimate covers the surfacing of 597.9 miles of roads. Most of this will be base course and surface course of local materials such as gravel. 247.0 miles of bituminous surface will be constructed. The average estimated cost for surfacing is $10,997 per mile.

(*c*) *Bridge construction, $502,000.*—This covers the construction of 1,087 running feet of bridges. Most of this will replace wornout spans now in a dangerous condition. The average estimated cost per running foot of reinforced concrete bridge is $462.

(d) *Surveys and plans, $1,437,000.*—This covers preliminary engineering, surveys, and preparation of plans and specifications for the construction of roads and bridges. The estimate covers surveys and plans for 537.9 miles of roads.

The total 1967 program has been allocated to area offices with jurisdictions covering reservations in several States and to agencies covering one to several reservations. Tentative allocations have been made to individual projects. The final projects built will vary slightly, due to such factors as the amount of the low bid on contracts. Other factors, such as the obtaining of county takeover agreements, and unexpected development in other programs such as education or irrigation, can affect the final program. The 1967 road construction program is distributed as follows:

(1) *Aberdeen area, $2,235,000.*—This area program includes 52.9 miles of grading and draining and 135.5 miles of surfacing of which 66.7 miles are bituminous surface in the States of North Dakota, South Dakota, and Nebraska.

(2) *Anadarko area, $470,000.*—This area program consists of 13 miles of grading and draining, 12 miles of bituminous surfacing, and 285 feet of bridges in the State of Oklahoma.

(3) *Billings area, $1,315,000.*—This area program consists of 48.4 miles of grading and draining, 47 miles of surfacing, and 75 feet of bridge construction in the States of Montana and Wyoming.

(4) *Gallup area, $4,335,000.*—This area program includes 90 miles of grading and draining, 82.6 miles of surfacing of which 16.2 miles are bituminous surface, and 290 feet of bridge construction in the States of Colorado, New Mexico, and Arizona.

(5) *Juneau area, $835,000.*—This area program consists of 6 miles of grading and draining, and 10 miles of surfacing of which 7 are to be bituminous surface in the State of Alaska.

(6) *Minneapolis area, $565,000.*—This area program consists of 23.7 miles of grading and draining, 44.5 miles of surfacing of which 15 miles are bituminous surface in the States of Minnesota and Wisconsin.

(7) *Muskogee area, $470,000.*—This area program consists of 10 miles of grading and draining, 26.3 miles of surfacing of which 20.3 miles are bituminous surface in the States of Oklahoma and Mississippi.

(8) *Phoenix area, $2,980,000.*—This area program includes 45.6 miles of grading and draining, 132.7 miles of surfacing of which 75.1 miles are bituminous surface and 307 feet of bridge construction in the States of Arizona, Nevada, and Utah.

(9) *Portland area, $1,960,000.*—This area program consists of 56.5 miles of grading and draining, and 90.6 miles of surfacing of which 20 miles are bituminous surface in the States of Oregon, Washington, and Idaho.

(10) *Sacramento area, $460,000.*—This area program includes 4.7 miles of grading and draining and 4.7 miles of surfacing in the State of California.

(11) *Washington, D.C., $375,000.*—This covers Central Office supervision, and 6.5 miles of grading and draining, 12 miles of bituminous surfacing, and 130 feet of bridge construction on the Cherokee Reservation in North Carolina and Big Cypress and Miccosukee Reservations in Florida.

Federal-aid highway roads area budget classification, breakdown 1967

Area	Total funds	Grading and draining		Surfacing		Bridges		Surveys	
		Miles	Amount	Miles	Amount	Feet	Amount	Miles	Amount
Aberdeen	$2,235,000	52.9	$925,000	135.5	$1,141,000	------	------	89.0	$169,000
Anadarko	470,000	13.0	212,000	12.0	166,000	285	$67,000	15.0	25,000
Billings	1,315,000	48.4	730,000	47.0	430,000	75	40,000	45.0	115,000
Gallup	4,335,000	90.0	2,612,000	82.6	971,000	290	195,000	212.0	557,000
Juneau	835,000	6.0	435,000	10.0	340,000	------	------	10.0	60,000
Minneapolis	565,000	23.7	227,000	44.5	289,000	------	------	23.7	49,000
Muskogee	470,000	10.0	228,000	26.3	216,000	------	------	11.0	26,000
Phoenix	2,980,000	45.6	887,000	132.7	1,740,000	307	160,000	45.0	193,000
Portland	1,960,000	56.5	795,000	90.6	992,000	------	------	71.5	173,000
Sacramento	460,000	4.7	285,000	4.7	115,000	------	------	11.7	60,000
Washington	375,000	6.5	150,000	12.0	175,000	130	40,000	4.0	10,000
Total	16,000,000	357.3	7,486,000	597.9	6,575,000	1,087	502,000	537.9	1,437,000

2. Federal-Aid Highway Act—Navajo-Hopi program, $4,024,000

The regular Federal-Aid Highway Act Bureau road program has, since 1935, been restricted to roads in the county class. When the Bureau of Public Roads ruled in 1957 that BIA Route 1 across the Navajo Reservation required State highways standards because of its trans-state nature, the Bureau dropped it from its regular program.

In 1957, the Congressional Joint Committee on Navajo-Hopi Indian Administration held hearings on the problem of State highway-type roads needed on these reservations which the States claimed were beyond their Federal-aid highway capabilities.

The hearings resulted in a bill to amend the Navajo-Hopi Rehabilitation Act to provide $20 million in contract authority to construct Routes 1 and 3, totaling 368 miles. The bill was enacted in 1958, and the Bureau substantially completed the construction in 1962.

It was then apparent that there were some 350 miles of other roads on these reservations in the same category. A number of bills were introduced to cover this need, among which was H.R. 4900. This bill proposed the amendment of the Navajo-Hopi Rehabilitation Act to furnish an additional $24 million in contract authority to build some 350 miles of road which the States would agree to take

over and maintain as State highways. It was agreed that the authority would be made available at the rate of $4 million per year.

When the Department proposed a report on this bill, it was advised by the Bureau of the Budget to consider incorporating this need in the regular Federal-Aid Highway Act budget estimate for 1967. It was in response to this suggestion that this additional $4 million program estimate was made.

This estimate covers the initial construction on Route "X", a 60-mile road that extends southeasterly from the city of Page, Ariz., to Route 1, now Arizona State Highway 64, near Shonto. It opens a vast isolated area, well populated by Navajo people who are direly in need of transportation facilities. It furnishes access to and from the east to the city of Page and to scenic Navajo recreation areas on the south shore of Lake Powell. The total preliminary estimate for Route "X" is $7 million.

The following is a detailed description of the 1967 fiscal year Navajo-Hopi highway program:

(*a*) Grading and draining, 30 miles	$2,179,000
(*b*) Bituminous surfacing, 30 miles	1,250,000
(*c*) Bridge construction, 720 feet	445,000
(*d*) Survey and plans, 50 miles	150,000
Total	4,024,000

(*a*) *Grading and draining, $2,179,000.*—This feature includes clearing the right-of-way, installing drainage structures such as culverts or bridges less than 20 feet long, and grading operations to construct a drained roadbed with flat curves and easy grades which will furnish a firm foundation for the base course and riding surface. This estimate covers 30 miles of clearing, draining, and grading. The average cost per mile is $72,600.

(*b*) *Surfacing, $1,250,000.*—This route will carry traffic of the State highway class. This feature includes subbase and base courses of selected granular material which is compacted by controlled watering and rolling, and a bituminous surface course. The thickness of the various courses will be related to the load-carrying capacity of the subgrade and base courses. The bituminous surface course will be a hot plant mixed combination of gravel, sand, and asphalt. The estimate covers 30 miles of surfacing at an average cost of $41,600 per mile.

(*c*) *Bridge construction, $445,000.*—This covers the cost of constructing bridges to State highway secondary standards. It is estimated that 720 running feet of bridge will be started during this fiscal year.

(*d*) *Surveys and plans, $150,000.*—This feature includes the reconnaissance survey, location survey, drainage survey, soil survey and all plats, plans, specifications and plans necessary to invite bids for contracts and construction. The 50 miles includes the 30 miles of construction in this estimate and 20 miles for the 1968 program.

This estimate is based upon a plan to construct the entire length of Route X as soon as possible. Although the quantities furnished here are based upon the 10 miles extending southerly from Page, Ariz., and 20 miles extending northeasterly from Navajo Route 1, near Shonto, Ariz., it may be necessary to adjust the project limits along the route in accordance with conditions to maintain progress. The length of Route X is 60 miles and the preliminary estimate of total cost is $7 million. The 1967 estimate will cover one-half of the length and the most difficult construction.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) decrease (−)
Program and financing:				
Total obligations	$18,586,104	$17,342,581	$20,024,000	+2,681,419
Unobligated balance available, start of year	−19,952,684	−19,366,581	−20,024,000	−657,419
Unobligated balance available, end of year	19,366,581	20,024,000	18,000,000	−2,024,000
Contract authorization (new) (permanent)	18,000,000	18,000,000	18,000,000	
BUREAU OF INDIAN AFFAIRS				
Obligations by objects:				
11 Personnel compensation	5,076,373	5,778,000	5,829,000	+51,000
12 Personnel benefits	295,882	344,000	348,000	+4,000
21 Travel and transportation of persons	240,300	275,000	267,000	−8,000
22 Transportation of things	396,107	300,000	300,000	
23 Rent, communications, and utilities	408,458	400,000	400,000	
24 Printing and reproduction	7,566	8,000	8,000	
25.1 Other services	790,453	1,016,000	1,100,000	+84,000
25.2 Services of other agencies	1,301,652	41,000	41,000	
26 Supplies and materials	1,677,101	2,000,000	2,000,000	
31 Equipment	672,896	600,000	500,000	−100,000
32 Lands and structures	7,785,229	6,624,839	9,297,000	+2,672,161
42 Insurance claims and indemnities	1,677	2,000	2,000	
44 Refunds	567			
Subtotal	18,654,261	17,388,839	20,092,000	+2,703,161
Quarters and subsistence charges	−68,157	−68,000	−68,000	
Total, Bureau of Indian Affairs	18,586,104	17,320,839	20,024,000	+2,703,161
ALLOCATION TO COMMERCE, BUREAU OF PUBLIC ROADS				
25.2 Services of other agencies		2,000		−2,000
32 Lands and structures		19,742		−19,742
Total, Bureau of Public Roads		21,742		−21,742
Total obligations	18,586,104	17,342,581	20,024,000	+2,681,419

Route X on the Navajo Reservation

Chairman Hayden. Would you please discuss your proposed road program for the committee, including particularly the $4,024,000 which you are asking for construction of roads under the Navajo-Hopi program to be funded under the Federal-Aid Highway Act?

Mr. Nash. Yes, sir. The $4 million under that program is the so-called route X, which is on the Navajo Reservation and would run for several miles southeast of Page. This is country which has tremendous recreation potential which is very rugged.

I should not be telling the Senator about his own State. However I have been over parts of it and it most certainly needs highway development to have any economic growth at all. We are hoping very much to have this road get underway. It is important to the Navajos.

It is important to the economic development of the area. It is also important to the non-Indians.

Mr. Trier, what would be the schedule of route X as we go along through the years?

Mr. Trier. We estimate that if we get the $4 million included in this estimate that another $4 million will complete this job. It will take 2 years to build 60 miles of road.

Mr. Nash. Mr. Chairman, I asked our chief road engineer how long it would take and he said that if we get route X funded at this level this year and a like amount the second year that this would complete route X in 2 years.

ROAD CONSTRUCTION IN NORTH DAKOTA AND SOUTH DAKOTA

Senator YOUNG. Mr. Chairman, may I ask one or two questions?

Chairman HAYDEN. You may.

Senator YOUNG. I notice you have $2,235,000 for roads in the Aberdeen area. What roads would these funds cover in North Dakota and South Dakota?

Mr. NASH. I would have to ask Mr. Trier for that detail. He has it right here I think, Senator.

Senator YOUNG. Would you supply it for the record and would you send me a copy?

Mr. NASH. Yes sir.

Senator YOUNG. Thank you.

(The information follows:)

North Dakota:	
Rolette County, Turtle Mountain Reservation: Belcourt-South Rd., 2.3 miles of grading	$65,000
Benson County, Fort Totten Reservation: Matchin School Rd., 7.5 miles of grade and surface	170,000
McLean County, Fort Berthold Reservation:	
Garrison Rd., 14.1 miles of surface	165,000
White Shield Rd., 2 miles of grade and surface	40,000
Dunn County, Fort Berthold Reservation: Mandaree schoolbus route, 16 miles of bituminous surface	80,000
Sioux County, Standing Rock Reservation:	
Cannon Ball Rd., 3.1 miles of grade and surface	60,000
Fort Yates streets, 3 miles of surface	10,000
Various reservations: Surveys and plans	41,000
Total, North Dakota	631,000
Nebraska: Thurston County, Winnebago Reservation: Big Bear Hollow Rd., 5 miles surfacing	47,000
South Dakota:	
Corson County, Standing Rock Reservation: Little Eagle, 6.5 miles of grade and surface	125,000
Ziebach County, Cheyenne River Reservation:	
Cherry Creek bridge, 12.1 miles of surface	60,000
Cherry Creek State 63, 11 miles of grade and surface	285,000
Lyman County, Lower Brule Reservation:	
Little Bend, 6 miles of grade and surface	120,000
Lower Brule streets, 1 mile of surface	20,000
Shannon County, Pine Ridge Reservation:	
Three Mile Creek, 2.5 miles of grade and surface	70,000
Sitting Bear Spur, 1.6 miles of grade and surface	40,000
Manderson Wounded Knee, 9 miles of surface	30,000
Manderson Rockyford, 18.7 miles of surface	220,000
Todd County, Rosebud Reservation:	
Little White River, 3.4 miles of grading, 7.1 miles of surfacing	215,000
Rosebud-St. Francis, 7.3 miles of surfacing	25,000
Ring Thunder Bridge, 120 feet	45,000
Roberts County, Sisseton Reservation:	
Big Coulee East, 3 miles of grade and surface	70,000
Big Coulee Enemy Swim, 9.6 miles of surfacing	27,000
Brown County, area office: Office and engineering	78,000
Various reservations: Surveys and plans	127,000
Total, South Dakota	1,557,000
Total, Aberdeen area	2,235,000

GENERAL ADMINISTRATIVE EXPENSES

Chairman HAYDEN. For general administrative expenses in fiscal year 1967 your request is $4,677,000, $54,000 more than was appropriated in the past fiscal year. Eighteen thousand dollars of this additional amount is for an increase in program. The justification statement submitted will be included in the record.

(The justification follows:)

Total appropriation, 1965		$4,520,000
Appropriation, 1966	$4,520,000	
Pay cost supplemental	103,000	
Total appropriation, 1966		4,623,000

SUMMARY OF INCREASES AND DECREASES, 1967

Departmental office:		
To provide services of resources management assistant	+$18,000	
To provide pay costs for 1966 positions	+11,200	
		+29,200
Field offices:		
To provide pay costs for 1966 positions		+24,800
Net increase, 1967		+54,000
Budget estimate, 1967		4,677,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966		
		Total appropriation	Pay cost supplemental	Amount available
1. Departmental office	$1,315,487	$1,320,000	$31,300	$1,351,300
2. Field offices	3,174,093	3,200,000	71,700	3,271,700
Unobligated balance lapsing	30,420			
Total	4,520,000	4,520,000	103,000	4,623,000

Analysis by activities

	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Departmental office	$1,315,487	$1,351,300	$1,380,500	$29,200	$11,200	$18,000
2. Field offices	3,174,093	3,271,700	3,296,500	24,800	24,800	
Unobligated balance lapsing	30,420					
Total	4,520,000	4,623,000	4,677,000	54,000	36,000	18,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $4,677,000; an increase of $54,000 over 1966.

Need for increase.—The increase of $36,000 is to provide pay costs for 1966 positions.

The increase of $18,000 is requested to cover the salary and personnel benefits of a new position of resources planning assistant, GS–15. Bureau of the Budget Bulletin No. 66–3, dated October 12, 1965, requires each Government agency to establish an integrated planning, programing, budgeting (PPB) system. Secretarial Order No. 2892, dated December 18, 1965, implements this requirement. Implementation and execution of the new system will require a staffing capability not currently available. The incumbent will have primary responsibility for developing and coordinating the service's planning, programing, and budgeting system, and continuing activities in this area of endeavor, based on guidelines and instructions issued by the Bureau of the Budget and Department of the Interior.

Program of work.—The programs of the Bureau are administered from two organizational levels—the Washington Office and the area offices. In the Washington Office, basic policy determinations are made, programs are evaluated, and operating procedures are developed; with the area offices carrying out the various programs and functions.

In the interest of efficiency and economy, the area offices perform the housekeeping functions for services common to all program activities. The benefiting program activities share part of the cost of these services based on the amount of administrative workload the programs create and the funds available to the programs. The Bureau's proposed 1967 administration program totals $6,507,000; of which $4,677,000 is requested under the General Administrative Expenses appropriation, and $1,830,000 allocable to program activities. A comparison of the program follows:

	1965	1966	1967	Change
Share of participating program activities	$1,532,000	$1,662,200	$1,830,000	[1] +$167,800
General administrative expenses appropriation	4,489,580	4,623,000	4,677,000	+54,000
Total administration program	6,021,580	6,285,200	6,507,000	+221,800

[1] Includes $17,800 to provide pay cost for 1966 positions.

The total amount requested for administration, $6,507,000, is approximately 2.7 percent of the total funds requested for the entire Bureau in 1967.

Examples of recent accomplishments. This program provides for carrying out administrative functions which support Bureau program activities. These functions include executive direction, budgeting, accounting, property management, personnel management, and management planning.

There follows a comparison of appropriations and funds available for administration for the fiscal years 1960 and 1965. The comparison reflects a 3.2-to-1 increase in appropriations over funds available for administration.

	1960	1965	Increase	Percent
Appropriations	$115,327,000	$215,825,000	$100,498,000	87
Administration	4,764,000	6,052,000	1,288,000	27

NOTE.—For fiscal year 1965, funds available for administration were 2.8 percent of total appropriations.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$4,489,580	$4,623,000	$4,677,000	+$54,000
Transferred to "Operating expenses, Public Building Service" General Services Administration				
Unobligated balance lapsing	30,420			
Appropriation	4,520,000	4,520,000	4,677,000	157,000
Proposed supplemental due to civilian pay increase (79 Stat. 1111)		103,000		−103,000
Obligations by objects:				
11 Personnel compensation	3,533,457	3,653,000	3,734,000	+81,000
12 Personnel benefits	255,502	281,000	292,000	+11,000
21 Travel and transportation of persons	225,483	235,000	235,000	
22 Transportation of things	11,264	22,000	11,000	−11,000
23 Rent, communications, and utilities	147,558	150,000	150,000	
24 Printing and reproduction	33,949	34,000	34,000	
25 Other services	70,093	70,000	65,000	−5,000
Services of other agencies	90,377	75,000	45,000	−30,000
26 Supplies and materials	66,481	62,000	70,000	+8,000
31 Equipment	41,416	41,000	41,000	
42 Insurance claims and indemnities	14,000			
Total obligations	4,489,580	4,623,000	4,677,000	+54,000

REQUEST FOR NEW POSITION

Chairman HAYDEN. Would you please explain the need for the increased funds to cover a new position of resources planning assistant?

Mr. NASH. Yes, sir. Since the Department of Defense has been very successful in improving its management by a means of program planning and budgeting, or PPB as it is now known, we have been directed by the President and by the Bureau of the Budget to begin to do the same thing throughout all the Departments. That includes, of course, the Bureau of Indian Affairs.

The Bureau of the Budget is asking the Department, and the Department is asking us in the Bureau for very extensive programs: the statements of goals and quantitative measurements of progress toward these goals. All this is all in addition to and on top of the normal budgeting function by which we prepare the estimates that we come in here with this morning.

So this amount will provide for one full-time specialist who will work inside our Bureau and with the Department and with the Bureau of the Budget in coordinating the work of the branches as they are required to meet these requests.

TRIBAL FUNDS

Chairman HAYDEN. The statement which you submitted in connection with tribal funds will be included in the record also.

(The statement follows:)

Funds have been deposited into the Treasury pursuant to various statutory acts of the Congress to be made available for expenditure for the use and benefit of the respective groups. The source of these funds is largely from income derived from Federal management of tribal real properties, the title of which is held in trust by the United States for the tribes. Another significant source is judgments or awards made pursuant to either general or specific statutory authorities enacted by the Congress.

In certain cases, the Congress has enacted legislation which provides the Secretary of the Interior with continuing authority to carry out the provision of the specific acts. Such authorities are referred to as permanent authorizations. Examples of such legilsation are: Fort Peck Indians, Montana (68 Stat. 329), Minnesota Chippewa Tribe of Indians (58 Stat. 271), and the Navajo Indians (64 Stat. 44). Funds covered by permanent authorizations, however, are included in annual budget presentations to give the Congress an opportunity to review the activity conducted under the authorities extended to the Secretary of the Interior.

In the absence of permanent expenditure authorization, annual appropriation by the Congress is required to permit the use of the funds. Such authority is provided annually in the Department of the Interior Appropriation Act and covers two categories: (1) Annual definite; and (2) annual indefinite.

Annual definite encompasses the use of funds, primarily, of those tribes who are not sufficiently organized to be represented by a recognized governing body. Funds programed under this type of authorization are not otherwise available for expenditure without congressional action and the $3 million requested for fiscal year 1967 is to provide the Secretary of the Interior with expenditure authority for the execution of programs, including such items as education of Indian children attending public or private schools, purchase of land and improvement thereon, compensation and expenses of tribal officers, councils, committees, and for various other purposes benefiting the particular Indian tribes. Expenditures made under this authority are individually made through Treasury regional disbursing offices, subject to the same regulations and procedures as appropriations from the general fund of the Treasury.

The annual indefinite authorization in the Appropriation Act provides the necessary authority, on an annual basis for the Secretary of the Interior, for such purposes as are designated by a particular tribe, to withdraw from the tribal accounts in the Treasury amounts which are to be advanced to bonded tribal treasurers of organized tribes to carry out programs approved by the Secretary and the conduct of tribal operations, including, but not limited to, management of tribal resources and other programs designed to improve the situation of the general membership.

Approximately 300 Indian tribes, bands, or identifiable groups have approximately 600 accounts in the U.S. Treasury which are used for the conduct of tribal financial programs, enterprises, businesses, and other tribal affairs. These funds are available for various purposes, under various acts of Congress, and are also subject to the provisions of tribal constitutions, bylaws, charters, and resolutions of the various tribes, bands, and groups.

Tribes who need their own funds which are on deposit in the U.S. Treasury are required to prepare budgets for approval. Tribal funds are programed under three categories; namely, permanent authorization, annual authorization, and indefinite authorization.

Funds programed under the permanent authorization are made available under various acts of Congress and can be disbursed either through the Treasury disbursing offices or advanced to a tribe for disbursement through the Indian Service disbursing agent's accounts or advanced to a tribe for disbursement by a bonded tribal treasurer under an approved plan of operation. These funds do not require annual approval by Congress, but are reported annually in the budget schedules. Funds programed under the annual authorization are disbursed through the Treasury disbursing offices, subject to the same procedures and limitations as appropriated gratuity funds and require annual approval by Congress. Funds programed under the indefinite authorization are made available under the annual Interior Department Appropriation Act under the heading "Tribal Funds." There, funds are advanced to tribes for disbursement by Indian disbursing agents or by bonded tribal treasurers under a plan of operation. Some Indian tribes employ more than one of the above methods in conducting their affairs. The following proviso makes these funds available: "* * * *Provided*, That, in addition to the amount appropriated herein, tribal funds may be advanced to Indian tribes during the current fiscal year for such purposes as may be designated by the governing body of the particular tribe involved and approved by the Secretary: Provided further, That funds derived from appropriations in satisfaction of awards of the Indian Claims Commission and the Court of Claims shall not be available for advances, except for such amounts as may be necessary to pay attorney fees, expenses of litigation, and expenses of program planning, until after legislation has been enacted that sets forth the purposes for which said funds will be used: * * *"

In the last 10 to 15 years, many tribes have progressed to the point that they have taken over the management of their affairs and the disbursement of their funds under a plan of operation previously approved by the Secretary and it is the policy of the Bureau to encourage tribes in this respect. Annual audits made of tribal funds by certified accountants of commercial auditing firms are submitted to the Bureau for review and information.

Indian tribal funds

	1965	1966	1967
1. Permanent authorization			
2. Annual authorization	$2,198,256	$3,000,000	$3,000,000
3. Indefinite authorization			
Total	2,198,256	3,000,000	3,000,000

Comparative statement of annual authorization activities

	1965	1966	1967
1. Education and welfare services	$103,376	$96,188	$100,308
2. Resources management	816,284	943,947	878,182
3. Construction and land acquisition	345,431	358,062	359,500
4. General tribal affairs	933,165	1,601,803	1,662,010
Total	2,198,256	3,000,000	3,000,000

Analysis of annual authorizations by activities

Activities	1966	Deductions	Additions	1967
1. Education and welfare services	$96,188		$4,120	$100,308
2. Resources management	943,947	$65,765		878,182
3. Construction and land acquisition	358,062		1,438	359,500
4. General tribal affairs	1,601,803		60,207	1,662,010
Total	3,000,000	65,765	65,765	3,000,000

Analysis of activities

Activity	Amount available, 1965	Amount available, 1966	Estimate, 1967	Increase (+) or decrease (−)
1. Education and welfare services	$103,376	$96,188	$100,308	+$4,120
2. Resources management	816,284	943,947	878,182	−65,765
3. Construction and land acquisition	345,431	358,062	359,500	+1,438
4. General tribal affairs	933,165	1,601,803	1,662,010	+60,207
Total	2,198,256	3,000,000	3,000,000	

Statement relating to 1965, 1966, and 1967 programs

1965 appropriation (annual authorization)		$3,000,000
1966 budget estimates (annual authorization, including supplementals submitted to Congress)		3,000,000
Total appropriations for 1966		3,000,000
Deductions:		
Health	$250	
Education	3,000	
Forest and range lands	12,167	
Economic development	50,000	
Management of Indian trust properties	981	
Repair and maintenance of facilities	8,136	
Equipment	3,562	
Attorney expenses	5,300	
Tribal officers and council expenses	5,420	
Miscellaneous expenses	300	
		89,116
Subtotal		2,910,884
Additions:		
Welfare	$2,000	
Law and order	5,370	
Agricultural extension	2,400	
Credit	2,333	
Soil and moisture conservation	786	
Purchase of land	5,000	
Administration expenses	9,324	
Miscellaneous tribes	61,903	
		89,116
Total estimate for 1967 (annual authorization)		3,000,000

Program of work.—No part of the funds contained in this estimate represents a charge upon the Federal Treasury. This item reflects the disbursement of funds to the credit of Indian tribes or bands under numerous special acts of Congress in compliance with the terms of the various trusts and for carrying out tribal programs recommended by the tribal governing bodies with the approval of the Commissioner of Indian Affairs.

The budget schedule reflects under the permanent authorization disbursements from the tribal trust funds authorized by permanent legislation, and under the annual and indefinite authorizations amounts requested annually by the various tribes for carrying out various tribal activities.

The estimate, therefore, is restricted to the funds requested annually as required by section 27 of the act of May 18, 1916 (39 Stat. 158).

Examples of recent accomplishments.—All amounts in the estimate have been requested properly by the Indians except the sum of $1,213,239 shown for miscellaneous tribes in the following tabulation. The amount under miscellaneous tribes is required to provide for additional resolutions that can be anticipated during the fiscal year.

Comparative statement of annual authorization by tribes

State-Agency-Tribe	1965	1966	1967
Alaska: Juneau area, Moqwawkie Indian Reservation, Native Village of Tyonek	$26,418	$44,000	$44,000
Arizona	61,511	55,000	55,000
Fort Apache Agency, White Mountain Apache	35,219	35,000	35,000
Pima Agency, Maricopa Colony	6,500	----------	----------
Salt River Agency, Salt River, Pima, Maricopa	6,170	10,000	10,000
San Carlos Agency, San Carlos Apache	13,622	10,000	10,000
California	206,495	301,675	335,500
Agua Caliente	64,787	72,000	71,595
Barona	278	525	525
Baron Long	301	650	650
Hoopa Valley	82,454	81,000	115,570
Morongo	1,314	----------	2,040
Round Valley	6,613	8,500	8,500
Tule River	42,857	39,000	36,620
Certain Indians of California (distribution of claims)	7,891	100,000	100,000
Idaho: Northern Idaho Agency, Nez Perce	71,777	20,225	20,225
Minnesota: Red Lake Agency, Red Lake	44,030	47,242	51,875
Montana	227,960	251,960	227,000
Blackfeet Agency, Blackfeet	14,385	1,960	2,000
Fort Peck Agency, Fort Peck	213,575	250,000	225,000
New Mexico	60,407	93,487	93,487
Jicarilla Agency, Jicarilla	44,417	55,961	55,961
Navajo, Ute Mountain	10,123	30,000	30,000
Zuni Agency, Zuni	5,867	7,526	7,526
North Dakota: Fort Berthold Agency, Three Affiliated Tribes	6,927	11,405	11,405
Oklahoma	1,060,220	519,260	461,610
Five Civilized Tribes:			
Cherokee	37,559	86,135	39,835
Choctaw	19,545	24,545	19,545
Chickasaw	8,254	15,350	9,000
Creek	16,808	20,750	20,750
Seminole	15,433	20,045	20,045
Osage Agency, Osage	386,434	352,435	352,435
Otoe and Missouri	166,377	----------	----------
Kiowa, Comanche, and Apache	3,041	----------	----------
Miami Tribe, Oklahoma	40,648	----------	----------
Cherokee Band of Shawnees of Oklahoma	2,887	----------	----------
Ottawa Band of Blanchard's Fork	40,585	----------	----------
Delaware Nation of Indians	105,770	----------	----------
Iowa Tribe of Oklahoma, Kansas, and Nebraska	122,226	----------	----------
Sac and Fox Tribe of Oklahoma, Missouri, and Mississippi	94,653	----------	----------
Oregon: Warm Springs Agency, Umatilla Subagency, Umatilla	16,905	13,660	13,660
Washington	369,434	390,750	372,999
Colville Agency:			
Colville	83,844	66,047	67,703
Spokane	30,659	19,000	19,000
Western Washington Agency:			
Hoh	10,835	----------	----------
Makah	----------	9,000	10,000
Puyallup	8,000	15,000	10,000
Quinault	14,287	15,000	10,000
Shoalwater	750	800	800
Yakima Agency, Yakima	221,059	265,903	255,496
Wyoming	46,172	100,000	100,000
Wind River Agency:			
Arapahoe	23,086	50,000	50,000
Shoshone	23,086	50,000	50,000
Miscellaneous tribes	----------	1,151,336	1,213,239
Grand total	2,198,256	3,000,000	3,000,000

ADMINISTRATIVE PROVISIONS

MOTOR VEHICLE PURCHASES

Chairman HAYDEN. I shall place in the record your statement supporting your request to purchase 93 passenger motor vehicles, of which 70 will be for replacement.

(The statement follows:)

The language provides for the purchase of 93 vehicles, of which 70 shall be for replacement only. Included in the 23 additional vehicles are 8 police-type vehicles needed to carry out the Bureau's responsibility in the area of law and order, and 15 buses to meet the additional needs in transporting pupils to and from schools.

SCHEDULE FOR NEW CAR PLACEMENT

Chairman HAYDEN. Where do you propose to place the 23 new cars?

Mr. NASH. Mr. Massey has a schedule of that. May we put that in the record, Mr. Chairman?

Chairman HAYDEN. All right.

Mr. NASH. Thank you.

(The schedule follows:)

PASSENGER VEHICLES, 1967 BUDGET YEAR

Class	Acquisitions	Replacements
Sedans	63	56
Station wagons	13	12
Buses	17	2
Total	93	70

NOTE.—Of the 23 additional, 8 are police type, 15 are buses; of the 70 replacements, 35 are police type.

Breakdown (form 80 budget report)

Area	Sedans		Station wagons		Buses		Total	
	Acquisition	Replacement	Acquisition	Replacement	Acquisition	Replacement	Acquisition	Replacement
Aberdeen	24	24	8	8	1	1	33	33
Anadarko								
Billings	3	3					3	3
Gallup	13	6			15		28	6
Juneau	1	1	1				2	1
Minneapolis	6	6	1	1			7	7
Muskogee								
Phoenix	5	5					5	5
Portland	10	10	2	2	1	1	13	13
Sacramento	1	1	1	1			2	2
Seminole								
Cherokee								
Miccosukee								
Arts and crafts								
Plant design and construction								
Total	63	56	13	12	17	2	93	70

INDIAN PARTICIPATION IN ANTI-POVERTY PROGRAMS (ECONOMIC OPPORTUNITY ACT)

Chairman HAYDEN. I was talking with a group of Navaho Indians this morning about projects by the Office of Economic Opportunity. What is your cooperation there?

Mr. NASH. We are very happy with the Office of Economic Opportunity programs and I have a report which I would be glad to offer for the committee's examination and for the record if the committee cares to put it in.

Chairman HAYDEN. I think it would be well to include it in the record.

Mr. NASH. Yes, sir.

(The report follows:)

TITLE I–A—JOB CORPS CONSERVATION CENTERS

The Job Corps program established under Title I–A of the Economic Opportunity Act of 1964, provides for Job Corps Youth Conservation Centers. The objective of the program is to provide a complete residential program of basic and general education, vocational education, professional guidance and counseling, skills training and constructive work experience for underprivileged young men aged 16–21 years. The overall mission is to prepare young men for the responsibilities of citizenship, to increase their employability by providing them with education, personal and social enrichment, skills, developmental work experience and other appropriate activities.

The centers under the jurisdiction of the Bureau of Indian Affairs are located on or adjacent to Indian reservations and accommodate from 100–224 young men in a residential living situation. The Corpsmen spend approximately one-half of their time performing long-needed conservation work under the direction of experienced conservation men. During the rest of their time they are involved in the educational program—both basic, general, and vocational. The education program is integrated with the work program, and each influences and depends upon the other.

The Bureau of Indian Affairs has been authorized and funded to construct and operate 10 conservation centers in 6 States on 9 Indian reservations as follows:

State and reservations:	*Center name*
Arizona:	
Colorado River	Poston.
San Carlos	San Carlos.
Navajo	Winslow.
Minnesota: White Earth	Chippewa Ranch.
Montana: Flathead	Kicking Horse.
New Mexico:	
Mescalero	Eight Canyon.
Navajo	Mexican Springs.
South Dakota: Cheyenne River	Swift Bird.
Washington:	
Makah	Neah Bay.
Yakima	Fort Simcoe.

Indian young men are eligible to apply for participation in the Job Corps program and if qualified, may be assigned to any Job Corps Center.

Centers operated by this Bureau are not exclusively or even predominantly for Indian youth.

There has been considerable interest from many Indian groups in having Job Corps Centers established on their reservation and where Centers have been established, there has been good support from local tribal members.

TITLE I–B—WORK TRAINING

(Neighborhood Youth Corps)

This program is limited by statute to young men and women, ages 16–21, with a primary aim of encouraging completion of high school, or qualification for employment.

These programs on Indian reservations are generally sponsored by tribal councils, as BIA schools (and other Federal agencies) cannot act as sponsors. The work programs are closely related to long-range tribal programs, but in no instance do they duplicate or replace any BIA or tribal programs for which funds or staff were allocated.

More than 15,000 Indian youth ages 16–21, were enrolled in some 65 programs during the summer months of 1965 at a cost of more than $10 million. Most of the summer programs were so successful that the sponsors immediately applied for approval to operate the programs during the school year, and approximately 35 predominantly Indian programs are now in operation, serving some 11,000 enrollees, with 12 additional programs now expecting approval soon, to serve an additional 4,000 enrollees. The cost of these current programs will exceed $16,000,000.

Many Indian communities have had their NYC proposals returned to them, to be resubmitted if additional funds become available. Participation will increase rapidly if programs can be funded.

If funds are available to fund these additional programs during the latter part of FY 1966, the total NYC funds spent this year on predominantly Indian programs could exceed $17,500,000 to serve about 17,000 students. If sufficient funds are available in FY 1967, $20,000,000 could be utilized for NYC programs with predominantly Indian participation to serve some 19,400 students.

Title I–C—Work Study

It continues to be difficult to qualify students for participation in this program, because of the very low family income provisions.

Assignment of this program to Office of Education (under the Higher Education Act) should result in some relaxation of these requirements. However, so far as we can determine off-campus work study programs are now assigned at only one location—Wahpeton, N. Dak. Cherokee, N.C., operated such a program last summer.

There is a great deal of interest from many Indian groups in having such programs assigned to their reservations. In no instance will these students replace present employees, or accomplish work projects for which the BIA was staffed or funded. Based on such limited experience, it is not possible to predict the extent of Indian participation in work study programs.

Title II–A—Community Action Programs

As of February 1, 1966, 49 community action programs identifiable as Indian sponsored, or with heavy Indian participation have been approved with a total funding or more than $7,325,000. An additional 24 such programs are now being considered or are pending consideration at OEO.

These community action programs cover a wide variety of activities, such as preschool, day care, supervised study, remedial reading, health aids, homemaking, recreation, etc. These functions are coordinated with existing BLA programs, but in no instance do they replace present staff or perform duties for which the BIA is staffed or funded. However, if these programs successfully arouse and motivate Indian communities to accept and require higher social standards, additional BIA services will be required to meet the needs and demands of Indian people.

Several of the 49 community action programs now funded are for "program development grants" only—actual establishment of active programs will require much larger allocations of funds. If these 49 are continued, and additional programs are approved, at least $20 million of community action program funds could be utilized in Indian communities in fiscal year 1967.

Headstart

(A Community Action Program)

This preschool program, involving children and parents, was extremely popular in Indian communities. During the summer of 1965, about 10,000 Indian youngsters participated in head start programs which were attended by Indian and non-Indian together, sponsored by local non-Indian groups. In 20 communities, with almost entirely Indian population, some 1,645 Indian children attended Headstart programs sponsored by tribal groups. OEO's funding of these programs with primary Indian participation approximated $3,225,000.

Emphasis is now being placed on making "Headstart" a year-round activity, and most of these programs will, in the future, be funded as components of community action, and will be reported as a part of community action programs.

Title II-B—Adult Basic Education

Although some Indians are participating in these programs as individuals, to the best of our knowledge no such programs are operating at present on reservations in areas with predominantly Indian population.

However, several such locations are now showing interest, and it is expected that some programs will be in operation in fiscal year 1967. It is not possible to predict the extent of their participation.

Title III—Special Programs To Combat Poverty in Rural Areas (Small Loans Through FEA)

During the last half of fiscal year 1965, title III loans reportedly obtained by Indians totaled 392, amounting to $759,189. During the first half of fiscal year 1966, these loans totaled 391, and amounted to $705,711. These loans were for such items as purchase of cattle, garage tools, arts and crafts shop, barber shop, farm machinery, fishing equipment (Alaska), etc.

These loans have not always been coordinated with tribal and BIA credit representatives, resulting in establishment of less than economic units, cattle being purchased without adequate provision for range facilities, etc.

Projecting the above statistics, we could expect approximately 780 loans, totaling about $1,465,000 during fiscal year 1966, and about the same activity in fiscal year 1967.

Title IV—Employment and Investment Incentive (SBA)

This title provides for rather sizable loans, primarily to establish enterprises. SBA has been reluctant to arouse hope for these loans, because practically no funds are available this year for such loans.

We can expect a considerable amount of activity if funds are available, but have practically no experience on which to base an estimate.

Title V—Work Experience Programs

As of February 1, 1966, only two title V programs were approved and in operation on reservations—Turtle Mountain Agency, North Dakota ($498,000), and Fort McDermitt, Nev. ($187,700). Constructive and needed work projects—conservation, recreation development, building access roads, beautification, etc., are being accomplished under this title.

The BIA has found that operation of this program at Turtle Mountain Agency has resulted in considerably increased expenditures of general assistance funds, beyond that anticipated for this fiscal year—however, it is generally felt that, in addition to work accomplished, some families have shown additional social responsibilities (for example, bringing children back from boarding school into home, etc.). It is too early to assess the changes of attitudes which may develop from this program.

Reluctance of States to legislate to authorize payments of ADC funds to employable parents (AFDC–UP) has prevented many interested reservation areas from establishing Title V programs. A positive move in this direction is required if title V programs are to be approved. If States do take steps in this direction, reservation-based Title V programs will expand greatly.

It is impossible to predict this activity for FY 1967; however, if funds were available everywhere, Indian title V programs could probably utilize at least $20 million in FY 1967, on worthwhile work projects to which many unemployed adult Indian workers could be assigned.

Again, these workers will not replace present BIA employees and the work projects to which they are assigned will not duplicate or replace projects for which funds have been appropriated.

Title VI—VISTA

(Volunteers in Service to America)

More than 55 Indian communities have requested assignment of more than 500 VISTA workers. By January 1, 1966, 238 had been assigned, and the total

should reach at least 300 by the end of FY 1966. At an estimated value of $3,350 per VISTA per year, this would represent a total of $1,005,000.

If suitable volunteers can be recruited and trained, the total assigned could reach 500 in FY 1967 at an estimated dollar value of $1,675,000.

In no instance do these VISTA's replace present BIA personnel, or do work projects for which funds have been appropriated to the BIA.

Indian Participation in OEO Programs

Title I–A—Job Corps conservation centers

BIA conservation center program	Fiscal year 1965	Fiscal year 1966	Fiscal year 1967
Center construction and equipment	$4,837,910	$6,851,030	
Center operation	1,077,620	6,720,000	$9,158,930
Total	5,915,530	13,571,030	9,158,930

Number of federally operated conservation centers authorized:	
Total Job Corps program	88
Interior Department	41
BIA	10
Enrollee capacity of authorized centers:	
Total Job Corps program	15,000
Interior Department	7,116
BIA	1,679
Value of work project accomplishments to date	$245,000

	Fiscal year 1965	Fiscal year 1966 (estimate, based on 1st ½ year.)	Fiscal year 1967 (estimate could use effectively if funds available)
Title I–B: Neighborhood Youth Corps.	46 programs, mostly May–June 1965. 12,000 Indian youth. Some tribal sponsored. Many non-Indian sponsored. Cost $5,300,000 Neighborhood Youth Corps funds (comparably nationwide, approximately $125,000,000 obligated, serving 160,000 youth).	57 programs approved (including some operated August–September 1965). 15,000 enrollees. Cost $10,000,000 (comparably nationwide, approximately $160,000,000 obligated to serve 175,000 youth).	75 programs (year-round). 20,000 enrollees. Cost $20,000,000.
Title I–C: College work study.	(1)	(1)	(1).
Title II–A: Community action programs.	26 programs approved, cost $3,682,323 (comparably nationwide, rural program funds obligated, including Indian, $9,500,000). (Total nationwide CAP funds $250,000,000.) Head Start, 10,000 children, $3,225,000.	59 programs, cost $9,150,000. (1st programs usually small, program development grants. Components will be added, more expensive each year.)	74 programs. $20,000,000 cost.
Title II–B: Adult basic education.	(2)	(2)	(2)
Title III (FHA): Small loans.	392 loans. $759,189 cost.	780 loans. $1,465,000 cost.	780 loans. $1,465,000 cost.
Title IV (SBA): Employment and investment incentives.		7 loans. $200,300	Will be considerable interest, not possible to predict.
Title V: Work experience (HEW).	2 programs. (Started about Apr. 15, 1965).	2 programs (carryover). $679,100.	Could utilize 40 programs. $20,000,000 cost.
Title VI: VISTA (estimated value $3,200 per man-year).	99 workers. $331,650	300 workers. $1,005,000	500 workers. $1,675,000.

[1] Very limited participation, insufficient on which to base predictions.

[2] No appreciable amount of activity, cannot predict future activity. Best Indian participation thus far is in eastern Oklahoma, in mixed programs.

Job Corps Conservation Centers

Mr. Nash. In quick summary I can say that under the title 1–A, the Job Corps Conservation Centers, we are operating six. We will be operating 10, and this is very good from the standpoint of the reservation communities, and for the conservation work that is done under their division.

We have had a comparatively small number of Indian young men who are interested in signing up with the Job Corps. They prefer the adult vocational training program which is available to them because of their Indian status and is not available to the others.

In the whole country I think there are only about 250 Indian enrollees in the Job Corps. Is that correct?

Mr. Finale. 250 in all of the Job Corps centers, the conservation and the urban centers.

Mr. Nash. In the whole program.

Work Training Program (Neighborhood Youth Corps)

Now, in title 1–B the work training program, the so-called Neighborhood Youth Corps, we had 15,000 Indian young people, both boys and girls, between the ages of 16 and 21 that were enrolled in 65 programs during the summer of 1965.

And, it looks as though that would be increased this coming year provided OEO is funded for it.

I think this will have a tremendously beneficial effect on the high school dropout. The reason I say that, Mr. Chairman, is that in our own Federal schools, when we started to work on the dropout problem, one of the first things we did was to save as much summer work for the Indian young people as possible.

This was a much smaller scale program that what the Neighborhood Youth Corps amounts to. I think the most jobs we got was about 1,100. So we had 1,100 where they had 15,000; but during the years that that summer work program for high school age young people has been in effect on the reservations we have brought our dropout rate in the Federal schools down to where it is no higher than it is for the non-Indians in the country as a whole. I would expect the same thing to happen in the public schools now.

Community Action Programs

The community action programs are very popular on the reservations. As of February 1, this, year there were 49 community action programs with Indian sponsors, or with very large Indian participation, and 24 additional programs are being considered or are actually pending over at OEO.

They cover a wide variety of activities: preschool, day care, supervised study, remedial reading, use of health aids, homemaking, recreation, and there are, of course, locally developed programs.

Each program has come right out of the Indian people themselves. We look forward to many more of these and hope that the program continues for a long time.

HEADSTART (PRESCHOOL PROGRAM)

Headstart, the preschool program, was very successful on the reservation, very popular. During the summer of 1965 10,000 Indian children participated in Headstart programs which were attended by Indians and non-Indians, sponsored by local non-Indian groups.

Then in 20 communities with almost solid Indian population, about 1600 children attended Headstart programs under the sponsorship of the tribes. So that we look to this as a major input to the education program.

PROGRAM TO COMBAT POVERTY IN RURAL AREAS

Now, under title 3, the special programs to combat poverty in rural areas, in the last half of fiscal year 1965 there were 392 loans totaling about $760,000. In the first half of fiscal 1966, in other words, the last 6 months of last year, the rate was about the same. This is not a lot of money compared to the Indian need for credit, but it is helpful and we hope to see it grow.

EMPLOYMENT AND INVESTMENT INCENTIVE

Title 4, the employment and investment incentive, the small business administration part of the war on poverty, has not amounted to much as far as the Indian country is concerned because there are practically no funds available for loans over there.

WORK EXPERIENCE PROGRAM

Title 5 is the work experience program and we have only two of those, at Turtle Mountain and at Fort McDermitt in Nevada, I might comment on our experience here that this has had the effect of raising the general assistance costs quite markedly because this is a program whereby you continue to receive general assistance although money is provided to gain the work experience at the same time. This, I may say, is very popular. The result is that it is raising our general assistance cost. It is a good program, but it is expensive to us.

Mr. Rovin, do you care to comment on that?

Mr. ROVIN. Yes. This is right. I would like to emphasize that we do believe it is a good program because people are actually working now whereas they weren't before; but in accordance with the HEW's interpretation of their responsibility, we continue our general assistance and they supplement it by an additional amount. In order to get in this work experience with the training component it is necessary that these projects continue.

So, whereas formerly these people might have been out in seasonal work, now they are engaged in the work experience and training project. I consider it is worthwhile, but we are paying for it.

VOLUNTEERS IN SERVICE TO AMERICA (VISTA)

Mr. NASH. Finally, in conclusion on this economic opportunity matter, is VISTA, the Volunteers In Service To America. There has been some publicity about VISTA workers on the reservations indicating that there was difficulty. I would just like to say for the record, Mr. Chairman, that these are only two instances out of 300 VISTA workers that are now on the reservations.

Excuse me, that 300 is too large; 238 have been assigned by January of this year, so that 2 out of more than 200 is not a lot. The Indian people like them. The communities want them. They are doing valuable work, providing much needed assistance, and the Indians hope that they get a lot more of them and so do we.

REPORTING BY NAVAJO RESERVATION

Chairman HAYDEN. The only complaint I had in regard to this matter was that the Navajo Reservation was in three States and had to report to three headquarters, whereas they could report directly to the Indian Affairs Bureau.

We thank you for your statement.

LACK OF APPLICATION OF EDUCATION ACT TO INDIAN STUDENTS

Mr. NASH. Mr. Chairman, there is one thing that I ought to have put in my highlight statement that my associates call to my attention now.

The Elementary and Secondary Education Act as it is now written is not going to provide any benefits to Indian students in the Federal schools.

It will provide great benefits to Indian students in the public schools. Accordingly, we have been working with the Office of Education in the Department of Health, Education, and Welfare to see whether the necessary changes in the act can be brought about so that an injustice will not be done to the Indian children who are at present being counted for benefits in the public schools, while the benefits do not go to the schools that they are actually attending, that is, to the Federal schools.

This may or may not prove successful. We, of course, hope it will. If it should not prove successful it is possible that we might be asking the Bureau of the Budget for permission to come in for a supplemental so that the Indian children will not be denied the opportunity that other children are getting for quality education. The right way to do it is by a change in the Elementary and Secondary Education Act and that is the route that we are pursuing.

Chairman HAYDEN. I have been asked to present to you questions which would have been asked by committee members if they could have been present. I will place these questions in the record and ask that you provide appropriate responses.

(The questions and answers follow:)

QUESTION SUBMITTED BY SENATOR MUNDT

AID TO EDUCATION AT ST. CHARLES, S. DAK.

Question. The last paragraph on page IA 9 of your justifications discusses aid available to schools for education of Indian children. Last year we discussed at these hearings, and since then we have had considerable correspondence, the situation at St. Charles, South Dakota. So far no one at the Bureau has come up with the answer as to how we can help St. Charles obtain adequate facilities. In the light of the discussion on page IA 9 could you have someone reevaluate the situation and provide a report to my office?

Answer. Although there are approximately 50 Indian children who attend the St. Charles Public School in Gregory County, South Dakota, and the Bureau pro-

vides a substantial annual operational sum to assist in their educational costs under authority of the Johnson-O'Malley Act, we have no general authority for construction assistance to public schools. Through close coordination with the U.S. Office of Education, Department of Health, Education, and Welfare, we are advised that St. Charles is ineligible for a construction grant partially at least because the district has not bonded itself to the capacity allowable under State law as is required before assistance can be obtained under Public Law 815. The only way the Bureau of Indian Affairs could assist the St. Charles Public School obtain additional facilities is for the Congress to provide the necessary authority and funds for transfer to the public school district.

Mutual-Help Housing Projects in South Dakota

Question. On page IA–50 of the justifications you discuss mutual-help housing projects. Will you please send to my office a report on the mutual-help projects in our South Dakota reservations?

Answer. Seven South Dakota tribes have undertaken public housing projects. The Oglala Sioux Housing Authority has completed 150 conventional low-rent units. The following housing authorities have conventional low-rent units completed or under construction: Cheyenne River, 54; Crow Creek, 50; Lower Brule, 30; Standing Rock-McLaughlin, 60; and Rosebud, 92. Sisseton has recently established a housing authority and is in the process of preparing an application for program reservation.

The Oglala Sioux Housing Authority and the Rosebud Housing Authority each have a program reservation from the Public Housing Administration for 50 mutual self-help houses.

We are assisting the Rosebud Housing Authority in preparing a development program for these mutual-help units so that funds can be committed by PHA, and construction can be initiated during the next building season.

Road Construction in South Dakota

Question. Please provide my office with a breakdown of roadwork to be done in South Dakota as outlined on page IA–55 of the justifications. I would like the same type of breakdown for that portion of the $2,235,000 discussed on page IA–161 that will be spent for road work in South Dakota.

Answer. Breakdown of portion of amount on page IA–55:

Road maintenance

	Miles	Amount
Cheyenne River agency	364	$60,200
Pierre agency	169	50,100
Pine Ridge agency	534	105,200
Rosebud agency	172	55,200
Sisseton agency	55	22,100
Aberdeen area office		58,000
Total road maintenance, State of South Dakota	1,294	350,800

Breakdown of portion of amount on page IA 161:

Road construction

Corson County, Standing Rock Reservation: Little Eagle, 6.5 miles of grade and surface	$125,000
Ziebach County, Cheyenne River Reservation:	
Cherry Creek bridger, 12.1 miles of surface	60,000
Cherry Creek State 63, 11.0 miles of grade and surface	285,000
Lyman County, Lower Brule Reservation:	
Little Bend, 6.0 miles of grade and surface	120,000
Lower Brule streets, 1.0 mile of surface	20,000
Shannon County, Pine Ridge Reservation:	
Three Mile Creek, 2.5 miles of grade and surface	70,000
Sitting Bear Spur, 1.6 miles of grade and surface	40,000
Manderson Wounded Knee, 9.0 miles of surface	30,000
Manderson Rockyford, 18.7 miles of surface	220,000
Todd County, Rosebud Reservation:	
Little White River, 3.4 miles of grading, 7.1 miles of surfacing	215,000
Rosebud-St. Francis, 7.3 miles of surfacing	25,000
Ring Thunder Bridge 120 feet	45,000
Roberts County, Sisseton Reservation:	
Big Coulee East, 3.0 miles of grade and surface	70,000
Big Coulee Enemy Swim, 9.6 miles of surfacing	27,000
Brown County, area office: Office and engineering	78,000
Various reservations: Surveys and plans	127,000
Total road construction, South Dakota	1,557,000

Clothing Needs for Boarding School Students

Question. Several of my constituents have contacted me regarding the allowance for clothing and incidentals for the children at the Indian schools. I am informed that many times the Bureau employees are forced to pay this type expense out of their own pockets. Has this problem come to the attention of the Bureau and do you have any plans for taking care of the matter?

Answer. The Bureau is aware of the clothing needs of boarding school students who have no parental source of help. Because many are orphans and many come from broken impoverished homes they arrive at school with no change of clothing or without adequate severe weather clothing. Bureau school personnel have attempted to provide for the most urgent needs from school operating funds but have not been able to make provision of adequate clothing and other incidentals for all who need this help. It is estimated that an additional amount of $500,000 would meet these needs and it is our plan to request funds for this purpose as soon as it can be done within established budget priorities.

Students are given opportunities to earn money for incidentals wherever this is possible. Schools located near metropolitan areas have active weekend placement programs and a number have work study programs developed with the aid of the Office of Economic Opportunity. The number of schools which can provide earning opportunities for students is limited by age of the children, isolation, etc.

Pine Ridge, S. Dak.

LIGHTING

Question. I have been contacted concerning the lighting situation at Pine Ridge. Apparently only a couple of the main intersections are lighted at night. The fact that other streets are not lighted leads to many problems. Since the Bureau has so many activities headquartered at Pine Ridge is there any way that you could help provide adequate lighting for the town?

Answer. Electrical energy for the town of Pine Ridge is provided by an independent cooperative which also provides electricity for the Bureau's agency located adjacent to this town. The Bureau provided for the installation of street and area lighting within the Government complex. It is suggested that the town people approach the electrical cooperative looking toward arrangements for street lighting for the Indian community.

LAW AND ORDER PROGRAM

Question. The tribal council at Pine Ridge has contacted me about the law and order program there. They tell me that the Bureau is allocating about $181,000 for law and order programs whereas a total of at least $275,000 is needed for an adequate program. Do you have any plans to help improve this situation?

Answer. The amount requested for law and order for the fiscal year 1967 does not include any additional funds for Pine Ridge.

GRASS MOUNTAIN-ST. FRANCIS ROAD

Question. Last year we had discussion about the Grass Mountain-St. Francis Road. Your people provided me with the attached background statement on the need for the road. Do you have plans in this years budget to do this vitally needed road work?

Answer. The Grass Mountain-St. Francis Road is one of the roads essential to the development of the Little White River Valley but is not included in the 1967 program. Rosebud Agency officials and the Rosebud Tribal Council established priorities in accordance with service to the Indian people and the development of the recreational area. This road does not directly serve any Indian homes along the 4.5 mile length of the project; it provides a shortcut between Grass Mountain and St. Francis. The project is tentatively scheduled for the 1971 fiscal year.

INDUSTRIAL PLANTS ON SOUTH DAKOTA RESERVATIONS

Question. Please give me a rundown on the present status of the industrial plants on the various South Dakota reservations.

Answer. The present status of the industrial plants on the South Dakota reservations is—

Crow Creek.—Sioux Manufacturing, Inc., Fort Thompson, S. Dak.: Company established in November 1964 to manufacture automotive mufflers. It was estimated that at capacity operations, a total of 54 workers, including 50 Indians would be employed. As of December 31, 1965, the company had a work force of 11, including 10 Indians.

Lower Brule.—CalDak Electronics, Inc.: Manufacturer of electronic parts and transistors. Agreement to establish a facility on the reservation was reached in June 1965 and company became operational in December 1965 with a work force of eight, including seven Indians. At capacity operations, we estimate the work force will number 31, including 30 Indians. The Bureau has negotiated with the company for an on-the-job training contract for fiscal year 1966 for 16 Indian trainees.

Pine Ridge.—Wright & McGill Co.: Established in March 1961 as a branch of a large Denver-based manufacturer of sporting equipment. The operation affords seasonal employment in snelling fishhooks: seasonal employment peaks at about 200; off-season, 90. As of December 31, 1965, 200 Indians were employed.

Manderson tent project, Manderson, S. Dak.: This project, a tribal enterprise to manufacture tents, was started in June 1963 and went out of business in the third quarter of 1964. During its operating period, the project employed a maximum of eight Indians on a seasonal basis.

Rosebud.—Rosebud Manufacturing Co.: Agreement to establish an operation on the reservation was reached in November 1965, with a production target date of February 1966. The plant will manufacture vanitories, cabinets, prehung doors and windows, and has an estimated capacity workforce of 50, including 30 Indians.

Sioux Dairy Cooperative, Mission, S. Dak.: This cheese manufacturer was established on the reservation in 1964. As of December 31, 1965, a total of nine workers were employed, including two Indians.

Sisseton.—Swiss Precision Industrial Armament Corp.: This company is a branch of Herters, Inc., a large sporting goods manufacturer based in Waseca, Minn. The present plant is an outgrowth of an original contact with the company in 1958 and a visit to the area by company officials in 1961. The present agreement was reached in November 1965 and calls for the establishment of an 11,600-square-foot facility to manufacture 12-gage shotgun shells. It is expected that the company will employ 40 workers in 2 shifts when it becomes fully operational. Target date for start of manufacturing is March 1, 1966.

Standing Rock-Cheyenne River.—Products Miniature Co., Inc., Mobridge, S. Dak.: Negotiations for the establishment of this branch of a Pewaukee, Wisconsin

manufacturer of moulded plastic products began in 1962. In March 1964, an ARA loan authorization was approved, calling for joint tribal-community participation in financing. The tribe (Standing Rock) subsequently withdrew from participation and the ARA loan was renegotiated in August 1965. A condition of the new loan agreement requires that residents of both the Standing Rock and Cheyenne River Reservations be offered employment in the plant. At capacity operation, the facility is expected to employ a total of 100 workers, including 75 Indians.

Harn Corp., McLaughlin, S. Dak.: This soft goods manufacturing plant remained closed in 1965. At the present time, payments on the tribe's loan to the company are delinquent. The tribal attorney has approached the Bureau on an informal basis regarding referring the matter of protecting the tribe's rights under the contract to the Department of Justice for appropriate action. Until the Bureau receives a formal request from either the tribe or its attorney substantiating such action, steps to foreclose cannot be taken; until the tribe's contract with Harn is settled, a new manufacturing operation cannot be negotiated.

Yankton.—Electro Tech Educational Corporation Greenwood, S. Dak.: An Episcopal priest, a former electrical engineer, established this electrical and electronic assembly project in 1964 as an outgrowth of a training class he had been conducting for a group of Indians on the reservation. Since producing to one assembly contract for the Farrall Instrument Co., Grand Island, Nebraska, the company remains open only on a profitable basis when a contract can be secured. When not under specific contract, the Indian workers are trained by the priest in various electrical jobs. While reluctant to accept Bureau assistance in the beginning, the priest is now more receptive and our Aberdeen Area Office is initiating a mail campaign to secure additional assembly work for the company.

We are in the process of developing a booklet of case histories for the companies assisted in establishing facilities on or near Indian reservations and hiring Indian workers.

Kitchen-Dining Facilities, Flandreau Indian School

Question. As you know the kitchen-dining facilities at the Flandreau Indian School are in miserable shape. Will you please provide me with a report outlining just what the situation is presently, what facilities are needed and the cost of constructing any new facilities needed?

Answer. The existing kitchen-dining room building at Flandreau Indian School was constructed in 1898. The kitchen proper and adjacent storage area were rehabilitated by the Bureau in 1958. At the present time only 130 of the total of 600 students enrolled are protected from the elements when standing in the food serving lines. The other students must line up outside and wait to be served or stay in their dormitories until the first group is served. A new kitchen-dining room building adequate for 600 pupils is needed. It is estimated that this building would cost $325,000.

Land Operations Office, Martin, S. Dak.

Question. What is the present status of the Land Operations sub-office at Martin, S. Dak.? My constituents seem to feel that the office does enough business so that it should be kept open and not closed according to your plans.

Answer. Due to a decrease in funds for Soil and Moisture Conservation, it has been necessary to reduce personnel and close some offices which have been financed from this activity. The reductions being made are at locations where the lack of personnel will have the least detrimental effect on the total Bureau program such as the Land Operations Office at Martin, S. Dak.

Every effort will be made to maintain adequate and expeditious service to the Indians in the Martin, S. Dak. area.

Municipal Building at Lower Brule

Question. Last year we had some discussion about a municipal building at Lower Brule to replace facilities taken during construction of Big Bend Reservoir. As I understand it $33,000 is available and $120,000 extra was needed. Please provide the committee with a breakdown of facilities needed and what the cost would be for these facilities. Is the $120,000 still adequate?

Answer. The Corps of Engineers presently holds $37,420 which was appropriated for the purpose of designing and constructing a community building for the tribe. Of this amount $33,000 was for actual construction of the building and the balance of $4,420 was for architectural and engineering services. The pro-

posed community building would have a clinic, courtroom, post office, toilets, storage rooms, tribal offices, offices for the employees of the Bureau, two holding cells and storage for surplus commodities. The previous cost estimate for constructing the building is not adequate since it was based on a structure without the two holding cells, without the surplus storage area and with only a minimum clinic. The total estimated cost of the complete facility described above is $200,000. Deducting the $37,420 now available from the Corps means there would be a need for an additional amount of about $163,000. However, the Public Health Service—Division of Indian Health has proposed in their fiscal year 1967 budget request the amount of $47,200 for a separate health center at Lower Brule. If the health center is approved and these funds are appropriated by the Congress, the facilities will be combined into one building and the amount of $47,200 can also be deducted from the total cost of the project making the total additional amount needed as $115,800. Thus, there would be one building combining all the needs of the community.

Questions Submitted by Senator Bartlett

High School Dormitory, Fairbanks, Alaska

Question. Are any of the planning funds in the Bureau of Indian Affairs budgetary request to be used for planning the construction of a dormitory at Fairbanks, Alaska, for native high school students attending Fairbanks public high schools?

Answer. The amount requested in fiscal year 1967 for advance planning of future projects does not include any planning money for a dormitory at Fairbanks.

Question. What is the position of the Bureau concerning the proposal for a residential dormitory at Fairbanks for high school age natives attending Fairbanks public schools?

Answer. Prior to the appointment of a committee by Governor Egan in 1962 to study the education needs of Alaska children from remote rural communities, the Bureau had done some planning for a dormitory and school to be built in Fairbanks. This facility would have been on or near the campus of the University of Alaska and in addition to providing educational opportunity for rural youth would have served as a laboratory and demonstration school for teacher training and research.

When the Governor's committee issued its report in 1963, entitled "An Overall Education Plan for Rural Alaska," no facility for Fairbanks was proposed. Instead it proposed regional high schools at Nome, Kodiak, and Mount Edgecumbe. The Bureau cooperated with this planning by building a dormitory at Nome and has requested funds in its 1967 budget for a dormitory at Kodiak and for rehabilitation and expansion of Mount Edgecumbe.

We believe the Governor's committee provides the best approach to planning for the education of children in rural Alaska and we do not know at this time what future recommendations it may make with respect to construction of an educational facility at Fairbanks.

SUBCOMMITTEE RECESS

Chairman Hayden. We thank you for your statement. The subcommittee will stand recessed until 10 a.m., Thursday, February 24, when we will hear from the National Park Service.

(Whereupon, at 11:50 a.m., Wednesday, February 23, 1966, the hearing was recessed until 10 a.m., Thursday, February 24, 1966.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

THURSDAY, FEBRUARY 24, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:30 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senator Byrd.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATEMENT OF GEORGE B. HARTZOG, JR., DIRECTOR; A. C. STRATTON, ASSOCIATE DIRECTOR; C. P. MONTGOMERY, ASSISTANT DIRECTOR; T. S. JETT, NATIONAL CAPITAL REGION DIRECTOR; H. G. SMITH, CHIEF OF PROGRAM COORDINATION; C. O. WALKER, CHIEF OF BUDGET AND FINANCE; SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

APPROPRIATIONS, REVENUES, AND VISITORS

Chairman HAYDEN. The subcommittee will be in order.

As we begin consideration of the fiscal year 1967 budget estimate for the National Park Service, I will place in the record a summary table of appropriations, revenues, and visitors to National Park facilities between the years 1933 and 1967; a table showing general fund receipts deposited to the credit of the United States during fiscal years 1965 to 1967; and a summary of the amounts available in 1966 compared with budget estimates for fiscal year 1967.

(The tables follow:)

Year	Appropriations			Revenues	Visitors (calendar year)
	Operating funds	Capital improvements	Total		
1933	$2,816,620	$8,004,000	$10,820,620	$628,182	3,481,590
1934	2,518,190	2,567,600	5,085,790	729,153	6,337,206
1935	6,799,540	5,000,000	11,799,540	905,935	7,676,490
1936	9,110,780	7,585,500	16,696,280	1,136,026	11,989,793
1937	11,198,395	6,635,000	17,833,395	1,398,692	15,133,432
1938	11,052,834	10,618,546	21,671,380	1,508,127	16,331,467
1939	12,202,047	13,832,650	26,034,697	1,567,334	15,530,636
1940	12,954,267	8,144,015	21,098,282	1,928,078	16,755,251
1941	4,622,649	4,747,381	9,376,030	2,179,119	21,236,957
1942	5,715,005	8,894,770	14,609,775	2,080,702	9,370,969
1943	5,079,342	408,023	5,487,365	1,061,992	6,828,420
1944	4,563,560		4,563,560	807,601	8,339,775
1945	4,736,810	4,000	4,740,810	824,078	11,713,852
1946	5,457,125	30,250	5,487,375	1,392,947	21,752,315
1947	11,032,334	14,995,621	26,027,955	2,923,587	25,534,188
1948	9,660,055	968,000	10,628,055	3,303,328	29,858,828
1949	11,542,299	2,505,350	14,047,649	3,467,606	31,726,402
1950	15,150,982	14,953,868	30,104,850	3,527,607	33,252,589
1951	16,288,200	17,687,500	[1] 33,975,700	3,534,372	37,106,440
1952	16,878,564	11,370,000	28,248,564	3,568,094	42,299,836
1953	18,131,920	15,030,410	[1] 33,162,330	4,190,643	46,224,794
1954	18,437,550	15,416,300	33,853,850	4,037,551	47,833,913
1955	18,494,095	14,199,895	[2] 32,693,990	4,914,239	50,007,838
1956	20,787,000	28,079,300	48,866,300	5,065,784	54,923,443
1957	22,970,000	45,050,000	68,020,000	5,658,040	59,284,869
1958	[3] 27,581,530	48,400,000	75,981,530	5,744,920	58,676,953
1959	29,962,600	50,000,000	79,962,600	5,688,138	62,812,000
1960	32,682,000	46,735,000	79,417,000	5,685,176	[4] 72,287,800
1961	37,890,000	51,528,000	89,418,000	5,660,349	79,039,800
1962	[5] 42,223,851	[6] 67,976,000	110,199,851	5,841,761	88,457,100
1963	[7] 48,017,054	[8] 72,775,500	120,792,554	6,450,559	94,092,900
1964	[9] 51,379,829	61,697,000	113,076,829	7,085,877	102,475,145
1965	[10] 56,199,000	[11] 71,986,600	128,185,600	5,581,436	[12] 112,140,600
1966	[13] 60,411,200	59,177,000	119,588,200	[12] 1,520,375	[13] 119,500,000
1967 (estimated)	65,761,100	53,500,000	119,261,100	1,482,575	127,500,000

[1] Net appropriations after reductions pursuant to law.
[2] Excludes $131,600 transferred to Office of Solicitor, and includes $600,000 included in Second Supplemental Appropriation Act, 1955, for the Jones Point Bridge.
[3] Includes $390,094 appropriated plus $134,436 transferred from other agencies for pay increases; and excludes $23,000 transferred to Office of Territories.
[4] New basis for counting visitors was implemented at beginning of 1960. Comparable figure on old basis of counting is 65,827,000.
[5] Includes $1,025,000 supplemental appropriations and excludes $28,000 transferred to Bureau of Outdoor Recreation and $9,649 to General Services Administration.
[6] Includes $3,500,000 supplemental appropriations.
[7] Includes $1,629,750 supplemental appropriations and excludes $1,101,096 transferred to Bureau of Outdoor Recreation and $600 to General Services Administration.
[8] Includes $5,000,000 supplemental appropriations and excludes $2,000,000 withdrawn for Bureau of Indian Affairs.
[9] Includes $625,000 supplemental appropriations and excludes $72,671 transferred to General Services Administration for the Franklin Delano Roosevelt Library.
[10] Includes $1,699,000 supplemental appropriations.
[11] Includes $15,613,000 supplemental appropriations.
[12] Estimated.
[13] Excludes $22,800 transferred to General Services Administration, and includes proposed supplemental of $943,000 for pay increase costs.

General fund receipts deposited to the credit of the U.S. Treasury during the fiscal year 1965 and estimated for the fiscal years 1966 and 1967

	Actual, 1965	Estimated	
		1966	1967
Automobile, admission, guide, and elevator fees	$4,189,257	0	0
Business concessions	814,946	$953,500	$1,003,600
Rents and royalties	283,857	281,875	166,875
Permits, privileges, and licenses	36,780	37,000	38,000
Sale of power and other utilities	51,959	60,000	70,000
Sale of Government property and products	165,063	148,600	164,700
Sale of services	3,631	3,650	3,650
Other fees and forfeitures	2,425	2,400	2,400
Refunds, recoveries, etc	33,374	33,200	33,200
Gifts and contributions	144	150	150
Total	5,581,436	1,520,375	1,482,575

Comparative summary of the amount available for 1966 with the 1967 estimates

Appropriation and activity	Estimated available, 1966	Estimate, 1967	Increase or decrease (−)
Management and protection:			
Management of park and other areas	$27,572,000	$30,451,000	$2,879,000
Forestry and fire control	1,617,000	1,708,000	91,000
Soil and moisture conservation	206,000	206,000	
Park and recreation programs	3,176,000	3,260,000	84,000
Concessions management	562,000	552,000	−10,000
Subtotal	33,133,000	36,177,000	3,044,000
Maintenance and rehabilitation of physical facilities:			
Roads and trails	9,863,600	10,621,200	757,600
Buildings, utilities, and other facilities	14,892,600	16,400,800	1,508,200
Subtotal	24,756,200	27,022,000	2,265,800
Construction:			
Buildings, utilities, and other facilities	25,677,000	23,000,000	−2,677,000
Acquisition of water rights	500,000	500,000	
Roads and trails			
Subtotal	26,177,000	23,500,000	−2,677,000
Parkway and road construction (liquidation of contract authorization):			
Parkways	8,000,000	7,500,000	−500,000
Roads and trails	25,000,000	22,500,000	−2,500,000
Subtotal	33,000,000	30,000,000	−3,000,000
General administrative expenses:			
Departmental expenses	1,546,000	1,577,000	31,000
Regional office expenses	976,000	985,100	9,100
Subtotal	2,522,000	2,562,100	40,100
Grand total	119,588,200	119,261,100	−327,100

PREPARED STATEMENT

Chairman HAYDEN. Director Hartzog, you may, if you wish, file your written statement for the record and highlight it orally for the committee.

Mr. HARTZOG. Thank you very much, Mr. Chairman.

It is a great pleasure to be here and with your permission I would like to file a general statement and make a few highlight remarks about it if I may.

(The statement follows:)

I sincerely appreciate this opportunity to discuss with you, today, the plans and programs of the National Park Service which are now before you for consideration.

I am keenly aware of the important part this committee has played over the years in advancing the Service's programs and in helping us to attain our objectives. I know we share a mutual interest in preserving the scenic grandeur of our Nation, interpreting its history and providing healthful outdoor recreation for the enjoyment of the American people.

Parkscape U.S.A.

This year, the National Park Service celebrates its golden anniversary. The 31 national parks and monuments with which Steve Mather started in 1916 have grown into the world's finest national park system of 230 areas enjoyed annually by more than 100 million visitors.

A decade ago, neglect threatened our parks. Today, the task is different. Our challenge now is to continue to preserve our national park system and improve its management while coping with the problems arising from the triple pressures of urbanization, growing population, and mounting leisure time. For example, at the beginning of Mission 66, it was predicted that visits to the national park system by 1966 would total 88 million. Actually, this year we will exceed 119 million visits.

As we enter upon a second half century of public service, our new program—Parkscape U.S.A.—is designed to meet the challenge of the future in the following ways:

1. Preparation of the national park system plan to be included as part of the Bureau of Outdoor Recreation's nationwide recreation plan which must be submitted to the Congress by 1968.
2. Development of creative new approaches for sharing knowhow in park and recreation planning, development, maintenance, management, protection, and interpretation through cooperative programs and joint planning at every level of government and with private industry as well.
3. Creation through a program of international cooperation of new ways to strengthen and expand in additional ways our cooperation with other nations seeking to preserve their natural and cultural heritage.
4. Seek to improve and develop the national parklands in urban areas better to serve our citizens.
5. Continue to improve and to expand our interpretive programs for visitors to our national parklands in order to communicate the heritage preserved and interpreted for them in America's national parklands.

Federal Telecommunications Service (FTS)

Last year, the committee expressed concern about uncontrolled use of the Federal Telecommunications Service or FTS. In response to your concern, special instructions have been issued to each employee throughout the Service spelling out the need for economy in the use of those facilities, such as: (1) consolidation of calls; (2) placing calls at such time as will avoid overloading circuits during peak hours; (3) use of teletype; and (4) keeping messages brief. Memorandums to the field suggesting ways to economize on calls are being reinforced by periodic spot checks, review of communications procedures and constant reiteration of the need to economize. A copy of our memorandum of November 5, 1965, on this subject, has been furnished to the committee staff.

Travel

We were greatly pleased when this committee last year relieved us of formal limitations on travel. We have tried to keep faith with the spirit of this action by maintaining a very tight control over both our travel and per diem expenditures. We now have what we call a "master plan for attendance at meetings." During the last 10 days preceding each calendar quarter, a special committee reviews the summary requests of the entire Service for the coming quarter. They take a broad Service view of the total attendance at each meeting and recommend a balanced and reasonable program for official attendance for the quarter.

With regard to inservice workshops and meetings, we now develop—each fiscal year—a coordinated Service program of such working meetings. These procedures provide for prior official review to eliminate duplication and overlapping of attendance at meetings. To keep this matter ever present in the minds

of our supervisors we are now issuing another memorandum on the subject emphasizing their responsibility in this regard. A copy of this memorandum will be furnished the committee staff.

Donations

It has been our practice for a number of years to report to the committee annually on donations of cash, lands, and other objects received by the Service. I am pleased to report that during the 1965 calendar year additional cash donations totaling $759,800 and donations of lands and other objects—exclusive of White House furnishings—valued at approximately $1,134,000 have been received.

Not all of our donations are from persons outside of the Service. For example, a 3-month survey during 1965 for the period July 1 to September 30 revealed that 117,000 hours of uncompensated overtime with a value of more than $500,000 was contributed by our employees. Projected over a period of 12 months, this figure might well be doubled, especially when we consider that the visitor use of our national parks is being extended gradually beyond the traditional summer season.

Job Corps Camps

I am proud of the part that the National Park Service has played in successfully developing plans for construction and development of nine Job Corps conservation centers since the beginning of that program. Six of these centers are already in operation with a capacity enrollment of 750. The centers presently under development at Harpers Ferry, W. Va., Acadia, Maine, and Ellis Island in New York will provide for an additional 500 youths. All centers have been well accepted by the nearby communities. At the Service's Catoctin Mountain Park in Maryland we established the first Job Corps conservation center in the United States. Good leadership for these Job Corps men is considered to be the key to ultimate success of the program—and I assure you we screen our leaders very carefully. The National Park Service has experienced an enthusiastic response from these carefully selected leaders who are now working with hundreds of underprivileged young men—youngsters to whom the coming months offer the promise of a new lease on life and a chance for social and economic independence.

1967 Estimates

Again this year, all of our programs, particularly those involving increases, have received very thorough and critical review at all levels of consideration up through the Bureau of the Budget. The result has been that only a relatively few items of increase, which are more than offset by decreases, are included in the 1967 budget, and in addition certain savings and program reductions have been identified.

The budget contemplates that park visits (including National Capital Parks) will exceed 137 million in 1967 as compared to 121.3 million in 1965, and an estimate of about 129 million in 1966. This increase in visitation, together with the significant increase in the number of park areas to be operated and developed, has created a substantial additional workload and in turn a recognized need for additional funds.

The estimates under consideration total $119,261,100. This is a net decrease of $327,100 under the amount of $119,588,200 available for 1966. The amount indicated as available for 1966 includes a total of $943,000 for increased pay costs which could not be absorbed in 1966, and which is proposed for inclusion in a 1966 supplemental estimate. The above figures reflect an increase of $5,349,900 over the amount available for 1966 for operating appropriation items and a decrease of $5,677,000 for capital appropriation items.

Operating Programs

The appropriation items which finance the operating programs, the amounts requested for 1967, and the increases provided for in the 1967 estimates are as follows:

Appropriation item	1967 estimate	Increase
Management and protection	$36,177,000	$3,044,000
Maintenance and rehabilitation of physical facilities	27,022,000	2,265,800
General administrative expense	2,562,100	40,100
Total	65,761,100	5,349,900

The 1967 estimates provide increases in operating funds and staffing, primarily to meet additional requirements brought about by the increasing public use of the existing parks and the activation of several new park areas. Also, the budget makes provision, as it has for the past several years, for increased fund requirements for operating and maintaining the many new and reconstructed facilities that are being completed and placed into operation for visitor and administrative use in the parks.

The increase requested under the "Management and protection" and "Maintenance and rehabilitation of physical facilities" appropriation items, totaling $5,309,800, provides $4,437,500 for the benefit of park operating programs; $950,400 to cover pay increase costs for existing classified positions, wage rate increases and additional employee compensation fund payments; $63,000 representing the U.S. share of the estimated increased fund requirements for Roosevelt Campobello International Park, Canada; and $61,700 to strengthen the registry of national landmarks program. While the budget also reflects an increase of $102,200 for the national park system planning program, it is offset by a reduction of $100,000 as a result of a nonrecurring increase in 1966 for studies of Ice Age Scientific Reserve, Wisconsin, and a park below Greers Ferry Dam, Ark. This action will not increase the program level but will have the effect of retaining it at the same level as in 1966.

The estimate also reflects a program savings of $205,000 resulting from organizational realinements.

The increase for the benefit of park operating programs includes $1,074,800 for operations and maintenance in 13 new park areas, 10 of which were authorized by the 89th Congress and 3 reservoir recreation areas that will be operated under cooperative agreements with other Federal agencies. These areas are: Agate Fossil Beds National Monument, Nebr.; Alibates Flint Quarries and Texas Panhandle Pueblo Culture National Monument, Tex.; Amistad Recreation Area, Tex.; Arbuckle Recreation Area, Okla.; Assateague Island National Seashore, Maryland-Virginia; Delaware Water Gap National Recreation Area, Pa.-N.J.; Ellis Island (addition to Statue of Liberty National Monument), N.Y.; Golden Spike National Historic Site, Utah; Herbert Hoover National Historic Site, Iowa; Hubbell Trading Post National Historic Site, Ariz.; Nez Perce National Historical Park, Idaho; Pecos National Monument, N. Mex.; and Sanford Recreation Area, Tex.

Also included in the increase is $1,797,100 for the operation and maintenance of new facilities in the older parks which will be completed under the construction programs and placed into operation and $868,900 for additional staffing and other requirements in 23 park areas which have been added to the national park system during the past 5 years and for which progressive increases in funding have been requested from year to year as requirements have increased.

Increases for the benefit of park operating programs also include $559,400 for National Capital parks, including a special item of $225,000 for planting and maintenance of the additional flowers, shrubs, and trees in National Capital park areas as a part of the First Lady's beautification program; $82,000 for more adequate fire protection service in the parks, including four of the new ones; and $55,300 to provide more and better informational publications to meet the increased visitor needs.

The increase of $40,100 under the "General administrative expenses" appropriation provides $21,700 to cover pay increase costs for existing classified positions and $18,400 for the salary and personnel benefits of a new position of Resources Planning Assistant. The incumbent will have primary responsibility for developing and coordinating the Service's planning, programing, and budgeting system under guidelines and instructions issued by higher authority pursuant to Bureau of the Budget Bulletin No. 66–3, dated October 12, 1965.

The total increased staffing provided for in the 1967 budget under the operating appropriation items is 199 permanent full-time positions and 321 man-years of temporary employment.

Capital Programs

The capital program estimates include $23,500,000 for "Construction" and $30 million for "Parkway and road construction (liquidation of contract authorization)."

The "Construction" estimate provides for the following:

Buildings, utilities, and other facilities	$23,000,000
Acquisition of water rights	500,000
Total	23,500,000

The Service's 1967 fiscal year request ($28,316,000) for acquisition of lands is included in the estimate of the Bureau of Outdoor Recreation to be funded from the land and water conservation fund.

The "Parkway and road construction (liquidation of contract authorization)" estimate of $30 million will provide funds to make payments as requirements therefor accrue in the liquidation of obligations incurred under the contract authorization for parkway and road and trail construction, as provided by the Federal-Aid Highway Act of 1964. The parkways and roads and trails construction program levels for 1967 are in the amounts of $9 million and $23,037,700, respectively, or a total of $32,037,700. This is a total decrease of $1,896,300 under the approved program level of $33,934,000 for 1966.

The estimate of $23 million for buildings, utilities, and other facilities is a decrease of $2,677,000 under the amount appropriated for fiscal year 1966. The 1967 estimate provides noteworthy amounts for facilities in such areas as Federal Hall National Memorial, New York ($1,305,300); Statue of Liberty National Monument, N.Y. ($900,000); Harpers Ferry National Historical Park, W. Va. ($600,000); Lake Mead National Recreation Area, Ariz.-Nev. ($1,346,000); Mount Rainier National Park, Wash. ($866,000); Yellowstone National Park, Wyo. ($452,100); Jewel Cave National Monument, S. Dak. ($787,300); and for parks of the National Capital area ($4,106,000).

Of the last amount, $618,000 is for developments on the Mall; $500,000 for replacing the Watergate barge; $525,000 for an amphitheater at Fort Washington; $1,750,000 for reconstructing and improving small parks and reservations in various locations, including the provision of visitor facilities in the Fort Circle parks, and in the Watts Branch Linear Park in Northeast Washington; and $713,000 is for numerous other smaller projects. These projects will provide for badly needed visitor facilities in the park areas and at the same time add to the beautification program in the Nation's Capital.

Needs for visitor facilities in recently authorized national seashores are recognized by the inclusion of a total of $1,595,300 for such areas as Cape Cod, Mass.; Fire Island, N.Y.; Padre Island, Tex.; and Point Reyes, Calif. Also, a total of $1,306,700 is included to begin developments in 9 of the 13 new park areas mentioned previously.

Some of the major projects in the roads and trails construction program are: $795,300 for continuing construction of the Bryson City Road in Great Smoky Mountains National Park, N.C.; $685,600 for paving and incidental work on 15 miles of the entrance road to Mammoth Cave National Park, Ky.; $653,500 for reconstruction, grading and drainage of dangerous sections of Route 1, Mt. McKinley National Park, Alaska; $895,200 for construction of 2 miles of Heart O' the Hills Road, Olympic National Park, Wash.; $871,600 for constructing 7.4 miles of the Blue Mountain Road from Route 6 junction with Route 3 to Point of Pines, Dinosaur National Monument, Utah; $681,000 for construction of 2.5 miles of Route 1-B, Rocky Mountain National Park, Colo.; and $1,416,400 for constructing 3.5 miles of Old Faithful bypass and parking, and $501,500 for reconstruction of the east entrance road to Sylvan Pass at Yellowstone National Park, Wyo.

Some of the major projects included in the parkway construction program are: $427,600 for final surfacing of 15 miles on the Blue Ridge Parkway located southwest of Asheville, N.C., opened to traffic in early 1965, thus completing the parkway between Asheville and the southern terminus of the parkway at Great Smoky Mountains National Park, N.C., for a distance of 76 miles. In Virginia, $701,500 is included for the final paving of the parkway around Roanoke, opened to traffic in June 1965; and marking the completion of the parkway in Virginia; $1,751,700 for continuing construction on a 10-mile section of the Foothills Parkway in Tennessee from State Highway 73 and the Little River easterly to Caylor Gap. This latter section is adjacent to a 10-mile unit on Chilhowee Mountain opened to traffic in early fall of 1965. An amount of $2,319,100 is included for starting construction on a 6-mile section in northeast Mississippi of the Natchez Trace Parkway; also included is $537,700 for the resurfacing and other road improvement of 19 miles of the parkway north of Jackson, Miss. Resurfacing of the 9-mile Suitland Parkway in the District of Columbia and Maryland is estimated to require $816,600; and improvements to the acceleration and deceleration lanes on the Baltimore-Washington Parkway in Maryland are estimated to require $671,600.

Mr. Chairman, I shall be pleased to try to answer any questions you and the other committee members have about our program and the 1967 estimates now before you. Thank you.

Mesa Verde National Park

Mr. Hartzog. I sincerely appreciate this opportunity to discuss with you today the plans and programs of the National Park Service which are now before you for consideration.

I am keenly aware of the important part that you and the members of this committee have played over the years in advancing the Service's programs and in helping us to attain our objectives.

I know that we share a mutual concern in preserving the scenic grandeur of our Nation, interpreting its history, and providing healthful outdoor recreational opportunities for the American people.

BRIEFING BROCHURES

As has been our custom, I bring you and the members of the committee two briefing brochures and an archeological publication resulting from the Mesa Verde National Park study and excavation project, which was a cooperative program paid for primarily by the National Geographic Society. This is one of the great archeological works in this country today.

Golden Anniversary Year

This year the National Park Service celebrates its golden anniversary. The 31 national parks and monuments with which Steve Mather started in 1916 have grown into the finest national park system of some 230 areas visited and enjoyed by more than 100 million people each year.

Chairman Hayden. I take a little pride in saying I have been around here all that time.

Parkscape U.S.A.

Mr. Hartzog. Indeed you have and we are deeply honored with what you have done for us over the years.

A decade ago neglect threatened our parks. Today, the task is different. Our challenge now is to continue to preserve our national park system and improve its management while coping with the problems arising from the triple pressures of urbanization, growing population, and mounting leisure time.

As we enter upon a second half century of public service, the objective of our program is Parkscape U.S.A.—designed to meet the challenge of the future in the following ways: First, to prepare a national park system plan to be included as a part of the Bureau of Outdoor Recreation's nationwide recreation plan which the Congress has instructed be submitted to it by 1968.

SHARING OF PARK KNOW-HOW IN COOPERATIVE PROGRAMS AND JOINT LAND USE

Second, to develop new creative approaches for sharing know-how in park and recreation planning, development, maintenance, management, protection and interpretation, through cooperative programs and joint land use planning at every level of Government and with private enterprise as well.

INCREASED COOPERATION WITH OTHER NATIONS

Third, to strengthen our cooperation with other nations seeking to preserve their natural and cultural heritage.

Mr. Chairman, the inspiration of the national park idea, which is a unique contribution of this Nation to world culture, has inspired more than 80 nations around the world to set aside national parks to similarly preserve, protect, and interpret their own natural and cultural heritage.

IMPROVEMENT OF URBAN AREA PARK LANDS

Fourth, to seek to improve and develop the national park lands in urban areas to better serve our citizens.

IMPROVED INTERPRETIVE PROGRAMS

And, fifth, to continue to improve our interpretive programs in order to communicate better to our visitors and to the citizens of our land the heritage preserved for them in America's national park lands.

CONCESSIONS MANAGEMENT

There are a number of matters in which this committee has expressed interest from time to time. One of these is concessions management.

A total of 208 concessions were operated under contract and permit during 1964. Legislation giving statutory effect to concession policies was enacted last year. At that time some 20 contracts had expired.

CONCESSIONS STUDY

President Johnson's statement accompanying the signing of Public Law 89–249 directed the Bureau of the Budget to complete by April 1, 1966, a study of all Federal concessions programs to determine the desirability of seeking new legislation to establish common concession policies on all publicly owned lands.

FRANCHISE FEE FORMULA

In the meantime the President directed us to issue 1-year extensions to the extent practicable. In the majority of cases 1-year extensions will be granted. In the meantime a new franchise fee formula was put into effect which is weighted to give recognition to the various types of operations from which the gross receipts of the concessionaire are derived.

During 1964 franchise fees were reconsidered in connection with 11 concession contracts, of which 8 were increased and 3 remained unchanged. In 1964 the concessionaires paid franchise fees totaling $978,651, for an increase of $240,408 over 1963, or a total increase of 32½ percent.

Total gross receipts during this period increased by 10½ percent. Profits during this period, after franchise fees and taxes, increased by $366,734 or 15.1 percent.

Donations

It has been our practice for a number of years to report to the committee annually on donations of cash, lands, and other objects received by the Service.

I am pleased to report that during the 1965 calendar year additional cash donations totaling $759,800 and donations of lands and other objects, exclusive of furnishings for the White House, valued at approximately $1,134,000 were received.

Not all of our donations, however, are from persons outside of the National Park Service. For example, a 3-month survey during 1965 for the period July 1 to September 30 revealed that 117,000 hours of uncompensated overtime with a value of more than $500,000 were contributed by our employees.

This is the equivalent of having nearly 200 additional employees during that period. Projected over a period of 12 months this figure might well be doubled.

Job Corps Camps

I am proud of the part that the National Park Service has played in successfully developing plans for construction and development of nine Job Corps Conservation Centers since the beginning of that program. Six of these Centers are already in operation with a capacity enrollment of 750.

The Centers presently under development at Harpers Ferry in West Virginia, Acadia National Park in Maine, and Ellis Island in New York will provide for an additional 500 youths. All of our Centers have been well accepted by the nearby communities.

The National Park Service has experienced an enthusiastic response from these underprivileged young men, youngsters to whom the coming months offer the promise of a new lease on life and a chance for social and economic independence.

Increased Park Visitation

In 1956 when Mission 66 was launched annual visitation was 61 million. By 1965 this had nearly doubled to 121 million. We estimate that in 1967 the national park system will receive 137 million visits.

As our total park use continues to rise you will note that our park season has also extended. For example, this poster shows visits by quarters—January to March, April to June, July to September, and October to December for certain years.

It is interesting to note that in 1965 the so-called slack period of September to December approximates the visitation during the height of the summer season in 1951. In just a period of 15 years this is what has happened under these triple pressures of increasing population, the craving of urbanites for outdoor recreational opportunities, and mounting leisure time.

1967 Budget Request

The budget now before you requests $119,261,100 reflecting an increase for park operations of $5,349,900. It is a decrease, however, in capital items of $5,677,000. Increasing public use of existing parks and the activation of several new park areas are responsible for practically all of this increase in operating money, about 98 percent of it.

Included in the increase is $1,074,800 for operating and maintaining 13 new parks that were added to the national park system, Mr. Chairman. Increases for operating the National Capital parks amounts to $559,400, of which $225,000 is for planting and maintenance of additional flowers, shrubs, and trees as a part of our First Lady's beautification program.

Improved Estimates for Land Acquisition and Development Costs

For some time this committee and the Interior and Insular Affairs Committee have been stressing the need for better estimates both for our land acquisition costs and for our development costs.

As a matter of fact, this committee gave us $100,000 in 1966 for the purpose of hiring staff appraisers to improve the quality of our land acquisition estimates.

Mr. Chairman, I submit that I do believe that there has been significant improvement in the quality of our land estimates. So that we can do a better job in planning our development program we are asking the committee this year to increase our advance planning funds by $300,000. Many of our projects go over the cost estimates simply because we are unable in our advance planning to firm up definite estimates based on detailed analysis and design data and, as the chairman knows. this has caused a number of reprograming requests to this committee over the years.

Chairman Hayden. Yes.

Mr. Hartzog. This money if you grant it will be utilized principally by our design and construction staffs in getting better basic design on building costs and similar items.

This money will also be used to extend our planning for newly authorized areas to enable us better to justify the estimates for development costs in our legislative proposals.

National Park System Plan and New Area Studies

The organic act establishing the Bureau of Outdoor Recreation instructs it to develop and submit to the Congress by 1968 a nationwide recreation plan. The national park system plan is an integral part of this overall nationwide plan.

In order that we may participate in this program and meet the deadline established by the Congress we are asking this year for an increase of $102,200 in our park planning item.

I would like to point out, however, that while this shows as an increase in the operating funds for this program, it is not an increase in the program level because this $102,200 replaces two nonrecurring program items that were included in 1966 for a study at Greers Ferry and for one at Ice Age which is a cooperative area authorized up in Wisconsin.

National Historic Landmarks Registry

Mr. Chairman, President Johnson said last year that—

> The registry of national historic landmarks is a fine Federal program with virtually no Federal cost. I commend its work and the new wave of interest it has evoked in historical preservation.

We can attest to the great popularity of the landmark program. It has led to a cumulating backlog of commitments to the preservation groups, Government leaders, and private citizens throughout the Nation who want us to study or restudy many, many sites, buildings, and other areas.

INCREASED FUNDS REQUESTED AND STUDIES COMPLETED

To date the national survey has completed 35 of the programed 41 theme studies. Some of these I have shared with the committee in the form of books, such as "The Soldier and the Brave" and "The Colonials and Patriots," in past years.

In addition we have completed 87 special studies under this program. We have also found considerable interest in the natural landmarks program. We are asking the committee this year for an increase in this program of $61,700 so that we may go forward, Mr. Chairman.

LIMITATION ON EMPLOYEE HOUSING

Mr. Chairman, there are a couple of problems that we have also had. One of them is in connection with employee housing in which we find that this limitation of $20,000 imposed in 1959 has resulted in a number of our bids for housing exceeding the limitation which has resulted in our having to come back for individual requests to you on this housing.

We are not at this time asking for any removal of this limitation. We do, however, want you to be aware of this problem and the fact that we are developing data on it and we expect to be communicating with the committee through its staff during this year on the numbers of cases in which this problem appears.

It is interesting to note that the increase in the construction cost index from the time the ceiling was imposed to now is some 23 percent so it is remarkable that we are able to get any housing under the limitation that was set in 1959.

LAND ACQUISITION PROGRAM

One other problem that has been of considerable concern to us is in our land acquisition program. At the present time our legislative authority authorizes us to acquire either the title to property in fee or a scenic easement.

RELUCTANCE OF LANDOWNERS TO CONVEY SCENIC EASEMENTS

In many cases, particularly in areas that are in the pattern of urban expansion, we find that it is not possible to buy scenic easements at a reasonable cost because in doing so we are really buying the owner's right to develop, so therefore, he in most instances wants the full fee value because we are precluding any other use later on.

We have been studying this problem and we expect to submit some legislative proposals on this which would permit us to acquire the title to property in fee and then either lease back or sell back a private development right in connection with these acquisitions in order to minimize the amount of land acquisition cost. I know that is a concern to you and the members of the committee in connection

with these new areas, and I just wanted the committee to be aware of the fact that we are working on it and we hope to have some proposals on it before the Congress this year.

It is a great pleasure to be here, sir. We deeply appreciate all that you have done for us over the years. We will be delighted to try and answer any questions you might have.

MANAGEMENT AND PROTECTION

Chairman HAYDEN. There will be placed in the record the justification statement for the budget estimate of $36,177,000 for the management and protection programs in the national park areas during fiscal year 1967.

(The justification follows:)

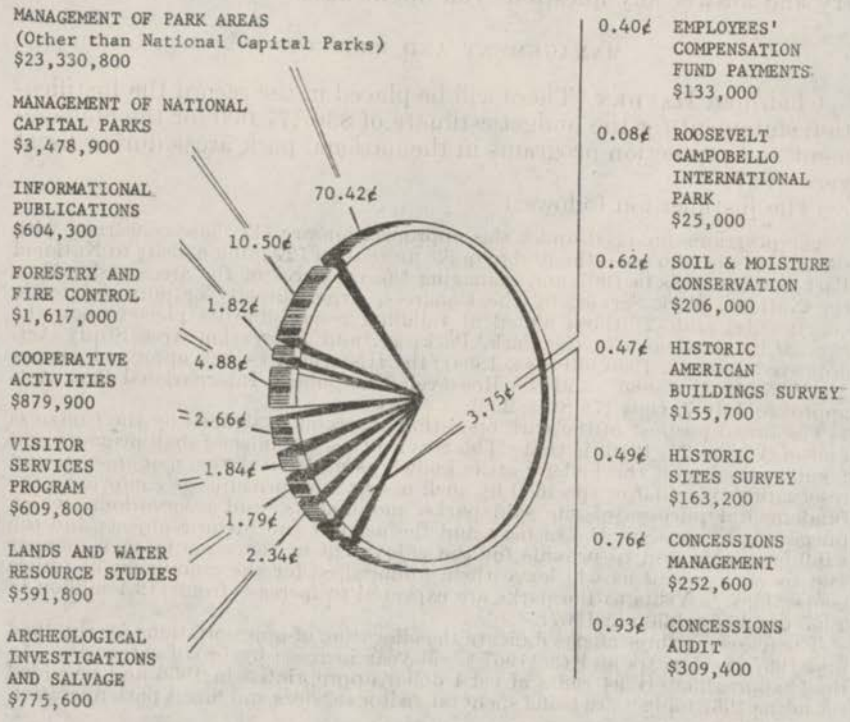
The programs financed under this appropriation are (1) those concerned with serving people who are estimated to make more than 127 million visits to National Park Service areas in 1967 and managing the resources of the areas assigned to the National Park Service by the Congress, either directly or pursuant to its enactments; and (2) those aimed at fulfilling responsibilities placed upon the Service by provisions of the Park, Parkway, and Recreation Area Study Act, approved June 23, 1936 (49 Stat. 1894); the Historic Sites Act, approved August 21, 1935 (49 Stat. 666); and the Roosevelt Campobello International Park Act, approved July 7, 1964 (78 Stat. 299).

The broad purpose of the park operating programs as defined by the Congress (act of August 25, 1916) is that "The Service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Visits to the parks are expected to increase from 112.1 million in 1965 to 127.5 million in 1967.

The following three charts indicate the allocation of appropriations for the 1966 and 1967 fiscal years and the 1967 fiscal year increase by broad categories. In brief, approximately 94 cents of each dollar appropriated in 1966 and provided for in the 1967 budget are being spent on visitor services and direct park operation responsibilities.

MANAGEMENT AND PROTECTION APPROPRIATION

THE M & P APPROPRIATED DOLLAR -- WHERE IT WILL GO



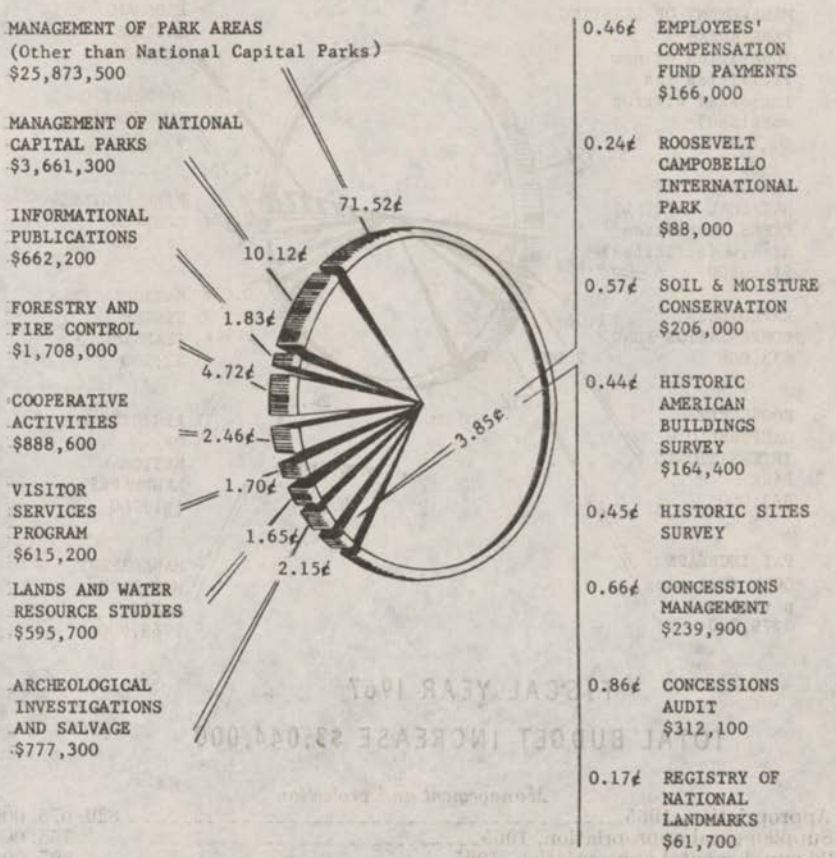
FISCAL YEAR 1966

TOTAL APPROPRIATION $33,133,000

(INCLUDES ESTIMATED PAY INCREASE COSTS)

MANAGEMENT AND PROTECTION APPROPRIATION

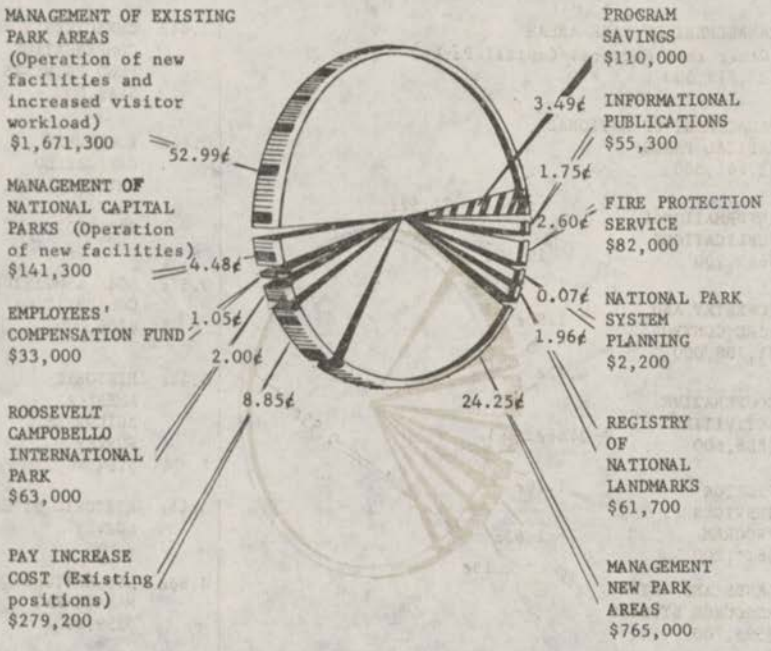
The M & P Budget Dollar -- Where it will go



FISCAL YEAR 1967
TOTAL BUDGET $36,177,000

MANAGEMENT AND PROTECTION APPROPRIATION

INCREASES BY BROAD CATEGORIES



FISCAL YEAR 1967

TOTAL BUDGET INCREASE $3,044,000

Management and protection

Appropriation, 1965	$29,075,000
Supplemental appropriation, 1965	155,000
2d supplemental appropriation, 1965	897,000
Total appropriation, 1965	30,127,000
Appropriation, 1966	32,366,000
Pay cost supplemental	783,000
Total appropriation, 1966	33,149,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration	−16,000
Total available, 1966	33,133,000

SUMMARY OF INCREASES AND DECREASES, 1967

Management of park and other areas:	
Increased pay costs for fiscal year 1966 positions	+$245,100
Operation of new park areas	+765,000
Operation of new facilities and increased visitor workload in existing park areas	+1,812,600
Additional park informational publications	+55,300
Employees' compensation fund payments	+33,000
Roosevelt Campobello International Park Commission	+63,000
Nonrecurring item due to program savings resulting from organizational realignments	−95,000
Total	+2,879,000
Forestry and fire control:	
Increased pay costs for fiscal year 1966 positions	+9,000
More adequate fire protection service	+82,000
Total	+91,000
Park and recreation programs:	
Increased pay costs for fiscal year 1966 positions	+20,100
Strengthen National Park System Planning and New Area Studies	+102,200
Strengthen Registry of National Landmarks Program	+61,700
Nonrecurring item due to completion of Ice Age and Greers Ferry Dam studies	−100,000
Total	+84,000
Concessions management:	
Increased pay costs for fiscal year 1966 positions	+5,000
Nonrecurring item due to program savings resulting from organizational realignments	−15,000
Total	−10,000
Net increase, 1967	3,044,000
Budget estimate, 1967	36,177,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers [1]	Amount available
1. Management of park and other areas	$24,514,182	$26,895,000	$693,000	−$16,000	$27,572,000
2. Forestry and fire control	1,715,616	1,595,000	22,000		1,617,000
3. Soil and moisture conservation	200,685	205,000	1,000		206,000
4. Park and recreation programs	2,905,777	3,121,000	55,000		3,176,000
5. Concessions management	506,484	550,000	12,000		562,000
Unobligated balance lapsing	284,256				
Total	30,127,000	32,366,000	783,000	−16,000	33,133,000

[1] Represents transfers to General Services Administration.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Management of park and other areas	$24,514,182	$27,572,000	$30,451,000	+$2,879,000	+$245,100	+$2,633,900
2. Forestry and fire control	1,715,616	1,617,000	1,708,000	+91,000	+9,000	+82,000
3. Soil and moisture conservation	200,685	206,000	206,000			
4. Park and recreation programs	2,905,777	3,176,000	3,260,000	+84,000	+20,100	+63,900
5. Concessions management	506,484	562,000	552,000	−10,000	+5,000	−15,000
Unobligated balance lapsing	284,256					
Total	30,127,000	33,133,000	36,177,000	3,044,000	+279,200	+2,764,800

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. Management of park and other areas—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) National parks, monuments, etc.	$20,748,942	$23,330,800	$25,873,500	+$2,542,700	+$201,400	+$2,341,300
(b) National Capital Parks	3,011,156	3,478,900	3,661,300	+182,400	+41,100	141,300
(c) Informational publications	490,180	604,300	662,200	+57,900	+2,600	55,300
(d) Employees' compensation fund payments	108,904	133,000	166,000	+33,000		33,000
(e) Roosevelt Campobello International Park Commission	155,000	25,000	88,000	+63,000		63,000
Total	24,514,182	27,572,000	30,451,000	+2,879,000	+245,100	2,633,900

[1] To provide for increased pay cost for fiscal year 1966 positions.

(a) *National parks, monuments, etc.*

The estimate for 1967 is $25,873,500, a net increase of $2,542,700 over 1966. The net increase consists of—

(1) A decrease of $95,000 due to program savings resulting from organizational realinements.

(2) An increase of $201,400 for increased pay costs.

(3) An increase of $765,000 for new park areas.

(4) An increase of $1,671,300 for operation of new facilities and to meet the increased visitor workload in existing park areas.

The programs financed under this subactivity are those concerned with serving people who are estimated to make more than 127 million visits to National Park Service areas in 1967 and managing resources of the areas assigned to the Service by the Congress either directly or pursuant to its enactments other than those comprising the National Capital region. The estimate contemplates that 230 park areas with a total of about 26.4 million acres in Government ownership will be administered during the 1967 fiscal year. The estimate also contemplates that visitation to those areas will reach 127.5 million in calendar year 1967 as compared to 112.1 million for 1965, the last completed calendar year, and an estimate of 119.5 million for 1966. Fulfillment of the Service's responsibility incident to this visitor use requires adequate staffs of uniformed personnel—rangers, naturalists, historians, guides, etc.—as well as adequate numbers of management and administrative employees. While much progress has been made in overcoming staffing and other program component deficiencies and in meeting the heavy increase in workload that has taken place; i.e., the increase in visitor use, the addition of new park areas to the system, and the provision of new visitor facilities in the areas the operation of which requires additional staffing and general expense funds, adequate staffing and funding levels have not been reached. It is essential that the full amount requested in the estimate

be provided if minimum requirements for the management, protection, and interpretation of the park areas are to be met in the budget year. Amounts requested herein, except for the new area requirements, are needed principally for operation of newly constructed facilities, and for meeting the increased visitor workload in some of the park areas, particularly those which have been activated during the past five years and for which only partial financing has been provided.

Need for increase.—New park areas, $765,000: As a result of congressional action in the first session of the 89th Congress, 10 new park areas have been authorized for addition to the national park system; cooperative agreements have been executed with the Bureau of Reclamation for the management of recreation areas within 2 reservoir areas; and another cooperative agreement has been executed with the U.S. section, International Boundary and Water Commission, for similar recreation management responsibility by the Service. Thus the responsibility of the Service has been broadened to include 13 new park areas for which no funds have heretofore been provided.

Despite the fact that authorized land acquisition, though commenced, may not have been consummated and required developments for management, protective and interpretive purposes and for public use and enjoyment may not have been provided, it is incumbent upon the Service to provide a minimal staff for discharge of responsibilities inherent in either the authorizing legislation or the cooperative agreements. During the formative stages of a new park area, many important policy decisions must be made; community and public relationships must be initiated, expanded and continued; and vital cooperative relationships with diverse and innumerable State, Federal, and municipal agencies must be established and maintained on a continuing basis. The planning and programing of development projects for these areas must be undertaken and subsequently followed through the construction stage to assure visitor services and enjoyment as soon as possible. Continuing coordination of Service projects with other agencies and interests and authorized or prospective concessioners and permittees is most essential if public needs and demands are to be met in an efficient and effective manner. Steps have been or soon will be taken to assign at least one employee to each of the 13 new areas.

The increase requested herein will provide funds and permanent positions (for less than a full year in many cases) in 1967 for the management, protection, and interpretation of each of the new areas as follows:

Area	Funds	Permanent positions
Agate Fossil Beds National Monument, Nebr. (Public Law 89-33, approved June 5, 1965)	$28,300	4
Alibates Flint Quarries and Texas Panhandle Pueblo Culture National Monument (Public Law 89-154, approved Aug. 31, 1965)	[1]	[1]
Amistad Recreation Area, Tex. (cooperative agreement approved Nov. 11, 1965)	73,900	6
Arbuckle Recreation Area, Okla. (cooperative agreement approved Feb. 1, 1965)	76,400	5
Assateague Island National Seashore, Md.-Va. (Public Law 89-195, approved Sept. 21, 1965)	98,800	10
Delaware Water Gap National Recreation Area, Pa.-N.J. (Public Law 89-158, approved Sept. 1, 1965)	98,500	10
Golden Spike National Historic Site, Utah (Public Law 89-102, approved July 30, 1965)	51,200	5
Herbert Hoover National Historic Site, Iowa (Public Law 89-119, approved Aug. 12, 1965)	46,700	4
Hubbell Trading Post National Historic Site, Ariz. (Public Law 89-148, approved Aug. 28, 1965)	46,300	4
Nez Perce National Historical Park, Idaho (Public Law 89-19, approved May 15, 1965)	46,400	4
Pecos National Monument, N. Mex. (Public Law 89-54, approved June 28, 1965)	38,000	3
Sanford Recreation Area, Tex. (cooperative agreement approved Mar. 15, 1965); and Alibates Flint Quarries and Texas Panhandle Pueblo Culture National Monument, Tex. (Public Law 89-154, approved Aug. 31, 1965)	123,500	10
Ellis Island (addition to Statue of Liberty National Monument), N.Y. (Public Law 89-129, approved Aug. 17, 1965)	37,000	5
Total	765,000	70

[1] Fund requirements for this area combined with those for Sanford Recreation Area listed below.

It is proposed to request supplemental funds to cover costs to be incurred in activating and operating these new areas during the current fiscal year.

Operation of new facilities and increased visitor workload in existing park areas, $1,671,300: In recent years the three major purposes for which increases have been requested under this subactivity have been (1) for operating newly constructed facilities, (2) for requirements generated by increased visitor use, and (3) for expansion in programs of newly activated areas.

Increases have been provided for these purposes in recent prior-year appropriations. However, the objective of providing adequate staffing and supporting general expense funds for management, protection, and interpretation of the park areas has not been realized and the requirement increases from year to year as visitor use of the parks increases, as new facilities are placed into operation and as progress is made in expanding operations in newly activated areas.

The placing into operation of new facilities provided under the construction programs brings substantial requirements for additional funds under this appropriation activity. New visitor centers require additional uniformed interpretive personnel. New campgrounds and campfire circles require additional protective and interpretive personnel (rangers, naturalists, historians, etc.), plus supporting general expense funds, including uniform allowances. New miles of roads and parkways, and, in some instances, reconstructed and reconditioned roads require additional ranger personnel for patrol functions, plus supporting general expense funds, including such expensive items as the acquisition, operation, maintenance, and replacement of motor vehicles.

Park visitation is expected to reach 127.5 million in 1967 as compared to 112.1 million in 1965, and an estimate of 119.5 million for 1966. Only through the provision of adequate uniformed personnel and supporting program assistance can minimum visitor services and park protection requirements be met, to say nothing of improving the services to the public and providing more adequate protection of park values. Also, in some cases, the management staffs must be increased if executive direction and administrative functions are to be performed in an efficient manner and if satisfactory progress is to be made in the prosecution of all park programs.

Aside from the increased visitor use of the parks during the previously recognized travel season, use patterns are changing and extending to the degree that in some heretofore seasonal parks, public use is steadily approaching a year-round basis. New public-use areas and improvements of roads and trails tend to spread public use within the parks. Water use and back-country use are steadily increasing.

Campground use increased approximately 123 percent from 1956 to 1965. In 1956 camper days totaled 3,628,600 while in 1965 they totaled 8,084,800. All of these factors bring about progressively increasing fund requirements for management, protection, and interpretive staffing and general expenses.

Of the total increase requested under this heading, $687,800 is for operations in 23 park areas that have been activated during the past 5 years, for which initial funding has been provided and in some cases increases in funding and staffing have been requested from year to year as progress has been made in acquiring lands and providing physical facilities, and as visitor use of them has increased. The 23 areas involved and funding and staffing data with respect to each follows:

	1966 program		1967 estimate		Increase	
	Permanent positions	Funds	Permanent positions	Funds	Permanent positions	Funds
Allegheny Portage Railroad National Historic Site and Johnstown Flood National Memorial, Pa. (2 areas)	4	$33,900	4	$49,800	.....	$15,900
Bighorn Canyon Recreation Area, Mont.-Wyo.	5	46,000	6	68,800	1	22,800
Canyonlands National Park, Utah	12	134,800	12	195,400	.....	60,600
Cape Cod National Seashore, Mass	17	256,400	19	337,700	2	81,300
City of Refuge National Historical Park, Hawaii	3	48,500	4	74,600	1	26,100
Curecanti Recreation Area, Colo	8	93,900	9	137,600	1	43,700
Fire Island National Seashore, N.Y	8	101,900	11	205,000	3	103,100
Flaming Gorge National Recreation Area, Utah-Wyo	9	126,400	9	163,400	.....	37,000
Fort Bowie National Historic Site, Ariz	2	23,000	2	30,900	.....	7,900
Fort Davis National Historic Site, Tex	4	49,600	5	56,100	1	6,500
Fort Larned National Historic Site, Kans	5	39,900	5	57,500	.....	17,600
Fort Smith National Historic Site, Ark	6	53,200	6	57,200	.....	4,000
John Muir National Historic Site, Calif	3	23,000	3	36,200	.....	13,200
Lincoln Boyhood National Memorial, Ind	3	43,900	4	62,600	1	18,700
Ozark National Scenic Riverways, Mo	7	71,000	9	163,400	2	92,400
Padre Island National Seashore, Tex	8	124,100	9	188,400	1	64,300
Point Reyes National Seashore, Calif	8	108,100	11	149,000	3	40,900
Russell Cave National Monument, Ala	3	26,800	3	29,100	.....	2,300
Sagamore Hill National Historic Site, N.Y	7	64,100	7	71,700	.....	7,600
Saint-Gaudens National Historic Site, N.H	3	30,900	3	39,800	.....	8,900
Theodore Roosevelt Birthplace National Historic Site, N.Y	3	25,900	3	31,000	.....	5,100
Whiskeytown Recreation Area, Calif	7	108,000	9	130,400	2	22,400
Total	135	1,633,300	153	2,335,600	18	702,300
Less pay increase cost for fiscal year 1966 positions	.....	.....	.....	.....	.....	14,500
Program increase requested	.....	.....	.....	.....	.....	687,800

In addition to the 18 new positions shown above, the increase would provide for 35 man-years of temporary employment for the 23 areas activated during the past 5 years.

The remainder of the increase, $983,500 is for operations in areas activated more than 5 years ago and for which present staffing and funding are essentially relative. This amount would provide for 39 new permanent positions and 54 man-years of temporary employment.

Total requirements under this heading have been determined on the basis of estimates justified by the individual park superintendents as adjusted after regional and Washington office review. This is the same basis upon which the requirement has been determined in prior years.

Program of work.—The program for fiscal year 1967 provides for a continuing effort to manage, protect, and interpret the park areas and facilities administered by the Service to accommodate a growing number of visitors (estimated at 127.5 million in 1967) and, at the same time, preserve park values. The program contemplates approximately the same standard of performance in the park areas as that currently obtaining. Substantially all of the increase requested has necessarily been programed for the operation of new facilities and for several recently authorized park areas, including 23 established during the past 5 years for which only partial funding has been provided and 13 authorized during recent months for which no funds have yet been provided.

Of the increase requested, 29 percent is for the operation of 13 new park areas; about 63 percent has been applied to the operation of newly constructed and reconstructed facilities and to cover requirements generated by increased visitor workload in existing park areas, principally those that have been established during the past 5 years; and the balance, about 8 percent, is for pay increase costs of existing positions.

(b) *National Capital region*

The estimate for 1967 is $3,661,300, an increase of $182,400 over 1966. The increase consists of—

(1) An increase of $41,100 for increased pay costs.

(2) An increase of $141,300 for operation of new facilities and to meet the increased visitor workload.

Need for increase.—The entire increase will be applied to cover costs incident to the management, protection, and interpretation of new and restored facilities, which will be completed and opened for public use in the 1967 fiscal year. The new facilities include the Lincoln Museum in the restored Ford's Theatre Building, the Theodore Roosevelt Memorial and the island on which it stands, the recently authorized Great Falls Park (Va.) with its visitor center, and the 100-site campground at Greenbelt Park along the Baltimore-Washington Parkway. The requested increase will provide for only the minimum standard of service which the public expects and the protection to which the public is entitled.

1. *Lincoln Museum, $40,400.*—The new Lincoln Museum will include the restored Ford's Theatre and the annex to the south. In the basement under the auditorium of the theater, there will be exhibits interpreting Lincoln's life and in the annex will be the Lincoln Library, the historian's (site supervisor's) office, and a place of assembly for visitors waiting to enter the auditorium to witness an interpretive auidovisual program. This is a much expanded facility over that known as the Lincoln Museum from 1932 to 1964 where only the ground floor of the Ford's Theater Building contained exhibits and was open to the public. With the addition of another building to protect, the auditorium and exhibit room both in the restored Ford's Theatre Building, and an expanded interpretive program in the auditorium, additional staffing is essential. It is planned that these sites will be open daily from 9 a.m. to 10 p.m. beginning January 1, 1967. The increase of $40,400 will provide for additional staffing and supporting program items required for the second half of the fiscal year. It is estimated that admission fee collections at the Lincoln Museum will amount to about $250,000 annually based upon an estimated 500,000 visitors at a proposed rate of 50 cents per person.

2. *Theodore Roosevelt Memorial and Island, $56,400.*—The only staffing on Theodore Roosevelt Island over the years has been one-fourth man-year of seasonal personnel. The island has been accessible to the public by ferryboat on weekends from mid-May through October. The ferry carried only 40 passengers per trip. With the completion of a parking lot and footbridge from the Virginia shore, ferry service will be discontinued and the island will then be reached on foot and be available to visitors daily. The Theodore Roosevelt Memorial covers 3 acres of the 88-acre island which is densely wooded and traversed by 3½ miles of foot trails. Additional staffing is required to provide interpretive services and to protect the memorial and the island for the tens of thousands of visitors expected to visit it with the improved access. Plans call for manning a kiosk at the bridgehead on the Virginia shore to acquaint visitors with the trail system on the island, a guidepost at the memorial, a roving patrol of the trails, and a guard at night. All posts would be manned 7 days a week and would provide coverage 24 hours per day.

3. *Great Falls Park (Va.), $80,400.*—Permanent staffing has not previously been programed for this 790-acre park. School groups will be encouraged to visit the park on weekdays during the school year and they will use the visitor center in much the same way as they use the Rock Creek Nature Center. The scenic attractions of Great Falls at all times of the year coupled with the story of geology, the unique natural features, and the human history dating from the early days of our Nation combine to mark Great Falls Park as one of the most significant units of the National Capital park system. In addition to the interpretive facilities, there is an extensive parking lot, picnic grounds to accommodate several thousand people, an extensive trail system, and visitors also participate in rock climbing and fishing. Some fishermen who venture too close to the water are lost each year when swept over the falls making it essential to provide for visitor protection in the area. The increase requested will provide minimal staffing for interpretation and protection.

4. *Greenbelt Park, $14,100.*—Located along the Baltimore-Washington Parkway in Prince Georges County, Md., this densely wooded park of 1,200 acres has never had any permanent staff. It contains a new circulatory road system serving 3 new picnic areas and a 100-site campground, all of which are intensively used by the public. Minimum staffing for protection of visitors and the park facilities, and for basic information services and public contacts as required is provided for under this item.

Program of work.—Within the District of Columbia and in the metropolitan portions of the adjacent States are some 40,000 acres of park land administered by the National Capital region of the National Park Service. The capital investment in these properties and improvements is in excess of $237 million. The available funds will be used primarily for managing, protecting, and interpreting these park areas, many of which are of paramount national significance like the great presidential memorials, the Lincoln Museum, George Washington Memorial Parkway, Rock Creek Park, and the lowermost portion of the Chesapeake & Ohio Canal. With the growing number of visitors and public use facilities, the emphasis on the "See the U.S.A." program, and the special efforts being made toward the beautification program in and around Washington, D.C., the workload in the National Capital park areas has increased significantly and there is every indication that it will continue to increase at a rapid rate in the future.

(c). *Informational publications*

The estimate for 1967 is $662,200, an increase of $57,900 over 1966. The increase consists of—

(1) An increase of $2,600 for increased pay costs.

(2) An increase of $55,300 for printing of additional informational publications.

Need for increase.—The $55,300 will be used to (1) print an additional 1,522,000 copies of informational publications and an initial 750 copies each of 5 historical and natural history handbooks (estimated at $39,000) and (2) employ additional editorial assistance (not to exceed 1 man-year) and provide additional general expense funds for needed expansion of the program in response to additional visitation and the added areas of the national park system (estimated at $16,300). The history and natural history handbooks are sales items, receipts from which are deposited as general fund revenues of the Treasury Department.

Program of work.—The publications program is a continuing effort. Service personnel in the parks, regional offices, and the Washington office participate in various stages of preparing and editing the publications. Currently the Service is engaged in a 3-year program to upgrade its graphics, mapping, and editorial work. Artists and writers of distinction have been employed to improve the quality of work. The Geological Survey has been called upon to bring technical assistance and direction to the mapping program. Publications produced for this program are printed at the Government Printing Office.

The Service is seeking new methods to meet rising needs for production of general informational publications and their important adjuncts, the historical and natural history handbooks. Several experiments, such as packets of related pocket-size folders which can be sold, will be initiated with new types of free and sales folders in the next year. It is expected that these innovations will improve the efficiency of this program. The publication program for the current and budget year is as follows:

1966 fiscal year

	Number	Copies	Estimated cost
Free informational publications:			
Booklets	16	2,050,000	$52,590
Folders	171	13,508,000	220,290
General information publications	3	70,000	4,380
Total	190	15,628,000	277,260
Sales publications:			
Historical handbooks	3	2,250	6,500
Natural history handbook	1	750	2,050
Fauna series	1	750	2,050
U.S. map	1	25,000	3,000
Washington, D.C., kit	1	2,000	4,000
Jefferson National Expansion Memorial	1	2,000	1,140
Total	8	32,750	18,740
Grand total	198	15,660,750	296,000

1967 fiscal year

	Number	Copies	Estimated cost
Free informational publications:			
Booklets	20	2,500,000	$65,000
Folders	175	14,500,000	246,500
General information publications	3	150,000	9,600
Total	198	17,150,000	321,100
Sales publications:			
Historical handbooks	3	2,250	7,600
Natural history handbooks	3	2,250	6,300
Total	6	4,500	13,900
Grand total	204	17,154,500	335,000

(*d*) *Employees' compensation fund payments.*

The estimate for 1967 is $166,000, an increase of $33,000. This increase is for payment to the Bureau of Employees' Compensation, Department of Labor.

Need for increase.—The estimate represents the total amount required for payment to the Bureau of Employees' Compensation, Department of Labor, as required by Public Law 86–767, approved September 13, 1960.

(*e*) *Roosevelt Campobello International Park Commission.*

The estimate is $88,000, an increase of $63,000 over 1966. This increase represents the U.S. Government's share of increased requirements for Roosevelt Campobello International Park.

An analysis of the 1967 fund requirement, as estimated by the Commission, follows:

Operating costs	$71,000
Capital outlay:	
Development	98,000
Land acquisition	100,000
Total capital outlay	198,000
Total estimate	269,000
Less estimated carryover balance from prior year funds	−93,000
Additional amount required	176,000
U.S. share—½	88,000
Less amount in appropriation base	−25,000
Increase required	63,000

The amount requested is one-half (the U.S. share) of the amount estimated to be required for the Roosevelt Campobello International Park during the 1967 fiscal year, as authorized by Public Law 88–363 (78 Stat. 299). The other one-half of the estimated fund requirement is to be provided by the Canadian Government.

The Commission has hired a small staff of permanent employees to handle the year-round administrative, maintenance, custodial, and related work at the park. When the park is open to the public, the staff is supplemented by temporary guards, guides, typists, laborers, etc., as needed. The salaries and wages of these employees, together with the cost of supplies and materials, travel, uniforms, insurance, utilities, equipment operation, etc., is included in the items that make up the $71,000 operating budget for 1967, which is the same amount as the program for 1966.

The Commission had determined that additional capital expenditures are required to provide properly for the administration, protection and interpretation of the park for which the $198,000 capital outlay ($100,000 for land acquisition

and $98,000 for developments) is included in the 1967 budget. The development items are as follows:

Visitor Center (additional funds)	$23,000
Road relocation, Visitor Center	50,000
Master plan of park	25,000
Total	98,000

2. Forestry and fire control—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Forest management	$223,373	$232,300	$234,600	+$2,300	+$2,300	
(b) Fire protection service	1,099,484	1,176,000	1,264,000	+88,000	+6,000	+$82,000
(c) Tree preservation	91,709	108,700	109,400	+700	+700	
(d) Forest fire suppression	301,050	100,000	100,000			
Total	1,715,616	1,617,000	1,708,000	+91,000	+9,000	+82,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

Forestry and fire control, along with soil and moisture conservation, is an activity concerned with preservation of the resources of the national park system for visitor benefit and enjoyment. The combination of programs in this activity provide such benefits as stable soils; wildlife habitat; forest cover in campgrounds; trees and shrubs in historical settings; scenic landscapes; building and forest fire protection; and hazardous tree removal for the comfort and safety of park visitors. This activity is correlated with similar activities of other agencies on adjacent lands.

(a) *Forest management*

The estimate for 1967 is $234,600, an increase of $2,300 over 1966. This increase is for pay costs.

Program of work.—Approximately 16 million acres or 57 percent of the land area managed by the Service is covered with outstanding examples of unique scientific and scenic forests, grasslands, desert shrubs and tundra.

Great emphasis must be directed to protection of the vegetation and forest cover from insects and forest diseases in order to preserve and maintain the esthetic and inspirational values of the parks, as well as the stability of the soils—much of which is most fragile and delicate because of the high altitudes and mountainous terrain in which many of the larger areas are located. The impact of heavy visitor use is eroding the natural setting and affecting the enjoyment of many campgrounds and other public use areas. The objective of the forest management program is to cope with these concepts and forest problems that arise and to provide direction and technical assistance in fire protection, insect and tree disease control, soil and moisture conservation, control of exotic and noxious plants, tree preservation, range and wildlife habitat management, and grazing administration. The program provides for cooperating directly with other Federal and State conservation agencies to provide efficiency and uniformity on joint operations, mutual aid during fires or other emergencies; soil and moisture control; forest and pest control; research; interagency training, and development and testing of new techniques and equipment.

(b) *Fire protection service.*

The estimate for 1967 is $1,264,000, an increase of $88,000 over 1966. The increase consists of—

(1) An increase of $6,000 for increased pay costs.

(2) An increase of $7,000 for fire protection service at new park areas.

(3) An increase of $75,000 for operation of new facilities and to meet increased visitor workload in existing areas.

Need for increase.—1. To provide fire protection at new park areas, $7,000.

Funds are needed to provide fire protection services to buildings, facilities, and forest cover for the following four new park areas for which funding is not now provided:

Arbuckle Recreation Area, Okla	$5,000
Sanford Recreation Area (including Alibates Flint Quarries and Texas Panhandle Pueblo Culture National Monument), Tex. (2)	1,500
Pecos National Monument, N. Mex	500
Total	7,000

2. For operation of new facilities and to meet increased visitor workload in existing park areas, $75,000.

The increased funding requested will (1) provide for additional manpower, specialized equipment, communication facilities, and training primarily for the operation and protection of new facilities; (2) replace obsolete and wornout equipment; and (3) strengthen and broaden our fire protection capabilities.

Helicopters and/or fixed-wing aircraft are used in fire control operations to lay hose, drop fire retardant chemicals, transport men, materials, and equipment, and to detect and scout fires. Aerial operations in fire control have resulted in reduction of fire losses and a corresponding reduction in overall suppression costs.

Adequate training of personnel and effective supervision is essential, as is maintenance, inspection, and updating of equipment. Compliance with Federal air regulations is mandatory in all air operations.

The increase will provide an additional 7.6 man-years of seasonal employment in existing park areas, and 1 man-year in new park areas.

Program of work.—Preventing any fire from starting is the best fire protection available. Fire prevention must, therefore, be a continuing effort if this Nation's natural resources are to be preserved for the use and enjoyment of people.

During 1967, the following major programs will be undertaken:

1. Emphasize and strengthen fire prevention programs to further reduce man-caused fire risks.
2. Develop fire protection capability at new areas and strengthen it at existing areas through the provision of training, equipment, and supplies, and the development of mutual assistance agreements with adjacent land management agencies and municipalities.
3. Reduce fire control costs through improved efficiency in operations, manpower development, and fire management.
4. Strengthen mutual aid programs in fire protection.
5. Increase mobility and use of equipment and manpower to cope with unusual fire emergencies.

(c) *Tree preservation*

The estimate for 1967 is $109,400, an increase of $700 over 1966. This increase is for pay costs.

Program of work.—Management of natural resources must, under certain specific conditions, involve preservation of individual trees or groves. Such preservation encompasses ornamental and landscape plantings, shade trees, historically significant trees, groves and historical orchards, specimen trees, and rare and endangered species, and involves the application of accepted arboricultural practices such as transplanting, pruning, bracing, and pest control. Under this program, public use, enjoyment and safety are increased through maintenance of vigorous and structurally sound shade trees in campgrounds, picnic areas, and points of visitor concentration. Capital investments and their architectural and landscape designs, and cultural values of visitor centers, historic structures, and various physical developments are enhanced through maintenance of ornamental and shade plantings. To accomplish this program the Service maintains two mobile tree preservation crews, each specially trained and equipped. An eastern tree crew serves the Northeast and Southeast regions, and the western tree crew serves the Midwest, Southwest, and Western regions.

(d) *Forest fire suppression*

The estimate for 1967 is $100,000, the same as 1966.

Program of work.—These funds are used solely to cover forest fire suppression and emergency presuppression costs when they occur. They are funds which may be required in addition to the regular fire protection service and on-site management activities for fire suppression and emergency presuppression actions.

Suppression involves actual on-the-ground fighting to control fires with dispatch and at the least cost. Presuppression activities include stepping up protection forces during periods of critical fire danger as a preparedness measure in the event of fire emergency.

3. Soil and moisture conservation

Soil and moisture conservation:

Fiscal year 1965 amount available	$200,685
Fiscal year 1966 amount available	206,000
Fiscal year 1967 estimate	206,000

Program of work.—An estimated 2 million acres, nearly 8 percent of the total area within the national park system, are in need of intensive soil and moisture conservation treatment for restoration of basic natural values. Portions of many parks have suffered impairment through overuse, others through misuse prior to establishment, and some through overabundance of wildlife.

A vigorous soil and moisture conservation program is a prerequisite to sound conservation and management of natural, historical, and recreational resources. This program relates directly to other park management activities such as forestry and fire control, noxious and exotic plant controls, tree preservation and maintenance, range and wildlife management, development and maintenance, and visitor services, protection, and use; it augments and enhances these management activities. The program is coordinated with management objectives and activities of local soil conservation districts and adjacent public lands to insure success of respective projects and accomplishment of long-range conservation objectives. The program includes land use planning, soil surveys, streambank stabilization and erosion control, pollution abatement, and revegetation of denuded areas.

4. Park and recreation programs—analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Cooperative activities	$761,177	$879,900	$888,600	+$8,700	+$6,500	+$2,200
(b) Visitor services	631,154	609,800	615,200	+5,400	+5,400	----------
(c) Land and water resource studies	459,674	591,800	595,700	+3,900	+3,900	----------
(d) Archeological investigations and salvage	728,959	775,600	777,300	+1,700	+1,700	----------
(e) Historic American buildings survey	150,631	155,700	157,100	+1,400	+1,400	----------
(f) Historic sites survey	174,182	163,200	164,400	+1,200	+1,200	----------
(g) Registry of national landmarks	----------	----------	61,700	+61,700	----------	+61,700
Total	2,905,777	3,176,000	3,260,000	+84,000	+20,100	+63,900

[1] To provide for increased pay cost for fiscal year 1966 positions.

(a) *Cooperative activities*

The estimate for 1967 is $888,600, an increase of $8,700 over 1966. The net increase consists of—

(1) A decrease of $100,000 as a result of the nonrecurring costs of (1) a study of the Ice Age Scientific Reserve, Wis., and (2) planning for a park and garden below Greers Ferry Dam, Ark.

(2) An increase of $6,500 for increased pay costs.

(3) An increase of $102,200 to strengthen the national park system planning and new area studies programs.

This is a continuing program and is comprised of two major functions, namely, (1) national park system studies, and (2) Federal agency and State assistance.

Need for increase.—The increase of $102,200 will have the effect of keeping the 1967 program at the same level as in 1966. The increase is offset by the reduction of $100,000 shown above for specific nonrecurring items provided in the 1966 appropriation. The existing program level is the minimum required to effectively

and economically carry out basic and priority responsibilities of national park system studies—both for development of a national park system plan ($45,000) and specific proposals for new areas ($57,200). Additional staffing is essential and this increase will provide 5 professional and one supporting positions including necessary general expenses and limited funds for temporary employment and contract services. The national park system studies staff is responsible for developing and providing the Bureau of Outdoor Recreation with required material for its completion of the nationwide outdoor recreation plan by May 1968. The National Park Service's contribution to the nationwide plan will involve completion of a national park system plan by June 1967, including identification of natural, historic (history and archeology), and recreational areas which are recommended for addition to the system. The plan will also identify areas judged to have national significance, but for which further suitability and feasibility studies will be required. The plan will be a dynamic one and, even when completed for this purpose, it must thereafter be revised and kept up to date. A portion of the increase for development of a national park system plan will be used to facilitate the work through utilization of special task forces and a number of field investigating teams comprised of present Service personnel for special assignments during the year on this project.

In recent years there has been a sharply increasing number of requests to investigate and identify qualified natural, historical (including archeological), and recreational areas for the national park system. Along with this there has been a significant increase in the number of related bills introduced in Congress to preserve and protect these areas before it is too late. Far more areas must be investigated than the fractional number which qualify for inclusion in the national park system; and the volume and variety of data required from these investigations have greatly expanded. The additional funds requested are needed to finance the greatly increased workload incident to this expanded and all-important program.

Program of work.—National park system studies: Field studies are required to determine the significance, suitability and feasibility of each area that is considered for addition to the national park system. The preparation of specific area reports and the compilation of supporting data for all legislative proposals constitute major portions of the work program.

Additionally, numerous meetings and hearings must be attended, each requiring special preparation; written and oral statements prepared; matters of policy decided and legal questions resolved. Many of the existing national parks were established with relative ease from the then undeveloped public domain. Most of today's proposals, however, involve areas located where much, if not most, of the acreage is in private ownership and where many diverse interests are involved. The determination of what is in the best public interest is becoming increasingly more complicated. This trend has been clearly demonstrated in the last few years on such projects as the Delaware Water Gap National Recreation Area, Pennsylvania-New Jersey, and the Assateague Island National Seashore, Maryland-Virginia, to cite only two out of some 45 on which legislation has been before Congress this last year alone. All of this emphasizes the very significantly increased Service responsibility and workload which have developed.

For almost every recent major proposal there has also developed a demand and need for economic and other technical studies to provide the Congress, directly affected State or local government bodies, and interested citizens background on which to make decisions concerning the economic enhancement or displacement involved when land is set aside for park purposes. Such studies are needed on many areas now being actively considered, and the trend can be expected to continue in the coming year as additional areas come under consideration. Such economic studies are carried out through contract arrangements with universities and other accredited institutions that have no vested interest in the area in question. They do, however, require the development of guidelines, supervision, review, and analysis.

Federal agency and State assistance: The Federal agency and State assistance program makes available to Federal agencies, the States and their political subdivisions, upon request, the skills and knowledge of the Service's park and recreation planners, interpreters, historians, archeologists, management specialists and other experts. This professional assistance is made available to Federal agencies primarily on a reimbursable basis, particularly in those instances when the minimal permanent staffing in the regional offices has to be supplemented in order to provide such assistance. Sharing of this expertise eliminates the need for full staffing of professional park and recreation specialists by other Federal agencies. Assistance is provided to the extent possible, within the fund resources available, to States requesting specialized assistance in park and recreation programs.

These programs are carried out in full cooperation with the Bureau of Outdoor Recreation and are fully consistant with the division of responsibilities between the two Bureaus (agreement of September 2, 1964). The Service is also participating in the interdepartmental comprehensive river basin planning studies and the natural beauty program.

In the Western States assistance has been, and will continue to be, rendered most often to the Bureau of Reclamation. The Service provides certain technical assistance in the preauthorization studies including analyses of historical and archeological values and, upon request, provides development planning and related assistance as required. Following congressional authorization for a project, the Service prepares general development and land-use plans showing the specific location and extent of user facilities and submits them along with recommendations to the requesting agency for its use in preparing construction plans. During construction, supervision, and followup, consultations are provided as requested. The Federal Water Project Recreation Act will increase the amount of assistance the Bureau of Reclamation will need on existing and newly authorized projects. The Corps of Engineers has its own professional staff but does occasionally request the Service's assistance in reviewing its development plans and reports. The recreation programs of the Bureau of Land Management, Bureau of Sport Fisheries and Wildlife, and Bureau of Indian Affairs, have been strengthened by the recent enactment of legislation and have accelerated their recreation development programs. As a result, requests from these agencies have increased the demand for specialized assistance from the National Park Service. The Service is making every effort to accommodate their requests, and long-range agreements are being consummated with these agencies to assure continued assistance on a programed basis. In view of the current workload and the increasing number of requests for assistance to Federal agencies, it will be necessary to undertake most of the Federal agency work on a reimbursable or advance-of-funds basis if it is to be accomplished.

There is a new acute awareness and emphasis on the preservation and creation of natural beauty throughout the country and the Service will continue its participation in this program by furnishing technical assistance to other Federal agencies and to States and their political subdivisions.

Participation will continue in 14 interdepartmental comprehensive river basin planning studies. Information developed will serve as a basis for determining the damage to scenic and scientific values that might result from proposed resource development, for weighing the qualifications of such values for preservation or development, and for consideration of these values as they relate or may contribute to water resource development programs.

In keeping with its responsibilities, the Service will review Corps of Engineers, Bureau of Reclamation, and Federal Power Commission project reports and submit its comments concerning them to the Assistant Secretary, Water and Power Development.

Thirty-four recreation demonstration areas comprising 222,317 acres of former Federal lands were conveyed to the States during the period between June 1942 and January 1957, with certain restrictive provisions and the stipulation that the land be inspected periodically to determine the degree of compliance with the terms of the transfer. This is being done and if any unauthorized use is found, action is initiated to assure compliance.

(*b*) *Visitor services*

The estimate for 1967 is $615,200, an increase of $5,400 over 1966. This increase is for pay costs.

Program of work.—Visitor services, both at the Washington and regional levels, provides overall coordination and staff direction of the park interpretive program in all of the park areas, consisting of (1) information services (in various media such as personal service, publications, audiovisual programs, exhibits, signs, etc.), and (2) interpretive services (including those performed by maintenance and concessioner employees as well as those performed by park uniformed staffs). It also includes participation in the preparation and review of park master plans and in the study and appraisal of proposed park areas.

Interpretive programs are the hallmark of the National Park Service. The evening campfire programs, audiovisual presentations, the planning and carrying out of the development of museum exhibits, the protection and interpretation of historic structures and memorials, the oral explanation of the geology, the flora and the fauna and even the scenery in natural areas, guiding the visitors through caves, advising the visitor about recreational opportunities, are elements of duties carried on throughout the national park system by more than 800 permanent and

seasonal interpreters (naturalists and historians) each year. This number increases each year with the new areas added and the ever-increasing visitor load. For the most part, these are park employees who are financed under Activity 1: Mangement of Park and Other Areas, of the "Management and protection" appropriation. The overall coordination and direction of functions performed by these employees are provided by Washington and regional office staffs, financed under the "visitor services" item.

The Washington and regional office staffs are required to keep pace with an ever-changing world of design techniques and methods which must be tested, considered, and, where practical, adopted for National Park Service use to maintain high standards of program content and presentation.

Training programs and training aids for both seasonal and permanent interpretive personnel are being developed or improved. A major program area is the providing of interpretive planning assistance and review for park staffs, including the preparation of master plans, interpretive prospectuses and exhibit plans. These are a necessary preliminary to the development schedule.

The Washington and regional office staffs are also providing aid in interpretive planning to an increasing number of other agencies and governments, both foreign and domestic, who request such help.

The conservation education program is increasing in significance and volume.

(c) *Land and water resource studies*

The estimate for 1967 is $595,700, an increase of $3,900 over 1966. This increase is for pay costs.

This continuing program is comprised of two main functions. The following tabulation shows the amounts programed for each function for the 1966 and 1967 fiscal years:

Function	Fiscal year 1966	Fiscal year 1967	Increase
1. Land-use studies	$356,900	$359,800	$2,900
2. Water resource studies	234,900	235,900	1,000
Total	591,800	595,700	3,900

1. LAND-USE STUDIES

Program of work.—The issuance of permits for uses of lands and waters under the administrative jurisdiction of the Service, real property appraisals incident to proposed area studies, appraisals of lands in controversy, formulation of land acquisition procedures for authorized projects, furnishing assistance in acquiring non-Federal land either through purchase, donation, exchange, or transfer, and providing technical assistance to Service personnel in the park areas comprise the principal features of this program.

There are currently about 2,900 revocable special-use permits in effect allowing individuals, corporations, and political entities to use Federal lands and waters in the national park system. It is contemplated that new permits will be issued and old ones will be renewed. Special-use permits cover such uses as private and public accesses; power and other utility lines across park lands; conforming agricultural uses of park lands; uses of federally owned structures; vacation cabin site leases; and military and civil defense uses of park areas.

There are presently before the Congress 13 proposals for establishment of new park areas approved by the Bureau of the Budget; 24 additional areas are classified as active proposals; and 21 areas are under study. Staff appraisers will appraise the lands proposed for inclusion in many of these areas in order to furnish the Service, the Bureau of the Budget, and the Congress, realistic estimates of real property and personalty values. Reviews of appraisals furnished by contract appraisers will be required since the accelerated upward trend of realty values outdates appraisals only a few months old.

The preparation of statistical land data for four separate and distinct inventories of Federal real property required by the Congress, involves the maintenance of meticulous land acquisition records throughout the Service.

There are approximately 6,300 assemblies of deeds and related papers and maps documenting the 26,200,000 acres of Federal lands and waters under the administrative jurisdiction of the Service. Controversial land matters, inquiries of interested parties, and programing of land acquisitions necessitate constant

reference to these muniments of title. The reviews, analyses, and reports preparation are accomplished at the Washington office level.

The Washington office staff also prepares plats for court proceedings and maps in support of budget requests and maintains real property acquisition progress maps for some 250 areas.

2. WATER RESOURCES STUDIES

Program of work.—The 1967 program calls for the continuation of—

1. General geologic and hydrologic investigations to determine the potential water resources of an entire park area. Such investigations are of broad scope needed for long-range administration, planning, and management purposes.
2. The review of deeds to land acquired under the Service's land acquisition program to determine and inventory appurtenant water rights which have been acquired. This is a preliminary step toward necessary amendment under the acquisition of water rights program (financed under the construction appropriation) to preserve and make those rights applicable to the changed Federal water use.
3. Research of water rights and resources, long-term measurements of water use, assembly and maintenance of records and the collection of hydrological data for which the actual perfection of water rights under the acquisition of water rights program is dependent.
4. The maintenance and operation of permanent gaging stations and observation wells to collect basic hydrological data for management and long-range planning purposes.
5. Special studies and the preparation of reports on water resources and water use needed for administrative and management purposes in connection with proposals to use park or monument land for multipurpose reservoirs, etc.
6. Chemical analysis of water quality of existing water supplies.
7. The formulation and direction of the water resources studies and acquisition of water rights programs.

The 1967 program also contemplates the scheduling of 55 investigations, 31 of which constitute continuation of measurements of streamflow and ground water level to supplement records of past years; 12 of the investigations comprise continuation of general geohydrological studies of entire areas; and 12 of the investigations will involve analysis of water rights and resources.

(*d*) *Archeological investigations and salvage*

The estimate for 1967 is $777,300, an increase of $1,700 over 1966. This increase is for pay costs.

Program of work.—This program deals with archeological surveys, investigations, and/or excavations in areas where reservoirs are under construction by Federal agencies, in areas of the national park system, and in cooperation with other agencies in the preservation and protection of historic and prehistoric remains as provided for in the Antiquities Act of 1906 (34 Stat. L., 225).

In 1967, the program contemplates surveys and salvage in approximately 70 reservoir areas in 29 States, and archeological investigations in 32 park areas. The major portion of the work (70 to 80 percent) is accomplished through contracts with qualified State and local educational and research institutions.

The primary purpose of the 1967 program is to protect, conserve, and salvage archeological values within the national park system and on all other lands when Federal construction or other developmental activities threaten such sites. Specific objectives are (1) excavate prehistoric or historic structures; (2) give professional archeological assistance in the preservation and protection of collections; (3) investigate archeological sites and areas proposed for addition to the national park system; (4) provide basic data to the interpretive program in archeological areas and other parks of the Service having important archeological remains; (5) give archeological advice and assistance to other Federal agencies and State organizations as requested; (6) carry out liaison work between the Federal Power Commission, private power development licensees and research institutions capable of salvaging archeological values threatened by such projects; (7) carry out liaison work with the urban renewal agencies in the archeological program in urban renewal and urban expansion areas; (8) salvage and process archeological material important to scientific knowledge which would otherwise be lost through reservoir flooding by the Bureau of Reclamation and the Corps of Engineers, urban renewal, or other related activities; (9) make available to State and local museums representative collections of artifacts and objects recovered through

salvage; and (10) publish the results of fieldwork and research so that scientific data obtained are not lost to the Nation.

(e) *Historic American buildings survey*

The estimate for 1967 is $157,100, an increase of $1,400 over 1966. This increase is for pay costs.

Program of work.—This program, which recognizes and records the features of historically and architecturally valuable buildings and thus helps to preserve them, is both a public service and active conservation. It is instrumental in the saving of landmarks of architecture, history and beauty, an integral part of the President's drive for the beautification of our communities. The program is carried out under the authority of the Historic Sites Act of August 21, 1935.

Measured drawings, photographs, and historical descriptions are prepared of older buildings in all portions of the country and represent every phase of our culture.

Major projects to be conducted during the 1967 fiscal year are of two types:

(1) *Measured drawings of historic architecture prepared by teams of architectural student assistants under the leadership of architectural professors.*—Buildings will be measured in the following areas:

Area:	*Number of buildings*
Central Texas	16
Oahu, Hawaii	6
Northern California	6
Chester County, Pa	8
Central New York State	8
Northern Virginia	6
Washington, D.C	6
Southern Alabama	7
San Juan, P.R	8
Virgin Islands	8

(2) *Photographs and historical data.*—Some of the following will be cooperative projects with local historical societies. In such instances the historical data or the photographs are to be provided locally, and the locality will, in turn, profit from the recognition accorded by the survey.

Area:	*Number of buildings*
Atlanta, Ga	20
Annapolis, Md	25
Central Florida	20
Washington, D.C	12
Wilmington, Del	12
Pittsburgh, Pa	15
Tarrytown, N.Y	15
Saratoga County, N.Y	20
Central Texas	15
Oahu, Hawaii	10
Northern California	10
Central Missouri	8

The survey provides an important cultural archive which is available to everyone by means of nominally priced prints at the Library of Congress. The material is extensively used by builders, architects, citizen groups, community governments, and scholars. In many cases, buildings have been restored or entirely reconstructed on the basis of these records. It is one of the most heavily used collections in the Library of Congress.

There are almost daily requests for the survey to measure or photograph particular buildings. Threatened demolition of a structure frequently provides the incentive to have its appearance and details recorded. A survey certificate is sometimes a deterrent to demolition. Where older buildings of some character are within urban areas slated for renewal, the Survey's experience and advice are available.

There is great enthusiasm for the survey among conservationists. This enthusiasm extends to active cooperation of many institutions and individuals. Colleges have donated drafting space and living accommodations. Many drawings and photographs have been donated by architects and others. This fruitful association has increased the effectiveness of the archive far beyond what would be possible with Federal funding alone. Contributions to the program consisting of

donated professional services, drawings, photographs, historical research, donated office space, etc., have approximated $50,000 in value each year for the past 4 years.

(f) Historic sites survey.

The estimate for 1967 is $164,400, an increase of $1,200 over 1966. This increase is for pay costs.

Program of work:—The historic sites survey is the only nationwide program for identifying and evaluating historic and archeological sites, buildings, and objects of national importance. A continuing activity, the survey is fundamental to the national program of conservation authorized by the Historic Sites Act of August 21, 1935.

In the conduct of the survey, history and prehistory of the United States are divided into periods or themes, such as: "Prehistoric Hunters and Gatherers"; "Indian Villages and Communities"; "Spanish Exploration and Settlement"; "The War for Independence"; "Political and Military Affairs, 1830–60"; and "The Arts and Sciences." Some themes are further divided, for example, "The Arts and Sciences" includes subthemes on "Education," "Architecture," "Literature, Drama, and Music," "Painting and Sculpture," and "Science and Invention." To date, 22 themes and a like number of subthemes have been approved. Other themes or periods covering more recent history and all inclusive themes, such as "Literature, Drama, and Music," "Science and Invention," etc., will be a continuing part of the survey program. For each theme and subtheme, a major study is prepared. Thirty-five of these studies had been completed and evaluated at the end of the 1965 fiscal year.

The major studies, averaging in excess of 160 pages each, consist of a documented narrative on the history of the period or topic involved, and descriptions of the historic and/or prehistoric sites that best commemorate or illustrate the period or topic. On an average, descriptions of some 89 sites are contained in each study.

The survey also prepares special topic and special site reports. Most of these deal with individual sites. Eighty-seven of these had been completed and evaluated by the end of the 1965 fiscal year. The survey is basic to, and provides the supporting data for, the Registry of National Landmarks program.

Data gathered by the survey and the criteria and guidelines developed in the course of the survey, are used by other Government agencies, both State and Federal, and by various historic preservation groups throughout the country.

At the close of the 1965 fiscal year, approximately 3,184 historic and archeologic sites had been studied and evaluated. Of these, 608 sites and buildings have been selected by the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments, as being of exceptional value (national significance), and approved for national landmark status by the Secretary.

Basic evaluation of areas proposed as additions to the national park system is a continuing function of the survey. During the 1965 fiscal year, several historical areas were authorized as additions to the national park system; such as, Allegheny Portage Railroad National Historic Site, Pa.; Fort Bowie National Historic Site, Ariz.; Fort Larned National Historic Site, Kans.; and Saint-Gaudens National Historic Site, N.H.

Also authorized in the present 1966 fiscal year are: Hubbell Trading Post National Historic Site, Ariz.; Golden Spike National Historic Site, Utah; Herbert Hoover National Historic Site, Iowa; and Pecos National Monument, N. Mex.

Through the publication of a series of books based on the thematic studies, the accomplishments of the Survey are now being made readily available to the general public. Two volumes of the proposed series of 18 books have already been published. These are volume XIII, "Soldier and Brave," and volume VI, "Colonials and Patriots." The popular appeal of these books and demand for them are evidence of the role these publications play in developing a greater understanding and appreciation of our national heritage. Because of the demand for other volumes, the publications program is now being given special emphasis.

For fiscal year 1967 it is anticipated that the major study of "Architecture" involving our heritage of buildings and structures for the 50 States will be completed and evaluated by the Advisory Board. It is anticipated also that 30 or more special studies and investigations will be prepared to meet the commitments made to the Congress, and to provide for evaluations needed by other agencies, and for areas proposed for addition to the national park system.

By the end of fiscal year 1967, in addition to the two volumes already published, five additional volumes are proposed to be in print.

Sites and buildings commemorating recent events in American history are now receiving more attention from preservationists, and the Survey must prepare

evaluations of these places in order to identify and encourage the preservation of those which merit national significance; such as atomic energy sites and the homes of recent Presidents of the United States.

(g) Registry of national landmarks

The estimate for 1967 is $61,700, an increase of $61,700 over 1966.

Need for increase.—No program of the National Park Service in recent years has generated more spontaneous public interest and involvement than the registry of national landmarks program involving history and natural history landmarks.

President Johnson, in his White House message on natural beauty said: "In almost every part of the country citizens are rallying to save landmarks of beauty and history. The registry of national historic landmarks is a fine Federal program with virtually no Federal cost. I commend its work and the new wave of interest it has evoked in historical preservation." The registry of natural landmarks, similarly, has evoked a new wave of interest in preserving America's scenic beauty and small natural areas of scientific interest. The natural landmarks program—identical in all major respects of research, identification of areas, and administration to the national historic landmarks program—likewise involves minimal Federal costs.

The registry of national landmarks program seeks to encourage the preservation of sites, buildings, and objects that commemorate or illustrate significant aspects of the history and prehistory of the United States, and of sites which importantly illustrate the geological and ecological character of America; to enhance the educational, historical, and scientific values of sites so preserved; to strengthen cultural appreciation of the historic and natural fabric of this Nation; and to foster maximum involvement in the preservation of America's heritage among local, State, and Federal Governments, citizens' organizations, and individuals.

The program imposes no Federal costs for acquisition, development, operation or maintenance of properties designated as landmarks. The owner at the time of designation retains property rights and responsibility for its development and care. Essentially, the landmarks program gives the status of Federal recognition to properties found to meet certain criteria with respect to significance, quality, and integrity, under any ownership sympathetic to the objectives of the program. In addition it is the means by which the Federal Government takes stock and keeps an inventory of the most significant aspects of our heritage of history and natural history.

Landmarks certificates and plaques are eagerly sought and cherished as a mark of distinction and as evidence of participation in a program of social responsibility. Resulting recognition and publicity have been strong stimuli to local conservation efforts.

Knowledge assembled through the landmarks program is useful in the planning activities of such agencies as the Bureau of Public Roads, the Bureau of Land Management, Urban Renewal, Fine Arts Commission, the Bureau of Outdoor Recreation, and others.

Program of work.—The landmarks program has now reached a level which may be maintained only through adequate staffing and funds. To continue it as a collateral function in other activities will not only dilute the high quality that has characterized the landmarks awards, but will seriously weaken the efforts of those activities that have carried the programs this far. The programs are imperiled through sheer volume of the work involved.

There are currently some 2,000 sites awaiting evaluation for landmark eligibility. Requests for study of sites have been delayed for as much as 3 years. Many of these are of such urgency that delay jeopardizes their preservation.

Biennial visits by a member of the Service is the proposed means of keeping in touch with the registered national landmarks. The Federal Government not only keeps an eye on the landmark, but the program also is a means of helping the owner by providing professional advice in interpretation and sharing with him professional knowledge of preservation and conservation.

5. Concessions management—Analysis by subactivities

Subactivity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Management	$226,731	$252,600	$239,900	−$12,700	+$2,300	−$15,000
(b) Audit	279,753	309,400	312,100	+2,700	+2,700	
Total	506,484	562,000	552,000	−10,000	+5,000	−15,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

(a) *Concessions management*

The estimate for 1967 is $239,900, a net decrease of $12,700 under 1966. The net decrease consists of—

(1) A decrease of $15,000 due to program savings resulting from organizational realinements.

(2) An increase of $2,300 for increased pay costs.

Program of work.—It is the policy of the Congress to have provided by private enterprise the facilities and services considered necessary to meet the reasonable demands of visitors to areas administered by the National Park Service. In line with this policy, it is the purpose of this program to supervise, coordinate, and regulate the establishment, operation, and maintenance of such facilities and services by concessioners pursuant to contracts with the United States. The objective is to have developed by concessioners sufficient clean, modern, and efficiently operated facilities to insure the visiting public comfortable and enjoyable visits at reasonable prices.

Greater emphasis needs to be placed on the important function of providing technical supervision over the establishment, operation, and maintenance of the services furnished by concessioners to the public, and in line with this, more professional training of Service personnel in the hotel and restaurant field will be needed. It shall be the objective to recognize and correct deficiencies in concessioners' operations before they become problems that affect the quality of service to the public and result in adverse reaction from visitors. These involve such things as housekeeping; food quantity, quality, and pricing; employee attitudes; and employee relations.

In addition, it is contemplated under this program that continuing emphasis will be placed on contract compliance, business procedures, the development of sources of concessioner financing, and continued assistance will be given, as requested, to municipal authorities, other Government agencies, both domestic and foreign, in handling matters of a similar nature.

(b) *Audit*

The estimate for 1967 is $312,100, an increase of $2,700 over 1966. This increase is for pay costs.

Program of work.—The program entails the audit by Service personnel of accounts, records and operations of the concessioners providing food, lodging, transportation, utilities and other facilities and services to the many millions of park visitors. The purposes of the audits are to insure that the provisions of the concessions contracts under which these businesses operate are being complied with, that the Government is being paid the full franchise fees required for the privilege granted by these contracts and that the accounting records and financial reports rendered to the Service are reliable, complete and truly reflect the financial conditions and results of operations as represented to the National Park Service. The audit work also encompasses financial surveys of the ability of prospective concessioners to perform contract requirements as outlined in responses to Service prospectuses prior to contract negotiations. Special assignments as made by Service and departmental officials are also carried out as requested. The Service's audit program calls for the performance of concession audits on a 3-year cycle basis with more frequent audits in particular instances where determined to be necessary.

Itemization of estimate

	Actual, 1965	Available, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$29,842,744	$33,133,000	$36,177,000	+$3,044,000
Unobligated balance	284,256			
Transferred to General Services Administration		16,000		−16,000
Appropriation	30,127,000	32,366,000	36,177,000	+3,811,000
Proposed supplemental due to civilian pay increases		783,000		−783,000
Obligations by objects:				
11 Personnel compensation	$21,988,131	$24,118,000	$25,975,000	+$1,857,000
12 Personnel benefits	1,998,672	2,030,000	2,190,000	+160,000
21 Travel and transportation of persons	637,837	672,000	725,000	+53,000
22 Transportation of things	311,073	320,000	330,000	+10,000
23 Rent, communications, and utilities	947,641	1,000,000	1,115,000	+115,000
24 Printing and reproduction	367,030	400,000	460,000	+60,000
25 Other services	1,285,217	1,529,000	1,713,000	+184,000
Services of other agencies	204,055	303,000	355,000	+52,000
26 Supplies and materials	1,119,272	1,636,000	1,870,000	+234,000
31 Equipment	820,831	1,100,000	1,300,000	+200,000
32 Lands and structures	7,985			
41 Grants, subsidies, and contributions	155,000	25,000	144,000	+119,000
Total obligations	29,842,744	33,133,000	36,177,000	+3,044,000

Chairman HAYDEN. Mr. Hartzog, would you please discuss this budget requirement, explaining generally the use to which the funds will be put?

Mr. HARTZOG. Thank you, sir.

DIRECT OPERATION OF PARK AREAS

Mr. Chairman, for the management of parks outside of the national capital parks our budget includes $25,873,500, or roughly 71½ percent of our total fund request. Add to this the management of the parks in the Capital area of $3,661,300 and other park related items, and we have about 94 percent of this budget before you for the direct operation of park areas as shown on the chart on page NP–8 of our justification.

PUBLICATIONS FOR VISITORS

The remaining elements there contribute to the support of the program in terms of informational publications for the visitors, and we have some samples of these which we brought along this morning; forestry and fire control, cooperative activities which includes park planning, working with the States and others in sharing park know-how and our general interpretive archeological and land and water resources survey programs.

Employees' compensation fund payments and an item to provide for the U.S. portion of the cost of operating the Roosevelt-Campobello International Park in Canada make up the remainder.

ASSATEAGUE ISLAND NATIONAL SEASHORE

Chairman HAYDEN. With regard to the $98,800 requested for Assateague Island National Seashore, I know that $100,000 has been made available for purchase of the required land. However, this is not nearly the total amount that will be necessary. What is the status of the land acquisition program here?

Mr. HARTZOG. Mr. Chairman, we have in the budget $3,360,000 under the "Land and water conservation fund" item for land acquisition. The $100,000 has permitted us to staff up the office and get some of the preliminary work out of the way.

Chairman HAYDEN. What is the need for 10 positions for management of the Assateague Seashore at this time?

Mr. HARTZOG. Sir, we have a list of these. It covers a superintendent, a chief ranger, administrative assistant, a park naturalist, three park rangers, a secretary and two clerk-stenographers to carry the program forward in the new year.

I would like to say, however, that the amount that is before you is a net item on these 10 jobs and they will be filled only as they are needed if the Congress allows them.

In other words, funds are not requested to fill them all as of the beginning of the fiscal year, but as they are needed during the year.

PERSONNEL AND FUND REQUIREMENTS FOR NEW PARK AREAS

Chairman HAYDEN. It would be helpful to the committee if you would prepare for the record a table showing the total budget estimates for 1967 for each of the new areas which you list beginning at page 16. Also show in this table the total number of personnel which it is proposed to place at each of these areas during the year.

Mr. HARTZOG. Thank you very much, Mr. Chairman.

Sir, we have that and if we may we will place it in the record:

(The table follows:)

New park areas for which permanent positions and funds are included in the 1967 fiscal year budget

Area	Management and protection		Maintenance and rehabilitation of physical facilities		Construction		Parkway and road construction (liquidation of contract authorization)		Total	
	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount
Agate Fossil Beds National Monument, Nebr. (Public Law 89-33, approved June 5, 1965)	4	$28,300	----------	$15,000	----------	$96,700	----------	$40,500	4	$180,500
Alibates Flint Quarries and Texas Panhandle Pueblo Culture National Monument, Tex. (Public Law 89-154, approved Aug. 31, 1965) and Sanford Reservoir Recreation Area, Tex. (cooperative agreement, approved Mar. 15, 1965) (2 areas)	10	125,000	4	67,000	----------	----------	----------	----------	14	192,000
Amistad Recreation Area, Tex. (cooperative agreement, approved Nov. 11, 1965)	6	73,900	----------	13,000	----------	----------	----------	264,300	6	351,200
Arbuckle Recreation Area, Okla. (cooperative agreement, approved Feb. 1, 1965)	5	81,400	5	36,000	----------	317,500	----------	100,500	10	535,400
Assateague Island National Seashore Md.-Va. (Public Law 89-195, approved Sept. 21, 1965)	10	98,800	7	34,500	----------	169,000	----------	20,000	17	322,300
Delaware Water Gap National Recreation Area, Pa.-N.J. (Public Law 89-158, approved Sept. 1, 1965)	10	98,500	1	15,300	----------	135,200	----------	248,600	11	497,600
Golden Spike National Historic Site, Utah (Public Law 89-102, approved July 30, 1965)	5	51,200	1	13,000	----------	361,000	----------	159,000	6	584,200
Herbert Hoover National Historic Site, Iowa (Public Law 89-119, approved Aug. 12, 1965)	4	46,700	1	18,000	----------	42,300	----------	8,100	5	115,100
Hubbell Trading Post National Historic Site, Ariz. (Public Law 89-148, approved Aug. 28, 1965)	4	46,300	1	17,000	----------	50,000	----------	----------	5	113,300
Nez Perce National Historical Park, Idaho (Public Law 89-19, approved May 15, 1965)	4	46,400	1	20,000	----------	----------	----------	----------	5	66,400
Pecos National Monument, N. Mex. (Public Law 89-54, approved June 28, 1965)	3	38,500	1	19,000	----------	35,000	----------	----------	4	92,500
Ellis Island (addition to Statue of Liberty National Monument), N.Y. (Public Law 89-129, approved Aug. 17, 1965)	5	37,000	4	42,000	----------	100,000	----------	----------	9	179,000
Total	70	772,000	26	309,800	----------	1,306,700	----------	841,000	96	3,229,500

NATIONAL CAPITAL REGION

Chairman HAYDEN. For the National Capital region you ask $3,661,300, which includes a program increase of $141,300, all for the operation of new facilities. Would you please describe the facilities to which this increase will apply?

RESTORED LINCOLN THEATER AND MUSEUM

Mr. HARTZOG. Thank you, sir; $40,400 of it is in connection with the restored Ford's Theater in the Lincoln Museum for which the committee gave us some $2 million in past years and which is now going forward. We expect it to be in operation during part of the year.

THEODORE ROOSEVELT MEMORIAL AND ISLAND

The amount of $56,400 is in connection with the operation of the Theodore Roosevelt Memorial and island. We have never had a full-time employee there, but with the completion of this very handsome memorial to President Roosevelt it is going to be necessary to staff up on a full-time basis.

GREAT FALLS PARK IN VIRGINIA

Last year the Congress authorized us to carry forward a land exchange at Great Falls with Pepco for a piece of property which we own in Maryland. This, together with the land that we have obtained from Fairfax County, will now permit the consolidation of this Great Falls area on the Virginia side and we need $30,400 to staff that park operation.

GREENBELT PARK IN MARYLAND

There is $14,100 requested for the staffing of Greenbelt, which is one of the urban parks out near the beltway which we anticipate will receive a great deal of visitor use. This is an area in which we have built campground and picnic facilities for people who wish to camp and visit the Nation's Capital.

STATUS OF FORD'S THEATER RESTORATION

Chairman HAYDEN. What is the status of the restoration of Ford's Theater?

Mr. HARTZOG. Sir, the contract for construction has been awarded in the amount of $1,557,000. The foundation work has been completed. It is expected that the total restoration will be completed by January of 1967, and I have a more detailed statement of the status of this which I would be pleased to put in the record if we may.

Chairman HAYDEN. You may do that.

Mr. HARTZOG. Thank you.

(The statement follows:)

Currently the excavation, foundation underpinning, wall stabilization, truss and roof system, and front facade have been completed, and payment has been made for 50 percent of the work.

Contract work started on January 4, 1965, with a completion date of June 27, 1966, and a cost of $1,390,000.

Subsequently change orders advanced the estimated completion date to February 1, 1967, and revised the construction cost to $1,557,000.

INTERBUREAU AIR OPERATIONS CENTER AT WEST YELLOWSTONE

Chairman HAYDEN. In connection with your fire control activities would you explain the Interbureau Air Operations Center?

Mr. HARTZOG. Thank you, sir.

Sir, this is a program that grew out of the new Yellowstone Airport involving some five agencies, the U.S. Forest Service, the Bureau of Land Management, the Bureau of Indian Affairs, Fish and Wildlife Service, and National Park Service. This operation was initiated in connection with the construction of the Yellowstone Airport to provide for centralized fire control work on the national forests and other public lands in the vicinity of Yellowstone as well as the park, and each of the operating agencies shares in the operating cost.

However, funds to build the facility were provided by the Congress, a part of which was included in our budget.

MOUNTAIN PINE BEETLE CONTROL AT GRAND TETON

Chairman HAYDEN. I observe that included in your operations at Grand Teton National Park is a program to control mountain beetle. By whom is the control work done, you or the Forest Service?

Mr. HARTZOG. Sir, this work shows up in our statement of accomplishments because it is a program we carry on under a cooperative arrangement with the U.S. Forest Service and coordinated and integrated with its program on forest lands.

The funds are appropriated to the U.S. Forest Service as a part of its overall pest control work. In turn funds are transferred to us for certain work so that the total program is integrated.

There is no money in this budget for this. It comes through the Forest Service budget, but we do supervise the work in the park.

1966 SUPPLEMENTAL FOR FIRE SUPPRESSION

Chairman HAYDEN. How much supplemental appropriations are you going to ask for fire control activities in fiscal year 1966?

Mr. HARTZOG. $245,000, sir.

SOIL AND MOISTURE CONSERVATION PROGRAM

Chairman HAYDEN. Your budget estimate for soil and moisture conservation in fiscal year 1967 is the same as fiscal year 1966, $206,000. Would you outline for the committee the use to which you put this money in the current fiscal year, and your plans for it in the coming fiscal year?

Mr. HARTZOG. Sir, practically all of the money, roughly $150,000, is for soil management and water management; in other words, the restoration of damaged areas.

For example, the balds in the Great Smoky Mountains National Park have been severely rooted up by wild boars which have come over from adjacent public lands. This involves the revegetation and reseeding of these balds. The rest of the money is used for planning, surveys, studies, and miscellaneous operations. We would plan to use the same amount this year for substantially the same programs. We have a breakdown of that and would be pleased to put it in the record.

Chairman HAYDEN. Very well.
(The information follows:)

1966 PROGRAM FUNCTIONAL BREAKDOWN

1. Studies and investigations	$5,000
2. Surveys	5,500
3. Land use planning	33,500
4. Soil management	130,000
5. Water management	22,000
6. Operations and maintenance	10,000
Total program	206,000

Soil and moisture conservation work will be accomplished within 36 areas of the national park system during 1966. Approximately 63 percent of the work is being directed toward reestablishment of vegetative cover, fencing, brush control, and other soil-stabilization measures. About 13 percent of the program involves water management—primarily bank protection and small developments. The remaining amount, approximately 24 percent, will be applied to land use planning, studies, and investigations coordinated with programs of adjacent jurisdictions and soil and water conservation districts.

1967 PROGRAM FUNCTIONAL BREAKDOWN

1. Studies and investigations	$4,500
2. Surveys	5,000
3. Land use planning	34,500
4. Soil management	131,500
5. Water management	20,000
6. Operations and maintenance	10,500
Total program	206,000

Soil and moisture conservation work is programed for 36 areas of the national park system during 1967 with about half of the total effort directed toward stabilization and improvement of soils. Increased cooperative activities with local soil conservation districts and other agencies is a continuing part of the overall program.

Some specific activities include stabilization of streambanks and meadows, reseeding work to restore native grasses depleted by excessive use or loss through fires, and cleanup or removal of stream course debris to prevent excessive flooding by runoff in succeeding storms.

Rapidly increasing use of all areas of the national park system, resulting from this Nation's accelerated population trends and growing public interest in outdoor recreation, requires intensive management to prevent overuse and subsequent impairment of natural and scenic values. Portions of many long existing park areas have already suffered impairment from overuse, and most newly established areas have serious depletion of land, vegetation, and water resources through abuse and misuse prior to establishment. This condition also exists on most areas currently proposed for inclusion in the national park system, and will likely be encountered with all future proposals.

The soil and moisture program, as it applies to impaired as well as to seriously depleted portions of park areas, consists of remedial measures that will control unnatural erosion and stabilize soils, reestablish native vegetation, and restore quantity and quality of water resources. Certain soil and moisture measures must also be applied in some areas to preserve scientific, historic, and prehistoric objects or scenes that are threatened by severe soil erosion, destructive flooding, or vegetation growth inconsistent with management principles.

GREER'S FERRY NATIONAL GARDEN PARK (PROPOSED), ARK.

Chairman HAYDEN. Last year funds were added to your budget for planning a park and a garden below Greer's Ferry Dam in Arkansas. What is the status of this planning at this time?

Mr. HARTZOG. Sir, of the $50,000 that was allotted for this project we have entered into a $40,000 planning contract with Mr. Edward

Durrell Stone of New York to come up with concept and cost estimates for the overall development.

The remaining $10,000 is being used for contingencies and overhead of our people working with Mr. Stone. We expect that the work will be finished in time to submit a program in the next fiscal year for the consideration of the Congress. I have a more detailed statement for the record if you wish.

Chairman HAYDEN. That is satisfactory.

(The statement follows:)

On February 9, 1965, Congressman Wilbur Mills introduced H.R. 4641 authorizing modification of the Greers Ferry Dam and Reservoir, White River Basin, near Heber Springs, Ark., in the interest of recreation development and for other purposes to provide for the construction, operation, and maintenance by the Corps of Engineers of a landscaped garden with fountains as part of the recreational facilities adjacent to the reservoir at an estimated cost of $325,000. No congressional action was taken on this bill. The Department of the Interior was requested to determine whether or not it could enter the picture and construct this facility. It was determined that the National Park Service had this authority under provisions of the act of August 7, 1946 (16 U.S.C. 17j–2).

By Senate amendment No. 10, $50,000 was added to the Department of the Interior and Related Agencies Appropriation Act, 1966, to enable the National Park Service to prepare plans for the Greers Ferry Park and Garden. The funds will be used for planning the combination of formal, informal, and natural water garden with approaches, parking, and related structures. The garden will feature fountains and water display, in the Greers Ferry project area below the dam. The National Park Service may administer, improve, and maintain the area under terms of a cooperative agreement with the Corps of Engineers. This agreement is yet to be consummated, although meetings have been held with the corps and a draft prepared. The acreage to be included within the proposed area and exact location of developments as well as other technicalities are yet to be agreed upon, but negotiations are underway.

A $40,000 planning contract has been entered into with Edward Durrell Stone, architect, of New York City. It is expected that these plans will be completed within the next few months, following which the cost estimates may be prepared upon which to base arrangements for financing. The amount of $50,000 is included in the budget for the fiscal year 1967 for preparatory work leading to construction after the planning currently underway is completed.

NATIONAL PARK SYSTEM PLANNING AND NEW AREA STUDIES

Chairman HAYDEN. Your cooperative activities budget includes an increase of $102,200 for system planning and new area studies. Can you break down the areas to which this increase will be assigned?

Mr. HARTZOG. Sir, $45,000 of this we expect to use in connection with furthering the development of a national park system plan as a part of the overall nationwide recreation plan.

The remainder of this money is going to be used on individual studies, and we have 77 of these studies that we would like to get underway. I have a list of them which I will be pleased to put in the record.

We don't have the remaining $57,000 broken down as to how much on each one because we don't keep our accounts that way. I will be glad to try to break it out further if after looking at this you desire it to be broken out.

Chairman HAYDEN. That is not necessary. Place the names in the record.

Mr. HARTZOG. Thank you, sir.

(The list follows:)

TENTATIVE LIST OF NEW AREAS TO BE STUDIED IN 1967

1. Savannah NHS, Ga.
2. St. Catherine's Island NS (Golden Isles), Ga.
3. Cherokee Council Grounds NM, Ga.
4. Fahkahatchee Strand NM, Fla.
5. Grand Portage-Pigeon Point, Minn.
6. Dismal Swamp NM, Va.-N.C.
7. Columbia River Parkway, Wash.
8. Piscataway Park, Md.
9. Antietam NBS, Md.
10. Point Reyes NS, Calif.
11. Poverty Point NHS, La.
12. Buffalo NR, Ark.
13. Parramore Island NS, Va.
14. Smith Island NS, N.C.
15. Ship Island NS, Miss.
16. Natchez Trace Trail, Tenn., Ala., and Miss.
17. Appalachian Parkway, W. Va., to Maine
18. Pensacola-Santa Rosa NS, Fla.
19. Great Plains-Prairie Parkway, Okla. to N.Dak.
20. Phosphorescent Bay NM, P.R.
21. Mississippi River NRA, Tenn.-Ark.
22. Wakulla Springs NM, Fla.
23. Wacassa River, Fla.
24. Ansley Wilcox House NHS, N.Y.
25. High Falls of the Ohio, Ohio
26. Sandy Hook NS, N.J.
27. Lindenwald (Van Buren House) NHS, N.Y.
28. Pine Barrens NM, N.J.
29. Fort Necessity NHS, Pa.
30. Ice Age NSR, Wis.
31. Hudson Highlands, N.Y.
32. Apostle Islands NL, Wis.
33. Allagash NSR, Maine
34. Connecticut National River, Connecticut, N.H., Vt., Mass.
35. Chicago Architectural Theme NHS, Ill.
36. Plymouth Rock NHS, Mass.
37. Maine Islands NS, Maine
38. Fort Stanwix NHS, N.Y.
39. Nantucket NS, Mass.
40. Wyandotte-Marengo Caves NM, Ind.
41. Governors Island NHS, N.Y.
42. St. Mary's City NHS, Md.
43. Portage Canal NHS, Wis.
44. Channel Islands NP, Calif.
45. Erskine House NHS, Alaska.
46. Ecola NM(Oregon State Park), Oreg.
47. Raton Mesa NM (Fishers Peak), Colo.
48. Sheep Mountain NM, Wyo.
49. Sitka NM *, Alaska.
50. Badlands NM *, South Dakota.
51. Mesa Verde NP *, Colorado.
52. Hawikuh NM, N. Mex.
53. Big Thicket NM, Tex.
54. Fossil Butte NM, Wyo.
55. Florissant Fossil Beds NM, Colo.
56. Sanford NRA, Tex.
57. Arbuckle NRA, Okla.
58. Lewis and Clark NWW, Mont.
59. Fillmore Crater NM, Utah.
60. Dixie Project NRA, Utah.
61. Washita Battlefield NHS, Okla.
62. Valle Grande-Bandelier NP, N. Mex.
63. Hawaii Volcanoes NP, Hawaii.*
64. Sawtooth NP, Idaho.
65. Alcatraz N. Mem., Calif.
66. Salinas NM, N. Mex.
67. Prairie NP, Okla.-Kans.
68. Samoa. (Special study)
69. Guam. (Special study)
70. Research Cave NM, Mo.
71. Big Hidatsa Village NM, North Dakota.
72. Atomic Explosion Site NHS, N. Mex.
73. Wood-Tik-Chik NP, Alaska.
74. St. Jacobs Well NM, Kans.
75. Cucharas Canyon NM, Colo.
76. Palm Grove NM, Tex.
77. San Gabriel NHS, N. Mex.

*NOTE.—Studies of major additions to existing areas.

PISCATAWAY PARK LANDS

Chairman HAYDEN. In connection with your studies of lands and water resources, I would like to know whether you have completed appraisal of all the area, proposed for inclusion in Piscataway Park, Md.

Mr. HARTZOG. Yes, sir; we have completed that now.

Chairman HAYDEN. How many appraisers did you assign to that park this year?

Mr. HARTZOG. Sir, I assigned one staff appraiser who was assisted by an outside land evaluation engineer. He is not a professional appraiser, but we felt that his talents were such that with our own staff appraiser, who is a highly qualified man, it would give us two valuations.

LAND VALUE ESCALATION

Chairman HAYDEN. How much change in value of the lands have you found?

Mr. HARTZOG. Considerable, sir. The present authorization is about $937,000 and we estimate that the cost to acquire the rest of the property will be about $3.7 million.

CONTEMPLATED LEASE OF USE RIGHTS

Mr. Chairman, may I say there, sir, that we expect in connection with this Piscataway legislation to submit this new tool that we were talking about earlier to permit us to lease back some of these lands for private use so that we think this overall gross figure of $3,711,000 can be reduced through lease back of private use rights.

Chairman HAYDEN. As I recall, the legislation authorizing this park provided for an appropriation of $937,600. How much of that authorization remains unappropriated?

Mr. HARTZOG. Sir, there is $544,500 remaining unappropriated and the item is in the land and water conservation budget that is now before you for consideration.

Chairman HAYDEN. Are you proposing amendatory legislation to provide the additional authorization?

Mr. HARTZOG. Yes, sir.

GROUND WATER LEVEL MEASUREMENTS

Chairman HAYDEN. In connection with your water resources study, does the National Park Service or the Geological Survey do the stream-flow measurements and ground water level measurements?

Mr. HARTZOG. Sir, the Geological Survey does it for us on a reimbursement basis. We furnish some of the equipment such as automobiles that their people use and then we reimburse them for their salaries and per diem, but the Geological Survey does the work.

ARCHEOLOGICAL SALVAGE AND INVESTIGATIONS PROJECTS

Chairman HAYDEN. Would you please place in the record a table showing where you propose to do archeological investigations and salvage in fiscal year 1967, together with an indication of the amounts which you have planned for expenditure at each of the sites?

Mr. HARTZOG. Thank you, sir. I have that statement and I will be pleased to put it in the record.

(The statement follows:)

Fiscal year 1967

Project	State	Status	Complete (fiscal year)	Type of work	Amount
Jones Bluff	Alabama	U/C	1968	Ex.	$11,000
Millers Ferry	do	U/C	1968	Ex.	10,000
DeGray	Arkansas	U/C	1969	Ex.	10,000
Barge canal	Florida	U/C	1969	Ex.	15,600
Carters	Georgia	U/C	1968	Ex.	15,000
Green River	Kentucky	U/C	1967	Ex.	10,000
Cave Run	do	U/C	1967	Ex.	12,000
Hull	Tennessee	U/C	1968	Ex.	15,000
National Park Service park projects:					
Everglades National Park	Florida				10,000
George Washington Birthplace National Monument	Virginia				10,000
Southeast region total					118,600
John Day	Washington-Oregon	U/C	1968	Ex.	25,000
Lost Creek, Applegate Creek, Resv.	Oregon	NS 68	1972	Ex.	15,000
Little Goose	Washington	U/C	1968	Ex.	15,000
Lower Granite	do	U/C	1968		15,000
Buchanan	California	NS 68			15,000
Wynoochee	Washington	NS 67			5,000
Hidden	California	NS 67			11,000
Martis Creek	do	NS 67			5,000
Western region total					106,000
Amistad	Texas	U/C		Ex.	55,000
Toledo Bend	do	U/C		Ex.	55,000
North San Gabriel	do	NS 68		Ex.	15,000
South San Gabriel	do	NS 68		Ex.	15,000
Sanford	do	U/C		Ex.	15,000
Forney	do	U/C	1967	Ex.	15,000
Laneport	do	NS 68		S	10,000
Short Mountain	Oklahoma	U/C			20,000
Waurika	do	NS 69		Ex.	20,000
San Juan-Chama	New Mexico	U/C			25,000
Cochiti	do	U/C	1968	Ex.	40,000
Dixie	Utah	U/C			15,000
Gillespie	Arizona	U/C	1967		10,000
National Park Service park projects:					
Big Bend National Park	Texas			S	7,000
Lake Mead National Recreation Area	Arizona			S	7,000
Canyon de Chelly National Monument	do			S	7,000
Bandelier National Monument	New Mexico			S	8,000
Zion National Park	Utah			S	5,000
Canyonlands National Park	do			S	16,000
Southwest region total					360,000
Carlyle	Illinois	U/C	1966	Ex.	14,000
Rend Lake	do	U/C	1969	Ex.	3,000
Shelbyville	do	U/C	1966	Ex.	2,500
Wabash Valley	Illinois-Indiana			Ex.	6,000
Huntington Mettmora Markland McAlpine Channelton Newburgh Uniontown Other small Levy units	Indiana	U/C		S	5,000
Eau Galle and Kickapoo	Wisconsin	U/C	1966	Ex.	5,000
Chagrin Big Darby Grand River	Ohio	U/C		Ex.	9,000
New Cumberland-Monongahela River Valley	West Virginia			Ex.	7,000
Tocks Island	New Jersey-Pennsylvania	NS 68		Ex.	16,000
Sandy Lick	Pennsylvania			S	1,000
Chartiers Creek	do			S	2,000
Dickey-Lincoln projects	Maine			S	2,000
Connecticut, Vermont, New Hampshire projects.				S	2,000

Fiscal year 1967—Continued

Project	State	Status	Complete (fiscal year)	Type of work	Amount
NPS park projects:					
Mound City Group National Monument.	Ohio			Ex.	$3,500
Saratoga National Historical Park	New York			S	500
Harpers Ferry National Historical Park.	West Virginia			S	500
Minute Man National Historical Park.	Massachusetts			S	500
Morristown, National Historical Park.	New Jersey			Ex.	1,000
Isle Royale National Park	Michigan				1,000
Acadia National Park	Maine			S	1,500
Salem Maritime National Historic Site.	Massachusetts			S	1,500
St. Croix Island National Monument.	Maine			S	1,500
Lincoln Boyhood National Memorial.	Indiana			S	1,000
Delaware Water Gap National Recreation Area.	New Jersey-Pennsylvania			S	1,000
Cape Cod National Seashore	Massachusetts			S	1,500
Allegheny Portage Railroad National Historic Site.	Pennsylvania			Ex.	1,000
Proposed areas				S	5,000
Northeast region total					95,500
Saylorville	Iowa	U/C	1968	Ex.	10,000
Big Hill	Kansas				5,000
Walnut Basin	do				5,000
Corbin	do				5,000
Meramec Basin	Missouri				10,000
NPS park projects:					
Pipestone National Monument	Minnesota				5,000
Devils Tower National Monument	Wyoming				4,000
Glacier National Park	Montana				9,000
Bighorn Canyon National Recreation Area.	do				2,600
Wilson's Creek National Battlefield Park.	Missouri				2,600
Bent's Old Fort National Historic Site.	Colorado				2,600
Dinosaur National Monument	Utah				2,600
Midwest region total					63,400
Accokeek Creek	Virginia			S & Ex.	15,000
Great Falls	do			S & Ex.	5,000
Prince William Forest	do			S & Ex.	5,000
National Capital region (various)	District of Columbia				2,500
Grand total					771,000

Symbols: U/C—Under construction; Ex.—Excavation; NS—New starts; S—Survey.

Registry of National Landmarks

Chairman Hayden. A new subactivity this year is registry of national landmarks, for which you propose an appropriation of $61,700. Would you please describe this subactivity in some detail?

Mr. Hartzog. Sir, this is a program in which under the Historic Sites Act of 1935 the Congress declared it to be the policy to preserve as a part of America's heritage the sites, buildings, and objects associated with the personages and events that shaped the course of our natural history.

It authorizes the Secretary to undertake a survey of these sites. This has been called the historic sites survey item which appears in the budget. Part of this program provides that we do not change the ownership of the properties, so that the preservation burden is largely picked up by private individuals, historical associations, States, and local governments who may own the properties.

DESIGNATION OF NATURAL AREAS OF NATIONAL SIGNIFICANCE

This program was broadened about 3 years ago to include the designation of natural areas of national significance to preserve the natural heritage of America. This is one of the greatest bargains that I know of anywhere in the Federal Government because it involves merely the research necessary to establish the national significance, a $26 plaque which the owner pays to have erected on the property, and then periodic inspections by personnel of the National Park Service to make sure that the standards are being lived up to by the owner. The program has grown to such proportions, Mr. Chairman, that in order to carry on the work on a systematic basis we desperately need this money.

Chairman HAYDEN. Will it duplicate any work done by the National Capital Planning Commission in the District of Columbia.

Mr. HARTZOG. It would not, sir. This is an arrangement that we agreed to last year with the National Capital Planning Commission whereby it will perform in the District area of jurisdiction substantially the same historical survey work that would be performed by Maryland or Virginia as a State and we would concern ourselves with the survey at the national level.

GLEN CANYON DAM AERIAL TRAMWAY CONCESSION

Chairman HAYDEN. I note that one of the concession activities for which you have invited bids is an aerial tramway from the top of Glen Canyon Dam to its tailwaters.

When do you anticipate that construction on this facility will begin and when do you think that it will be in operation?

Mr. HARTZOG. Sir, we are now negotiating the contract. We expect that the facility will be completed and in operation in the spring of 1967 if all goes well. I have a detailed statement on it I would be pleased to put in the record.

Chairman HAYDEN. You may do that.

Mr. HARTZOG. Thank you.

(The statement follows:)

An aerial tramway and supporting facilities are proposed at the Glen Canyon Dam site on the Colorado River, in the Glen Canyon National Recreation Area. A prospectus for the construction, operation, and maintenance of visitor accommodations and facilities was released on October 22, 1965.

The contract resulting from the prospectus would cover the construction of an aerial tramway capable of carrying 200 passengers per hour, and boats up to 2,200 pounds from the rim of Glen Canyon to a marina located some 3,100 feet below on the Colorado River. Access to the tailwaters below the dam will be by means of the tramway.

Facilities to be constructed at the upper terminal of the tramway are to consist of a passenger building with a waiting room, ticket office, and comfort stations; a boat terminal with facilities of loading and unloading boats up to 18 feet in length.

At the lower terminal, facilities will include a waiting room, a comfort station, bait and tackle shop, and snack bar; a boat terminal capable of loading and unloading boats, a boat launching ramp, 6 rental boats, 2 charter and sightseeing boats, 15 rental slips, boat servicing and repair facilities, and a boat storage area.

It is expected that if a successful contract is completed this spring, the tramway would be completed and in operation during the spring of 1967.

Funds included in the Bureau of Reclamation's 1967 budget for development of recreation facilities at reservoir areas in the Colorado River Basin by the National Park Service amount to $128,100 for a sewer and water system at the

upper terminal, and a sewage disposal plant and a canyon trail at the lower terminal.

Funds for surfacing an existing parking area will be included in a future budget. The present parking area is graded and usable, but not surfaced.

MAINTENANCE AND REHABILITATION OF PHYSICAL FACILITIES

Chairman HAYDEN. There will be placed in the record the justification statement for the budget estimate of $27,022,000 for maintenance and rehabilitation of physical facilities. Of this amount, $10,621,200 is allocated to roads and trails and $16,400,800 is to be expended on buildings, utilities, and other facilities.

(The justification follows:)

The maintenance and rehabilitation of physical facilities program is (1) the routine recurring work necessary to keep all National Park Service physical facilities (roads, trails, buildings, utilities, etc.) in such a condition that they may be utilized for their intended purpose at their original designed capacity; (2) the replacement of parts, overhaul, or reprocessing of materials due to wear or deterioration to restore these facilities to substantially the same original condition and efficiency; and (3) the providing for efficient operation of all physical facilities (i.e., buildings, utility systems, campgrounds, etc.).

The program is divided into two major parts:

ROADS AND TRAILS

The roads and trails program includes all work required for the efficient maintenance and operation of all roads, parkways, airport landing strips, and trails to enhance visitor enjoyment, prevent deterioration and protect the Government's investment; and the maintenance of new and reconstructed mileage using the latest techniques and methods wherever possible. Maintenance plans, programs, and estimates are prepared by engineers and maintenance personnel. Wherever it is possible and economical, the work will be performed under contract, otherwise the program will be executed by technical, skilled, and unskilled employees of the Service assigned to these activities.

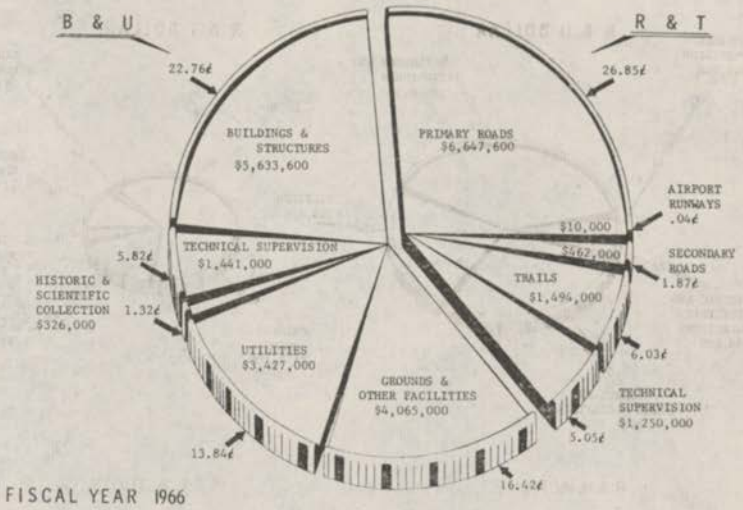
BUILDINGS, UTILITIES, AND OTHER FACILITIES

The buildings, utilities, and other facilities program includes all work required for the efficient maintenance and operation of all physical facilities in the parks, other than roads and trails. These facilities include buildings, structures, memorials, prehistoric ruins, historic structures, artifacts of historic and prehistoric importance, campgrounds and campsites, picnic facilities and grounds developments. Many of the tasks are routine and recurring, yet there are many complex operations involving highly technical work such as the operation of water and sewage plants and systems, heating and air-conditioning systems in buildings, and the preservation of priceless paintings and furnishings. Requisite work will be performed under contract wherever and whenever it is feasible and in the best interests of the Government. Otherwise the program will be executed by technical, skilled, and semi-skilled Service employees assigned to this activity.

The following charts reflect the allocations of the fiscal year 1966 appropriation by functions; increases by broad categories proposed for 1967; the increases by by activities and functions for 1967; and the allocation of the 1967 budget dollar as proposed herein.

MAINTENANCE AND REHABILITATION OF PHYSICAL FACILITIES APPROPRIATION

THE M & R APPROPRIATED DOLLAR -- WHERE IT WILL GO

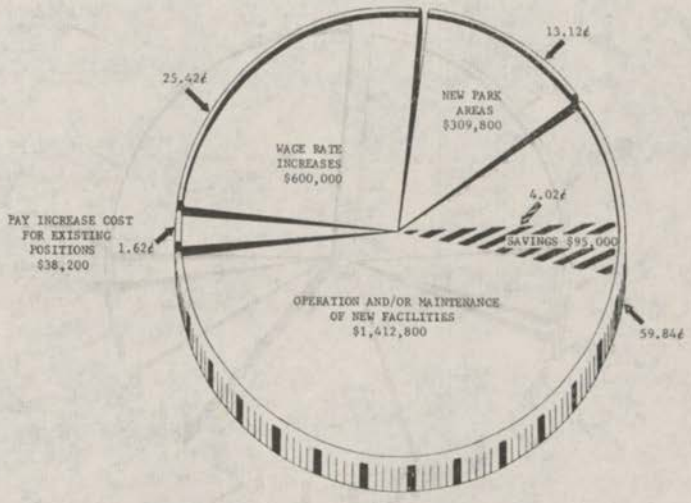


FISCAL YEAR 1966

TOTAL APPROPRIATION, $24,756,200

MAINTENANCE AND REHABILITATION OF PHYSICAL FACILITIES APPROPRIATION

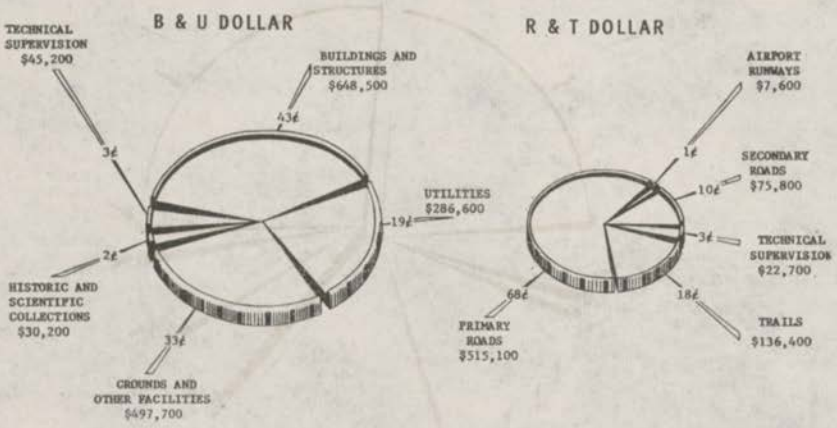
THE M & R INCREASE BY BROAD CATEGORIES



TOTAL BUDGET INCREASE $2,265,800

MAINTENANCE AND REHABILITATION OF PHYSICAL FACILITIES APPROPRIATION

THE M & R BUDGET INCREASE BY ACTIVITIES



B & U ACTIVITY

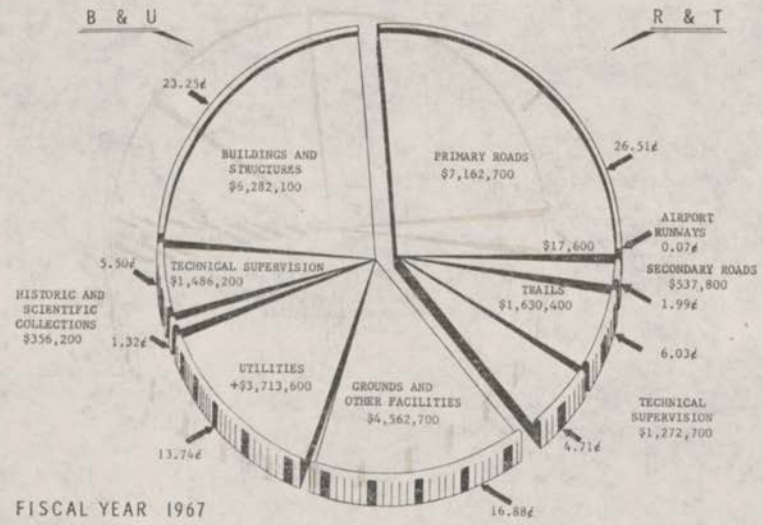
TOTAL INCREASE, $1,508,200

R & T ACTIVITY

TOTAL INCREASE, $757,600

MAINTENANCE AND REHABILITATION OF PHYSICAL FACILITIES APPROPRIATION

THE M & R BUDGETED DOLLAR -- WHERE IT WILL GO



FISCAL YEAR 1967

TOTAL BUDGET, $27,022,000

Maintenance and rehabilitation of physical facilities

Appropriation, 1965	$23,100,000
2d supplemental appropriation, 1965	550,000
Total appropriation, 1965	23,650,000
Appropriation, 1966	24,660,000
Pay cost supplemental	103,000
Total appropriation, 1966	24,763,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration	−6,800
Total available, 1966	24,756,200
Summary of increases and decreases, 1967:	
Roads and trails:	
Increased pay costs for fiscal year 1966 positions	+16,100
Wage rate increases already in effect	+240,000
New park areas	+95,000
Operation and/or maintenance of new facilities	+436,500
Nonrecurring item due to program savings resulting from organizational realinements	−30,000
Subtotal	+757,600
Buildings, utilities, and other facilities:	
Increased pay costs for fiscal year 1966 positions	+22,100
Wage rate increases already in effect	+360,000
New park areas	+214,800
Operation and/or maintenance of new facilities	+976,300
Nonrecurring item due to program savings resulting from organizational realinements	−65,000
Subtotal	+1,508,200
Net increase, 1967	2,265,800
Budget estimate, 1967	27,022,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay-cost supplemental	Transfers [1]	Amount available
1. Roads and trails	$9,476,422	$9,825,000	$42,000	−$3,400	$9,863,600
2. Buildings, utilities, and other facilities	13,995,371	14,835,000	61,000	−3,400	14,892,600
Unobligated balance lapsing	178,207				
Total	23,650,000	24,660,000	103,000	−6,800	24,756,200

[1] Represents transfers to General Services Administration.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Roads and trails	$9,476,422	$9,863,600	$10,621,200	+$757,600	+$16,100	+$741,500
2. Buildings, utilities, and other facilities	13,995,371	14,892,600	16,400,800	+1,508,200	+22,100	+1,486,100
Unobligated balance lapsing	178,207					
Total	23,650,000	24,756,200	27,022,000	+2,265,800	+38,200	+2,227,600

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. *Roads and trails.*—The estimate for 1967 is $10,621,200, an increase of $757,600 over 1966.

2. *Buildings, utilities, and other facilities.*—The estimate for 1967 is $16,400,800, an increase of $1,508,200 over 1966.

The increase consists of:

(1) A decrease of $95,000 ($30,000 under "Roads and trails," and $65,000 under the "Buildings, utilities and other facilities" activity) due to program savings resulting from organizational realinements.

(2) An increase of $2,360,800 ($787,600 under the "Roads and trails" activity and $1,573,200 under the "Buildings, utilities, and other facilities" activity) for the following purposes:

Purpose of increase	Roads and trails	Buildings, utilities, etc.	Total
Increased pay costs for fiscal year 1966 positions	$16,100	$22,100	$38,200
Wage rate increases already in effect	240,000	360,000	600,000
New park areas	95,000	214,800	309,800
Operation and/or maintenance of new facilities in existing park areas	436,500	976,300	1,412,800
Total	787,600	1,573,200	2,360,800

Need for increase.—Fund requirements for maintenance and operation of physical facilities in the parks are governed principally by the size, number, and complexity of the physical plant (roads, trails, buildings, utilities, campgrounds, sanitation systems, etc.), the numbers of visitors accommodated, and current cost levels—principally wage rates—as work is accomplished. Large-scale construction and reconstruction programs have been underway since 1957 and are planned through the budget year, which will result in the addition of many new and improved facilities. In addition, the maintenance and operation of facilities in new parks requires additional funds each year. The continued heavy park visitation exerts an additional burden on maintenance and operating funds, and maintenance cost levels have been increasing steadily over the past several years.

All of the increases requested, except the amounts for new parks ($95,000 under "Roads and trails" and $214,800 under "Buildings, utilities, and other facilities") are for going programs. Justifications for the broad categories of increases summarized in the foregoing follow:

Wage rate increases, $600,000

Roads and trails	$240,000
Buildings, utilities, and other facilities	360,000
Total	600,000

The funds requested under this item are to cover wage increases in effect as of August 15, 1965, and do not take into consideration such increases that may become effective during the balance of 1966 or during the 1967 fiscal year. It is essential that the increase be granted in order that the maintenance and operating program levels provided for in the past will not have to be reduced because of increased personal service costs. This increase includes $87,600 for the National

Capital Parks ($18,700 under roads and trails and $68,900 under buildings, utilities, and other facilities).

New park areas, $309,800

Roads and trails	$95,000
Buildings, utilities, and other facilities	214,800
Total	309,800

Fund requirements for operating and maintaining facilities in 10 new park areas authorized during the 1st session of the 89th Congress are included under this heading as well as two new reservoir areas to be operated under cooperative agreement between the Service and the Bureau of Reclamation, and another reservoir area to be operated uuder agreement with U.S. Section, International Boundary and Water Commission. The increase requested herein will provide funds and permanent positions for maintenance and operation of new areas as follows:

Area	Roads and trails	Buildings, utilities, etc.	Total	Permanent positions
1. Agate Fossil Beds National Monument, Nebr. (Public Law 89-33, approved June 5, 1965)	$4,000	$11,000	$15,000	----------
2. Amistad Recreation Area, Tex. (cooperative agreement approved Nov. 11, 1965)	6,000	7,000	13,000	----------
3. Arbuckle Recreation Area, Okla. (cooperative agreement approved Feb. 1, 1965)	16,000	20,000	36,000	5
4. Assateague Island National Seashore, Md.-Va. (Public Law 89-195, approved Sept. 21, 1965)	6,000	28,500	34,500	7
5. Delaware Water Gap National Recreation Area, Pa.-N.J. (Public Law 89-158, approved Sept. 1, 1965)	----------	15,300	15,300	1
6. Ellis Island (addition to Statue of Liberty National Monument), N.Y. (Public Law 89-129, approved Aug. 17, 1965)	----------	42,000	42,000	4
7. Golden Spike National Historic Site, Utah (Public Law 89-102, approved July 30, 1965)	7,000	6,000	13,000	1
8. Herbert Hoover National Historic Site, Iowa (Public Law 89-119, approved Aug. 12, 1965)	7,000	11,000	18,000	1
9. Hubbell Trading Post National Historic Site, Ariz. (Public Law 89-148, approved Aug. 28, 1965)	7,000	10,000	17,000	1
10. Nez Perce National Historical Park, Idaho (Public Law 89-19, approved May 15, 1965)	4,000	16,000	20,000	1
11. Pecos National Monument, N. Mex. (Public Law 89-54, approved June 28, 1965)	7,000	12,000	19,000	1
12-13. Sanford Recreation Area, Tex. (cooperative agreement approved Mar. 15, 1965) and Alibates Flint Quarries and Texas Panhandle Pueblo Culture National Monument, Tex. (Public Law 89-154, approved Aug. 31, 1965)	31,000	36,000	67,000	4
Total	95,000	214,800	309,800	26

Operation and/or maintenance of new facilities in existing park areas—$1,412,800

Roads and trails	$436,500
Buildings, utilities, and other facilities	976,300
Total	1,412,800

The major purposes for which increases have been requested over the years in the "Maintenance and rehabilitation" appropriation have been for (1) operating and maintaining newly constructed and reconstructed facilities and (2) improved maintenance and operation of existing facilities, including additional requirements brought about by increases in visitor use.

Substantial headway has been made in recent years through appropriation increases in providing for more efficient maintenance and operation of facilities and for the maintenance and operation of new facilities. As long as new, larger, and more complex facilities continue to be placed into operation, it will be necessary to request additional funds under this heading. Included in these increases is $22,000 for environmental health inspections to maintain, consistent with our increasing growth and expansion, the assurance of good public health practices, including water pollution control and safe food handling, through regular consul-

tative inspections by the U.S. Public Health Service with which the National Park Service has had a longstanding cooperative agreement.

The maintenance and operation of new and more complex buildings, such as visitor centers, administration buildings, and utility buildings, with attendant mechanical equipment; new and improved campgrounds; new and improved utility systems; and other varied types of complex facilities provided in the parks under the construction program, bring about increases in fund requirements from year to year. While some of these new facilities replace old ones for which maintenance and operation funds have been provided previously, most of them represent modern plant expansion, the maintenance and operation of which can be accomplished only through the provision of appropriation increases, or on a substandard basis through lowering of the overall standard of maintenance.

Experience of all agencies points up the fact that for the first 3 or 4 years after a road has been constructed or reconstructed, maintenance costs for drainage and shoulder and slope stabilization work are particularly high. Reconstructed roads are built to a higher standard with lesser grades, wider roadways, shoulders, ditches, and flatter slopes to safely handle increased visitor use. Accordingly, for reconstructed roads, maintenance costs are higher than for the old roads due to need for more frequent mowing, roadside cleanup and the increased surface to be maintained on the improved road.

Experience has shown, also, that maintenance costs during the first few years of operation and maintenance of newly constructed or rehabilitated buildings, utilities, and newly established or renovated grounds developments including campgrounds, are more expensive. Buildings are built to higher standard with much more complex heating, air-conditioning, lighting, and audiovisual systems. Grounds must be watered, weeded, and mulched regularly to assure establishment of plant materials and turf areas. All this is required for the effective and efficient handling of the increased visitor workload in such a manner as to afford the visitor a worthwhile experience. Operational costs are also increased by size and complexity of the physical plant, longer visiting hours, and longer seasons.

The increase under this item includes $225,000 directed specifically at achieving a higher level of maintenance in the most heavily used park areas in, and approaches to, the Nation's Capital. Under the stimulating leadership of our First Lady, hundreds of thousands of dollars have been donated to the Service for beautifying parklands in the Nation's Capital; this is in addition to hundreds of thousands of dollars worth of trees, shrubs, and other planting materials, such as the 700 cherry trees planted in the Washington Monument grounds this past fall, the 1,200 to be planted along the Hains Point roadway, and the thousands of azaleas planted in the memorial center of the city last spring.

If these plantings and their surrounding grounds are maintained properly, and seasonal plantings of bulbs and annuals are accomplished on a scheduled basis, a major stride will be made toward achieving a setting of beauty and splendor for our Capital more nearly commensurate with its place among the nations of the world.

Costs of maintaining these annual plantings range from $42 for the simplest plantings to $10,000 for the more elaborate plantings such as at the Netherlands Carillon, Simon Bolivar Statue and Lafayette Park where three seasonal changes are provided.

In fiscal year 1965 and during the first 7 months of fiscal year 1966, about 210,000 plants, including ground cover, bulbs, annuals, shrubs and trees were added to the landscapes in 25 parks. These floral displays varied in size from 3-foot planters with 40 plants, to 4,000 square feet with 10,000 plants at the foot of the Netherlands Carillon.

In fiscal year 1966 the program is being extended to include 28 additional parks concentrated within the center of the city and will include 215,000 plants in floral displays. Included will be a display along Pennsylvania Avenue east of the Capitol, which is one of the leading approaches to the Nation's Capital.

Approximately 70 additional park areas containing floral displays are scheduled for improvement and will require extensive maintenance by fiscal year 1967. These displays will continue to be a credit to the Nation's Capital only if carefully maintained.

The increase requested under this item will provide for 28 permanent positions, and 185 man-years of temporary employment and will be allocated to a total of 109 areas. Of the total increase, $418,000 is for maintenance and operating functions in the National Capital parks ($17,000 under roads and trails and $401,000 under buildings, utilities and other facilities, including the special item of $225,000 discussed above).

Program of work.—The program for 1967 contemplates a continuing rise in visitor use and expanded maintenance and operating requirements due to completion and placing into operation of new or reconstructed facilities, and the maintenance requirements incident to the activation of new areas authorized by the 89th Congress and those to be operated under cooperative agreements with other Federal agencies.

During the past several months consideration has been given to providing uniforms for maintenance employees in the park areas. As a result of those considerations, it is proposed to provide uniforms for the National Capital region maintenance employees on an experimental basis during the 1967 fiscal year. The uniform would be similar to that now worn by the Public Buildings Service employees of General Services Administration. Benefits to accrue from having Service employees in uniform include service to visiting public through identification of park employees who may furnish information or otherwise be of assistance, facilitation of supervision through easier identification of employees and the enhancement of morale of maintenance personnel.

Itemization of estimate

	Actual, 1965	Available, 1966	Estimate, 1967	Increase
Program and financing:				
Total obligations	$23,471,793	$24,756,200	$27,022,000	$2,265,800
Unobligated balance	178,207			
Transferred to General Services Administration		6,800		−6,800
Appropriation	23,650,000	24,660,000	27,022,000	2,362,000
Proposed supplemental due to civilian pay increases		103,000		−103,000
Obligations by objects:				
11 Personnel compensation	14,292,158	14,994,000	16,086,000	1,092,000
12 Personnel benefits	942,853	989,000	1,062,000	73,000
21 Travel and transportation of persons	146,164	149,000	151,000	2,000
22 Transportation of things	132,869	140,000	162,000	22,000
23 Rent, communications, and utilities	1,249,766	1,300,000	1,400,000	100,000
24 Printing and reproduction	15,765	28,000	30,000	2,000
25 Other services	1,568,009	1,685,000	2,108,000	423,000
Services of other agencies	154,800	153,500	175,500	22,000
26 Supplies and materials	3,303,383	3,538,700	3,984,500	445,800
31 Equipment	1,584,298	1,679,000	1,763,000	84,000
32 Lands and structures	58,814	100,000	100,000	
41 Grants, subsidies, and contributions	1,547			
42 Insurance claims and indemnities	21,367			
Total obligations	23,471,793	24,756,200	27,022,000	2,265,800

ROAD AND TRAIL MAINTENANCE PROBLEMS

Chairman HAYDEN. The committee would be pleased to have whatever comments you think should be made concerning this activity.

Mr. HARTZOG. Mr. Chairman, the maintenance budget of the National Park Service is a very crucial and critical one in this day when the Congress has provided the funds to build up the staffing. the physical facilities, and the roads and trails for the accommodation of more than 100 million visitors.

The increases in this maintenance program are the very minimum that we believe are needed in order to maintain a very minimum level of maintenance. Actually some of our roads and trails, as you probably know from their locations, are extremely costly to maintain because of high elevation, the snow, in which we can lose whole sections of road. This is the type of thing that this maintenance money is for.

CONSTRUCTION

Chairman HAYDEN. For fiscal year 1967 it is proposed that $23,500,000 be appropriated to the National Park Service for construction of buildings, utilities and other facilities, and for acquisition of water rights. This is $2,677,000 less than the appropriation for fiscal year 1966. The justification for this request will be included in the record.

(The justification follows:)

The "Construction" appropriation is the funding source for the following capital programs:

1. *Buildings, utilities, and other facilities.*—This includes all structural and nonstructural developments in the 230 authorized areas, except for roads and trails and parkway.

2. *Acquisition of water rights.*—This includes acquisition and development of water rights which are necessary for visitor and operational uses.

The acquisition of land and interests therein, previously financed under this program, is now being funded through the Bureau of Outdoor Recreation under authority of the Land and Water Conservation Act of 1965.

Construction

Appropriation, 1966	$26,177,000
Unobligated balance from prior years	17,831,361
Total available for obligation	44,008,361
Decreases:	
Buildings, utilities, and other facilities	32,109,224
Acquisition of lands and water rights	11,517,562
Executive mansion and grounds	32,906
Parkways	21,200
Roads and trails	433,598
Undistributed	−106,129
Total	44,008,361
Increases:	
Buildings, utilities, and other facilities	23,000,000
Acquisition of water rights	500,000
Total available for obligation	23,500,000
Budget estimate, 1967	23,500,000

Analysis by activities

Activity	Amount available, 1966	Fiscal year 1967			Total available, 1967, compared to total available, 1966
		Unobligated balance from prior years	Budget estimate	Estimated total available	
1. Buildings, utilities, and other facilities	$32,109,224	----------	$23,000,000	$23,000,000	−$9,109,224
2. Acquisition of lands and water rights	11,517,562	----------	500,000	500,000	−11,017,562
3. Executive Mansion and Grounds	32,906	----------	----------	----------	−32,906
4. Parkways	21,200	----------	----------	----------	−21,200
5. Roads and trails	433,598	----------	----------	----------	−433,598
6. Undistributed	−106,129	----------	----------	----------	+106,129
Total	44,008,361	----------	23,500,000	23,500,000	−20,508,361

1. Buildings, utilities, and other facilities, $23 million

The buildings, utilities, and other facilities program for 1967 totals $23 million, which is a decrease of $2,677,000 under the amount provided for 1966, and reflects a program savings of $185,000 due to organizational realinements.

Need for funds.—The amount of $23 million requested in 1967 will be used to provide for constructing additional buildings, utilities, and miscellaneous facilities to serve an estimated 127.5 million visitors annually. The types of facilities, including those in new park areas, proposed for construction within the amount of the estimate are summarized as follows:

Category of construction:	*Amount*
Camping and picnicking	$3,158,800
Public service and administrative units	10,408,500
Utilities	5,223,000
Employee housing	983,200
Miscellaneous	3,226,500
Total	23,000,000

Camping and picnicking facilities.—Requirements for camping spaces and related facilities are reflected in the amount of $3,158,800 proposed this fiscal year, as compared with $3,092,350 last year. As campground use continues to increase, the goal of the Service is to meet this demand by placing proper emphasis upon these types of developments. Approximately 1,700 additional campsites will be provided by the 1967 program to bring the grand total number of campsites to more than 31,000. Campground and picnic area developments include such items as site development, water, sewer, and power systems; tables, fireplaces, garbage receptacles; comfort stations; shelters, amphitheaters, campfire circles, and camp-tender residences.

Public service and administrative units.—The amount of $10,408,500 is programed for constructing and rehabilitating public service and administrative units. It will provide facilities which give direct service to the visitor and all units essential to proper administration, such as visitor centers, museums, wayside exhibits, contact stations, comfort stations (except those located in campgrounds), administration buildings, entrance stations, fire lookouts, utility buildings, and observation stations, among other things. Construction of these facilities will increase efficiency in park operations by replacing, enlarging, or modernizing facilities constructed 20 or more years ago, when visitors numbered less than a quarter of what they do today, and by providing new facilities in parks in which there have been no developments, including the newly authorized ones.

Utilities.—The $5,223,000 scheduled for utilities will serve the above-mentioned public service and administrative units and such units currently existing, and provide the necessary services for new concessioner developments or expansions. Utilities are programed only for those parks where commercial facilities are not available or economically feasible.

Employee housing.—A reduction in the $2,271,700 programed for employee housing in 1966 to $983,200 in 1967 is the result of greater emphasis being placed on public use facilities such as campgrounds and related facilities. This amount will enable the Service to provide only the most urgently needed living quarters for park personnel. The title, "Employee Housing" refers to facilities for housing permanent and seasonal employees such as detached residences, duplex residences, apartments, motel type multiple quarters, dormitories, bunkhouses, and trailers. Deferment of housing, particularly seasonal, has been given full consideration in view of more urgent items necessary to provide directly for the visiting public.

Miscellaneous.—The $3,226,500 programed for "miscellaneous" includes items such as park entrance facilities, fences, signs, seats, memorials, and grading, seeding, and planting for public service and administrative units.

Program of work.—The 230 areas administered or authorized for administration by the Service are located in 45 States, 2 of the territories, and the District of Columbia. Responsibility for carrying out the development programs lies with three field offices of design and construction located in Philadelphia, Pa.; San Francisco, Calif.; and Washington, D.C. Overall guidance and assistance is provided by the staff in the Washington office under the direction of an Assistant Director for Design and Construction. Personnel of these offices prepare plans, issue bid advertisements, assist in contract administration, and supervise construction for the majority of the projects in the program. In a few instances, if the projects are not particularly complicated in nature, or if professional personnel on the park staff is available for advice and assistance, construction responsibility is delegated to the superintendents of the parks. Most of the planning functions are accomplished by the field design offices although an increasing volume is being accomplished by contract with architectural and engineering firms. This latter method of accomplishment is becoming more and more important in light

of the ceiling limitations on personal services and travel expenses, and the competition for qualified professional personnel.

Projects of major interest included in the program are identified as follows:

Major alterations and improvements, $1,700,000

A lump-sum amount of $1,700,000 for major alterations and improvements is included to provide for numerous small items required to protect the visitor and Government property, to serve existing facilities, or to make existing facilities more functional. The types of projects making up this lump-sum amount are as follows:

Correction of unsafe and unsanitary conditions, including the construction or repair of stairs, fire exits, escapes, and sprinkling systems; enclosing of stairwells; remodeling of unsanitary kitchens and toilet facilities; replacement of unsafe wiring and electrical equipment; replacement of unsanitary sewer and water systems; reconstruction of deteriorated walls and the installation of rails and barriers; elimination of structural deficiencies; improvement of unsafe and unsightly grounds; and demolition of unsafe and obsolete structures, etc.

Correction of functional deficiencies, and modernization of existing facilities, including the improving and altering of buildings and structures to achieve optimum benefit from space and use, by such measures as removal or additions of partitions, rearrangement of space, or minor additions to existing structures; the construction of garbage and refuse disposal facilities; alterations of space to accommodate replacement of equipment, expanded office needs, or to correct substandard housing conditions; the substitution of modern comfort stations for pit and chemical toilets; the extension of water, sewer, electrical and communications systems; the provision of adequate public facilities such as the modernization of kitchens, bathrooms, utility rooms; the modernization, or addition of heating and lighting facilities in existing buildings; the addition of signs and markers and certain trailside exhibits to facilitate visitor enjoyment of existing roads and trails; the addition of fencing for wildlife control and protection of property, etc.; the expansion of existing visitor use facilities, such as campgrounds, visitor centers, comfort stations, and utility systems; vista clearing projects to provide visitor overlooks; and the rehabilitation, stabilization, and preservation of historic structures when the individual projects involved are estimated to require not more than $20,000 each.

DEVELOPMENTS FOR NEW ADDITIONS TO THE PARK SYSTEM

The 1st session of the 89th Congress authorized the addition of 10 new areas to the park system. In addition, three reservoir recreation areas became Service responsibilities pursuant to cooperative agreements with other agencies. A total of $2,147,700 is included in the 1967 budget for 10 of these areas, and $1,306,700 of that amount, nine areas, is included under this appropriation item for buildings, utilities, etc.—the roads and trails amount of $841,000, seven areas, is included under the appropriation item "Parkway and road construction (liquidation of contract authorization),"—as follows:

Area	*Amount*
Agate Fossil Beds National Monument, Nebr. (Public Law 89–33, approved June 5, 1965)	$96,700
Arbuckle Recreation Area, Okla. (Cooperative agreement approved Feb. 1, 1965)	317,500
Assateague Island National Seashore, Md.-Va. (Public Law 89–195, approved Sept. 21, 1965)	169,000
Delaware Water Gap National Recreation Area, Pa.-N.J. (Public Law 89–158, approved Sept. 1, 1965)	135,200
Golden Spike National Historic Site, Utah (Public Law 89–102, approved July 30, 1965)	361,000
Herbert Hoover National Historic Site, Iowa (Public Law 89–119, approved Aug. 12, 1965)	42,300
Hubbell Trading Post National Historic Site, Ariz. (Public Law 89–148, approved Aug. 28, 1965)	50,000
Pecos National Monument, N. Mex. (Public Law 89–54, approved June 28, 1965)	35,000
Ellis Island (addition to Statue of Liberty National Monument), N.Y. (Public Law 89–129, approved Aug. 17, 1965)	100,000
Total	1,306,700

Buildings and utilities projects in 10 other new park areas activated during the past 5 years, for which only an initial start has been made toward providing physical facilities, account for $2,604,100 of the total $23 million program. It is essential that minimum buildings, utilities and other facilities be provided in the new areas as lands are acquired and as visitor use increases. The areas in this category for which buildings and utilities projects are included in the 1967 program, and the amounts programed for each, are as follows:

Area	*Amount*
Big Horn Canyon Recreation Area, Mont.-Wyo	$487,700
Canyonlands National Park, Utah	15,700
Cape Cod National Seashore, Mass	149,600
City of Refuge National Historical Park, Hawaii	312,800
Fire Island National Seashore, N.Y	185,000
Fort Bowie National Historic Site, Ariz	25,900
Fort Davis National Historic Site, Tex	94,900
Padre Island National Seashore, Tex	818,900
Point Reyes National Seashore, Calif	441,800
Whiskeytown Recreation Area, Calif	71,800
Total	2,604,100

NATIONAL CAPITAL AREA

Of the $4,106,000 included for improvements in the National Capital area, $618,000 is for developments on the Mall; $500,000 for reconstructing and improving small parks and reservations in various locations; $500,000 for replacing the Watergate barge; $400,000 for visitor facilities in the Fort Circle Parks; $400,000 for visitor facilities in the Watts Branch Linear Park in Northeast Washington; and $1,081,200 is for numerous other smaller projects. These projects will provide for badly needed visitor facilities in the park areas and at the same time add to the beautification program in the Nation's Capital. In addition to the above, Lafayette Park, one of the prime ornamental parks in the city of Washington, will be refurbished with funds in the amount of $409,000 donated by the Old Dominion Foundation.

2. Acquisition of lands and water rights, $500,000—Analysis by subactivities

Subactivity	Amount available, 1966	Fiscal year 1967			Total available, 1967, compared to total available, 1966
		Unobligated balance from prior years	Budget estimate	Estimated total available	
(*a*) Acquisition of lands	$10,495,239				−$10,495,239
(*b*) Acquisition of water rights	1,022,323		$500,000	$500,000	−522,323
Total	11,517,562		500,000	500,000	−11,017,562

2. Acquisition of lands and water rights, $500,000

(*a*) *Acquisition of lands.*—The fund requirement for 1967 is not included under this item. It is included in the budget for the Bureau of Outdoor Recreation to be funded from the land and water conservation fund as authorized by Public Law 88–578, approved September 3, 1964.

(*b*) *Acquisition of water rights.*—The acquisition of water rights program for 1967 is in the amount of $500,000, the same as for 1966.

Program of work.—The 1967 program calls for continuing effort to:

1. Select well sites, drill and pump test wells to determine the quantity and quality of water available for use and the collection of data needed by engineers to facilitate the design of the water system. The knowledge gained from the geohydrological investigations under the water resources studies program (financed under the "Management and protection" appropriation) aids in the selection of suitable well sites. The increase in visitation to park areas and proposed developments to meet public use has created a demand for more water than is available from presently developed water sources. It has become increasingly necessary

to seek ground water sources since surface water sources are either fully appropriated or polluted in many areas where the parks are located.

2. Perfect and protect water rights in the name of the United States. Water rights must be acquired or established for more than 1,500 water systems which are being supplemented or enlarged. Increasing numbers of the Eastern States are adopting regulatory or appropriative water laws applicable to the use of ground water and the drilling, development, and use of wells. As a result, the Service must obtain increasing numbers of State permits and establish appropriative water rights. This requires the surveying and mapping of water systems, the filing of water right applications, progress reporting on water system development, and preparation of statements of water claims based on estimates of ultimate water demands and reports on increases in water use. The compilation of these documents is partly dependent upon prior research and collection of hydrologic data under the water resources studies program.

3. Prevent or eliminate conflicts between Federal, State, and private water rights. This involves water right adjudications and other suits and condemnations to acquire, establish, or protect Federal water right title.

4. Acquire private water rights and related lands or rights-of-way needed to provide water sources for public-use facilities.

The program contemplates the acceleration of well drilling in various parks, particularly in the recently established ones, such as Allegheny Portage, Canyonlands, Cape Cod, Fire Island, Point Reyes, and Ozark National Scenic Riverways where water supplies are critically needed. Efforts to locate urgently needed water supplies for present and future developments in Blue Ridge Parkway, Natchez Trace Parkway, and Shenandoah National Park will be continued.

Examples of recent accomplishments.—In 1965, the program involved work in 62 parks. Accomplishments in 1965 included the drilling and testing of 89 wells, 43 of which are successful production wells; the installing of about 48 water and tidal measuring gages; extensive surveying and mapping of water systems; and preparation of water right applications. Proofs and testimony resulted in the receipt of 26 water right licenses.

The 1966 program contemplates the drilling and testing of from 1 to 3 wells in each of 31 parks; continued surveying and mapping of water systems and the filing of water claims for about 51 parks; the receipt of about 15 final licenses; and limited water-rights purchases.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$38,860,998	$44,008,361	$23,500,000	−$20,508,361
Unobligated balance brought forward	−13,705,759	−17,831,361		+17,831,361
Unobligated balance carried forward	17,831,361			
Appropriation	42,986,600	26,177,000	23,500,000	−2,677,000
Obligations by objects:				
11 Personnel compensation	5,518,191	5,157,000	4,202,000	−955,000
12 Personnel benefits	358,751	336,000	270,000	−66,000
21 Travel and transportation of persons	301,409	296,000	296,000	
22 Transportation of things	70,043	70,000	50,000	−20,000
23 Rent, communications, and utilities	226,672	230,000	230,000	
24 Printing and reproduction	65,521	65,000	65,000	
25 Other services	2,042,149	2,000,000	1,200,000	−800,000
26 Supplies and materials	949,380	950,000	575,000	−375,000
31 Equipment	685,261	685,000	485,000	−200,000
32 Lands and structures	28,640,427	34,186,111	16,127,000	−18,059,111
41 Grants, subsidies, and contributions		33,250		−33,250
42 Insurance claims and indemnities	3,194			
Total obligations	38,860,998	44,008,361	23,500,000	−20,508,361

1967 Construction Program

Chairman Hayden. Would you please describe briefly the program which you plan under this activity in the coming year?

Mr. Hartzog. Mr. Chairman, it breaks down into camping and picnicking facilities, $3,158,800; public service and administrative

units, $10,408,500; utilities, $5,226,000; employee housing, $983,200; and a miscellaneous item that is a composite of small items, signs, markers, things that are not large enough to break out in this kind of a breakdown account, for $3,226,500. It also includes $500,000 for acquisition of water rights, which is the same program level as for 1966.

Mall Development Project, National Capital

Chairman Hayden. I note that included in the construction activity for the National Capital area is $618,000 for developments on the Mall. What do you plan to do in this area?

Mr. Hartzog. Mr. Chairman, we have retained the firm of Skidmore, Owings & Merrill to develop an overall concept for the Mall because this is one of the most historic pieces of ground anywhere in our Nation. It is the setting of our principal seat of government, the executive, the legislative, and the judiciary. It is also the frame of reference for the great national memorials in our history and this money would permit us to begin the program that Mr. Owings is now developing.

It has not been allocated to a specific project because we anticipate that this amount of money will be needed in the beginning of the development for preliminary plans and basic groundwork for the Mall plans.

Chairman Hayden. The Mall now provides a view from the Capitol to the Washington Monument.

Mr. Hartzog. Yes, sir.

Beautification and conveniences for visitors

Chairman Hayden. What are you going to do with this view?

Mr. Hartzog. We hope to enhance it, Mr. Chairman, by developing visitor walks through there. At the present time there is very little shaded area in there for the millions of visitors who stroll through this Mall.

Last year we experimented, for example, with prohibiting all-day parking there and made it available for visitor parking. Visitor parking facilities are desperately needed in this area because, as you know, there are millions of people who come in there with no place to put their automobile.

We received literally hundreds of tremendous comments from visitors who were able to find a place to park there last year. We propose to provide small stations at which people can get information, and comfort stations for their convenience.

Formal area between Capitol and Washington Monument

The plan has not been fully evolved and approved yet, but these are the kinds of things that we are hoping to do. Generally, the concept would be that from the Washington Monument to the Capitol, which is the setting for the Smithsonian buildings and the Washington Monument and the Capitol, with the Grant Statue Memorial in the front plaza, would be a formal type of Mall.

Informal area between Washington Monument and Lincoln Memorial

The area from the Washington Monument to the Lincoln Memorial taking in the tidal basin with the cherry trees would be an informal

but equally dignified type of landscape. Landscaping is going to be the great item here in providing places of rest and relaxation and shade for the visitors.

LAND ACQUISITION

Chairman HAYDEN. I know that funds for land acquisition are not included in your budget this year, but how much is proposed in the land and water conservation fund estimate for National Park Service land acquisitions in the coming year?

GEORGE WASHINGTON MEMORIAL PARKWAY

Mr. HARTZOG. Mr. Chairman, the item includes $28,316,000 for the National Park Service. This is not all the money, however, that goes to the direct benefit of the areas that would be managed by us since there is an item also in the budget estimate of the National Capital Planning Commission for right of way acquisition for the George Washington Memorial Parkway and if I may, Mr. Chairman and members of the committee, talk a little bit about that particular item, it is broken down into two segments, one from here to Fort Washington on the Maryland side of the Potomac to complement the parkway on the Virginia side.

RESOLUTION OF LOCATION PROBLEMS WITH SMITHSONIAN AND FAIRFAX

The other is on the Virginia side through Fairfax. You may recall that in connection with the item on the Maryland side last year this came up in connection with the Armed Forces Museum proposal of the Smithsonian and our proposals at Fort Washington.

ARMED FORCES MUSEUM

I am pleased to tell the committee that in the intervening year we have worked out complete agreement with the Smithsonian on the location and the operation of the Armed Forces Museum.

LOCATION OF PARKWAY

In the meantime we have worked out complete agreement with Prince Georges County on the location of this parkway which has been in considerable controversy with many of the local residents down there.

I am especially pleased to tell you that the location of the center line of this parkway now from the bridge to Fort Washington will not involve the destruction of a single residence. It will go through some private lots in the Riverview Estates, but we have assured those owners that we will permit any of them who desire, to retain a life estate in the lot that they sell, but those lots must be acquired in fee because this is the only basis on which we can spend enough money to do the construction.

AGREEMENT WITH BROADWATER ESTATES

With respect to the Broadwater Estates, which was also a very critical area, we have worked out an arrangement, Mr. Chairman, whereby we are going to locate the parkway in front of the Broad-

water Estates right here [pointing at map] and I have an aerial map here if I may get it and show you on a little larger scale. This is the Broadwater Estates and this was the old alinement. You see it went right through here and took out these very nice homes in here. We have worked out an agreement now whereby this alinement will swing here on vacant land and come in front of these lots on a fill area and then come back onto the original alinement.

This is the Riverview Estates and it will come through here. It will not take any of the residences. It will, however, as I said, take some of the lots, but the owners may retain a life interest in them.

Why we are able to do that, Mr. Chairman and members of the committee, is that this is the topographic profile of that area at Broadwater and you will notice that the lots drop off very sharply at the river's edge and for this reason we are able to swing off this bank and down on this fill and back in here, and all we have to buy here is the bluff side of these I believe it is seven lots that front on the river.

They have a little channel in here. Likewise we have agreed to bridge that channel so they can still use it, their marina facilities and their swimming pool, and get their boats in and out of the river.

To the best of our ability we have tried to resolve this in a context that meets all of the reasonable public interest and all of the reasonable private interest.

I would not want to mislead the committee by inferring, however, that everybody involved is overwhelmingly happy. I don't want to do that. I do want to say, however, with all of the official agencies we have now reached an agreement.

PRINCE GEORGES AND FAIRFAX SECTIONS

Chairman HAYDEN. If sufficient authorization does not remain in the Capper-Cramton Act, do you recommend funds for Prince Georges or Fairfax County? What do you want to do about it?

Mr. HARTZOG. Sir, this, of course, is an item that would be before the Capital Planning Commission for its consideration and therefore I would not be in a position to speak for it, but if I may answer your question personally, so far as our program interest is concerned, we would greatly prefer to go forward with the Prince Georges section of this because this is where we have arrived at all of the agreements and we do not have the same kind of agreements in Fairfax County.

REDWOOD NATIONAL PARK AUTHORIZATION BILL

Chairman HAYDEN. Yesterday the President asked Congress to authorize a Redwood National Park, and Senator Kuchel has introduced a bill to do that.

In the land authorization estimate there is $10 million for purchase of land. Briefly, what does the bill provide, and do you expect its enactment during this session of Congress?

Mr. HARTZOG. Sir, we hope for an authorization during this session of Congress and have asked the Congress to provide in the land and water conservation funds an item of $10 million to begin the acquisition of this park area.

AREA OF PROPOSED REDWOOD NATIONAL PARK

The bill provides for a park unit that would encompass roughly the Mill Creek watershed, including the two State parks—Jedediah Smith and Del Norte. It would also provide for the acquisition of the big trees which were discovered by the National Geographic Society in the Big Bend of Redwood Creek not to exceed 1,000 acres, plus enough right-of-way to get into this area, roughly 400 acres, so about 1,400 acres in the Redwood Creek section would be administered as the Tall Trees unit of the Redwood National Park.

The possibilities discussed in our original report have been reduced to about a thousand acres to protect those big trees and provide some reasonable camping facilities in the vicinity of them and an access off the main highway, but the major thrust of the preservation would be in the Mill Creek area in Del Norte County.

Chairman HAYDEN. Is this for the purchase of privately owned land?

Mr. HARTZOG. Yes, sir, it is for the purchase of privately owned land, most of which is owned by the Rellim Lumber Co., a subsidiary of the Miller Co., owned by Mr. Miller.

EVERGLADES WATER STUDY PROJECT

Chairman HAYDEN. Last year in commenting on the Everglades water study project, you indicated that you were participating with the Corps of Engineers in attempting to work out a plan to relieve the water problem in this area. What is the status of this matter at this time?

Mr. HARTZOG. Mr. Chairman, we are pleased to tell you that remarkable progress has been made on this problem since we last appeared here and I am very hopeful that within a matter of another week or 10 days we are going to have an agreement not only on an interim solution, but on a long-term solution which if the Congress approves by providing the money I think will solve the difficult problem that we face down there.

I have a more lengthy statement on this which we prepared as a briefing statement to be released in cooperation with the Corps of Engineers later this week and I will be pleased to put it in the record.

Chairman HAYDEN. All right. Place that in the record.

Mr. HARTZOG. Thank you, sir.

(The statement follows:)

DEPARTMENT OF THE INTERIOR—NATIONAL PARK SERVICE; DEPARTMENT OF THE ARMY—CORPS OF ENGINEERS

JOINT FACT SHEET ON WATER SITUATION AT EVERGLADES NATIONAL PARK

The Everglades National Park is primarily an aquatic area. The park has, for several recent years, experienced drought periods that have been extremely critical to its well-being. If it is to survive in the natural state which justified its establishment by Congress as a national park, it must continue to be nourished with sufficient water to provide the environment necessary for the production and maintenance of aquatic plant and animal populations.

The pronounced arid conditions which resulted from this deficiency of supply were alleviated, at least temporarily, by the late-starting rainy season of last fall. Hurricane Betsy, with 6 to 10 inches of rainfall directly on the park, and other rains, have raised the water levels to the point that, at the end of 1965, they were about equal to levels at the end of 1964. The question as to how soon, or if, the animal and plant life that has been so severely damaged in the dry period can recover remains to be answered.

Rainfall is the principal source of water to maintain the park ecology. However an important additional supply of water into the park is provided by overland flow. This additional supply should be in an adequate amount to overcome or minimize water shortage at all times, and particularly during the extremely dry periods. In recent years this amount has not been sufficient.

Overland flow from Lake Okeechobee and the area north thereof was intercepted by works of local interests between 1881 and 1927. Canals constructed during this period exclusively by local interests changed the runoff patterns in most of the area south of Lake Okeechobee, thereby diverting much of the water to the ocean.

As a result of hurricanes causing heavy loss of life and property damage, the Corps of Engineers starting in 1928 constructed the Okeechobee waterway involving the existing St. Lucie Canal, the lake, and the Caloosahatchee River and enlarged the existing levees around much of the lake.

In 1947, the Everglades National Park was established. At that time, and subsequent thereto, there was some overland flow of water into the park from the north.

In 1948, the Congress authorized the construction and operation of the central and southern Florida flood control project. Considerable detail as to purposes of the project are contained in House Document No. 643, 80th Congress, 2d session. This document also contained assurances that "the plan of improvement has also been developed in full recognition of the importance of the Everglades National Park * * *. Releases of water from conservation storage will assist in restoring and maintaining natural conditions within the national park area, by reducing damage from drought and fire which have threatened the preservation of lands, vegetation, and wildlife."

With specific reference to the Everglades National Park, the central and southern Florida flood control project works include construction of three conservation areas north of the park for storage and release of water for beneficial use. Conservation area 3, directly north of the park, is the main storage facility designed to hold water which can be released into the park. As a part of this conservation area there was constructed in 1962 a levee (L–29) for approximately 10 miles along the northern edge of the park. This levee contains five sets of gates through which water can be released from the conservation area into the park.

At present, several factors make supply of water to the park difficult. The southward flow of water released into conservation area 3 from Lake Okeechobee and conservation areas 1 and 2 is very slow because the average gradient is only 1 foot in 10 miles over the intervening distance of 40 miles to the park and existing canals in this 40 miles are inefficient for conveyance of water. Gravity discharges from Lake Okeechobee into conservation area 3 are limited by canal capacities between the lake and the conservation area and are further reduced by the head of water accumulating in the heavy sawgrass at the northern end of conservation area 3. Much water released into conservation area 3 is lost through evapotranspiration. Like the park, the principal source of water for conservation area 3 is direct rainfall. Unfortunately, 3 or 4 successive years of below normal rainfall have compounded the problem of collecting water to fill and maintain reasonable levels of storage in the conservation areas.

Tests conducted in 1965 indicate that the release capacity of the existing system for the benefit of the park can be improved by the use of project pumps. Funds for this purpose have not heretofore been available. However, even using maximum pumping capability, it may be necessary, in an emergency, to discharge excess water via the St. Lucie Canal and Caloosahatchee River to safeguard life and property when heavy rainfall is encountered and the hurricane season is imminent.

Water releases from conservation area 3 through the L–29 gates into the park have been limited to an interim water release schedule established by the Central and Southern Florida Flood Control district on the basis that the control of such water resided in the State, except for flood releases which are under the control of the Corps of Engineers.

For a number of years, the National Park Service, the Central and Southern Florida Flood Control District, and the Corps of Engineers have been coordinating studies to determine means of improving the water supply for the park. The Congress has authorized a study for this purpose which will consider water needs of the entire area. This study will be completed in the fall of 1967.

In the meantime, all avenues for relief work to correct present difficulties under existing and expanded authorities are being explored. Some work (second diagonal levee, L–67C) within conservation area 3 was started in September 1965.

This will reduce seepage losses to the east and thereby increase surface water for distribution to the park. Additional work (L–67 extension) consisting of a levee and canal along the east boundary of the park to distribute water to the park will be placed underway during the spring of 1966.

A further interim plan has been developed for the transfer of water from Lake Okeechobee to the park during periods when the lake levels will permit. With the cooperation and assistance of the Central and Southern Florida Flood Control District and the State of Florida, this work can proceed, in part, under existing authorities and in part under additional authority now being sought.

The plan consists of enlargement and extension of the North New River Canal downstream from the agricultural area to a junction with the Miami Canal and the Borrow Canal for L–67, enlargement of the Miami Canal downstream from the agricultural area to the same point, and the enlargement of the L–67 Borrow Canal from the Miami Canal to the park boundary. This work can be done under existing authority with the participation of the State. To this the State has agreed. The construction costs total about $3 million ($2,400,000, Federal; $600,000, State). Funds to accomplish the North New River Canal enlargement, estimated at $265,000, are available, and it is proposed to place this work under contract before the end of fiscal year 1966.

To move water from Lake Okeechobee through these canals into the park will require the operation of two existing pumping stations for extended periods of time. Expenditure of Federal funds for this purpose is not presently authorized, but authorization to pay for pumping for the specific benefit of Everglades National Park is now being sought from the Congress. These costs will amount to $75,000 to $150,000 per year.

Work now underway and planned should result in substantial relief to the park. These measures represent a practical approach to the problem until such time as more comprehensive measures can be considered under the more detailed study which Congress has authorized and which is being pursued as quickly as possible.

FUNDS PROVIDED FOR WATER PUMPING FACILITIES

Chairman HAYDEN. I recall that funds which were provided last June for the purpose of installing a water pumping facility at the Everglades have not been used. Would you please explain what has been done in lieu of the proposed pumping?

Mr. HARTZOG. Sir, we have been working on a different proposal that was advanced by the Corps of Engineers and we would still like to keep that money reprogramed as the committee allowed us to do last year because in part of this solution that is being worked out we may want to put in those pumps still as a supplementary facility in connection with the extension of one of these levees into the park.

However, we have used part of the money in drilling test holes and in determining depths of water and capacities and so forth. We would still like to keep the balance until this agreement has been worked out and we see what all the ramifications are.

PARKWAY AND ROAD CONSTRUCTION

LIQUIDATION OF CONTRACT AUTHORIZATION

Chairman HAYDEN. The justification for an appropriation of $30 million for "Parkway and road construction" (liquidation of contract authorization) will be placed in the record. This is a sum $3 million less than the amount appropriated for this purpose in fiscal year 1966.

(The justification follows:)

Appropriation, 1966	$33,000,000
Decreases:	
Parkways	8,000,000
Roads and trails	25,000,000
Total decreases	33,000,000
Increases:	
Parkways	7,500,000
Roads and trails	22,500,000
Budget estimate 1967	30,000,000

Analysis by activities

Activity	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
1. Parkways	$13,374,344	$9,605,650	$7,500,000	−$2,105,650
2. Roads and trails	21,063,393	23,978,068	22,500,000	−1,478,068
Total expenditures	34,437,737	33,583,718	30,000,000	−3,583,718
Less balance available from prior year	6,021,454	−583,718		+583,718
Total expenditures from current appropriation	28,416,283	33,000,000	30,000,000	−3,000,000

Contract authorization and liquidation program

	Contract authority available	Obligations	Unliquidated obligations prior years	Less obligated balance for proposed supplemental	Total obligations	Expenditures	Unliquidated obligations carried forward
FISCAL YEAR 1965							
Parkways	$25,807,613	$15,694,888	$17,172,381		$32,867,269	$13,374,344	$19,492,925
Roads and trails	27,312,786	22,214,934	18,331,175		40,546,109	21,063,393	19,482,716
Total	53,120,399	37,909,822	35,503,556		73,413,378	34,437,737	[1] 38,975,641
FISCAL YEAR 1966							
Parkways	21,112,725	13,622,725	19,492,925	$2,500,000	30,615,650	9,605,650	21,010,000
Roads and trails	28,097,852	28,060,152	19,482,716	3,000,000	44,542,868	23,978,068	20,564,800
Total	49,210,577	41,682,877	38,975,641	5,500,000	75,158,518	33,583,718	41,574,800
FISCAL YEAR 1967							
Parkways	18,490,000	9,000,000	21,010,000		30,010,000	7,500,000	22,510,000
Roads and trails	23,037,700	23,037,700	20,564,800		43,602,500	22,500,000	21,102,500
Total	41,527,700	32,037,700	41,574,800		73,612,500	30,000,000	43,612,500

[1] Available cash for liquidation is $583,718; balance of $38,391,923 is unfunded obligations.

Status of cash appropriation for liquidation of contract authorization

	1965	1966	1967
Appropriation	$29,000,000	$33,000,000	$30,000,000
Unexpended balance, start of year	6,021,454	583,717	
Total available	35,021,454	33,583,717	30,000,000
Less: Expenditures	34,437,737	33,583,717	30,000,000
Unexpended balance, end of year	583,717		

Need for funds.—The amount of $30 million requested under this appropriation item will be needed in fiscal year 1967 to make payments as requirements therefor accrue in the liquidation of obligations incurred under the contract authorization for parkways and roads and trails construction.

Contract authorizations for the 1966 and 1967 fiscal years are provided in section 2(5) and section 2(6) of the Federal-Aid Highway Act of 1964. The contract authorizations provided for those years, the approved program level for 1966, and the proposed program level for 1967 under the contract authorizations are as follows:

	Parkways	Roads and trails
1965 unprogramed contract authorization	$6,150,000	$1,311,700
1966 contract authorization	11,000,000	23,000,000
Total available contract authorization for 1966	17,150,000	24,311,700
Less: 1966 approved programs	[1] 9,660,000	24,274,000
1966 contract authorizations, unprogramed	7,490,000	37,700
1967 contract authorization	11,000,000	23,000,000
Total available contract authorization for 1967	18,490,000	23,037,700
1967 proposed programs	9,000,000	23,037,700
Unprogramed 1967 contract authorization	9,490,000	----------

[1] Includes $660,000 released from budget reserve for additional traffic lanes (both inbound and outbound) on the George Washington Memorial Parkway between Spout Run and the Theodore Roosevelt Memorial Bridge, and improvement of a ramp at Key Bridge.

1. Parkways, $7,500,000

The amount of $7,500,000 requested for 1967 will be needed to make payments as requirements therefor accrue in the liquidation of obligations incurred under the contract authorization for parkway construction.

The proposed $9 million program for 1967 would permit work on seven of nine authorized parkways. Of the 11 Bureau of Public Roads projects proposed, 2 involve amounts in excess of $1 million each and 4 exceed $500,000 each. The acquisition of parkway lands and their donation to the Federal Government is being pursued by the various States so that construction can move forward without delay upon approval of the program.

The Blue Ridge Parkway, which is nearing completion, had 7,997,400 visits during 1965. Other parkways continue to receive enormous public use and each new stretch of completed mileage calls for complementary facilities, such as access roads, campgrounds, picnic areas, utility systems, and comfort stations. Other associated facilities, such as utility buildings, must also be provided. The 1967 program provides $1,179,600 for these purposes.

BUREAU OF PUBLIC ROADS PROJECTS

Baltimore-Washington Parkway, $671,600 (District of Columbia and Maryland).—This 19-mile parkway runs from New York Avenue extension in the District of Columbia to Jessup Road (Maryland Route 175) in Maryland. At Jessup Road the parkway connects with the 10-mile section constructed by the State of Maryland. The Federal section was started by the Bureau of Public Roads during World War II as a military access road to Fort Meade. Under the authority of the act of August 3, 1950 (64 Stat. 400), it was transferred to Interior for completion and administration. Designed to provide a safe approach to the Nation's Capital, the parkway also provides recreational facilities at Greenbelt Park.

Increased traffic necessitates increasing the length and condition of acceleration and deceleration ramps at various locations to provide for safe access to and from the parkway.

Blue Ridge Parkway, $1,129,100 (North Carolina, $427,600; Virginia, $701,500).—This parkway was started in 1933 under authority of the National Industrial Recovery Act of June 16, 1933. When completed, it will extend along the crest of the Blue Ridge Mountains for a distance of 469 miles from Shenandoah National Park in Virginia to Great Smoky Mountains National Park in North Carolina.

In North Carolina, the program provides $427,600 for final paving of 15 miles of parkway located southwest of Asheville, opened to traffic in 1964 and 1965. This paving work is necessary for the safety and comfort of motorists and to

hold and protect the stone base from deterioration. Upon completion of this final paving, motorists will be provided with 76 miles of completed parkway from Asheville (North Carolina 191) to its southern terminus in Great Smoky Mountains National Park.

In Virginia, $701,500 is provided for final paving of 18 miles of parkway around around the City of Roanoke opened to traffic in July 1965; and final paving of the Mill Mountain Spur which will provide access from the parkway to the campground development and other recreational facilities on Chestnut Ridge and Mill Mountain in the vicinity of Roanoke.

Colonial Parkway, $219,900 (Virginia).—The Colonial Parkway had its inception in the act of July 3, 1930, the basic act for establishing Colonial National Historical Park. Subsequently, the parkway was more specifically authorized by the act of June 5, 1936 (16 U.S.C. 81c). It connects Yorktown, Williamsburg, and Jamestown Island by a 22-mile scenic roadway, portions of which parallel the York and James Rivers.

The amount of $112,000 is programed for constructing a collection road on the east side of the parkway in the vicinity of Millers Crossing. A grade separation is being constructed to eliminate a dangerous crossing of the parkway south of Williamsburg in a rapidly developing suburban area. The collection road will reduce traffic hazards by eliminating private access drives to the parkway.

The underpass at the naval weapon station was constructed to standards that today are obsolete. The pavement width is approximately 21 feet and the structure is located on a 1.5° curve and 4 percent grade. Since Navy operations in the vicinity are of interest to visitors, and the bridge abutment is not as wide as the pavement, two automobile accidents causing injury to seven persons, and numerous minor accidents, have occurred. It is proposed to widen the structure to 24 feet to eliminate the hazard. This project is programed for $107,900.

Foothills Parkway, $1,751,700 (Tennessee).—The parkway was authorized by the act of February 22, 1945, (16 U.S.C. 403h–11). When completed it will extend 68 miles generally parallel to the northern boundary of the Great Smoky Mountains National Park between the Pigeon River and the Little Tennessee River. An additional 4 miles, known as the Gatlinburg Spur, are complete and parallel the West Fork of the Little Pigeon River between Gatlinburg and Caney Creek.

The program will continue extension of the parkway by construction of an additional 3 miles from Carr Creek easterly to Caylor Gap at an estimated cost of $1,287,000. Funds were provided in the 1966 fiscal year for 7 miles of parkway from Highway 73 to Carr Creek. This new work is adjacent to the 10-mile unit opened to traffic in September 1965 between Highway 73 and Murray Gap on tope of Chilhowee Mountain.

Natchez Trace Parkway, $2,931,500 (Mississippi, $2,856,800; Tennessee, $74,700).—A survey to determine the route of this parkway was authorized by the act of May 21, 1934, and construction was started with funds allocated from Emergency Relief Appropriation Act of 1935. When completed the parkway will extend for a distance of about 450 miles from Nashville, Tenn., to Natchez, Miss.

In Mississippi, the program provides $2,319,100 for beginning construction on a portion of a 42-mile gap extending from the Alabama-Mississippi State line southwesterly to the completed parkway at Tupelo. This will involve the construction of 6 miles in Tishomingo County between the State line and Mississippi Highway 25. The program also includes $537,700 for resurfacing and shoulder improvement of combined sections of 19 miles to restore and preserve the original riding qualities.

In Tennessee, a section of the parkway passes through a large tract of land in Lewis County, acquired recently by the State for State park development. The park will be developed for overnight camp and trailer camping with picnic and hiking facilities. The program includes $74,700 for constructing an access connection and an underpass to serve park developments on both sides of the parkway right-of-way.

Suitland Parkway ($816,600).—This parkway was started in 1943 as a military access road and was transferred to the National Park Service pursuant to the act of August 17, 1949. This dual lane parkway, not yet completed, extends from the District of Columbia to Andrews Field, Md., a distance of about 9 miles. This parkway is a principal scenic approach to the Nation's Capital and carries arriving and departing State visitors and VIP's between Washington and Andrews Air Force Base, in addition to local and visitor traffic.

Increased traffic over the last few years, combined with crumbling curbing and spalling surface conditions, requires resurfacing of the entire length of all

mainline lanes of the parkway, and most of the interchange access and egress roadways. This will require a minimum of leveling and base patching and new concrete curbing, and the raising of drainage structures along the entire parkway.

NATIONAL PARK SERVICE PROJECTS

Miscellaneous roads and trails, buildings, utilities, etc., $1,179,600.—The program provides for some 45 minor projects to be accomplished by the National Park Service, including campground and picnic area roads, trails, parking areas, campground and picnic grounds development, water and sewer systems, maintenance area development, and other visitor facilities required to make the parkways usable recreation units.

Included in the foregoing are funds for completing campground and picnic ground developments at Mount Pisgah southwest of Asheville, and expansion of visitor facilities at various recreation areas on the Blue Ridge Parkway in Virginia and North Carolina; expansion of visitor facilities on the Natchez Trace Parkway in Alabama and Mississippi; expansion of the roads and trails system at the Look Rock Campground development on the Foothills Parkway in Tennessee; completion of the entrance road and resurfacing of the Ringfield picnic area road system on the Colonial Parkway in Virginia; and the completion of visitor hiking trails at Great Falls on the George Washington Memorial Parkway in Virginia.

The construction status of the parkways as of January 15, 1966, was as follows:

PARKWAYS

Status of construction mileages as of Jan. 15, 1966

Parkway and State	Total	Completed	Started	Programed [1]	1967 and later
Baltimore-Washington:					
District of Columbia	0.31	0.31	----------	----------	----------
Maryland	19.19	19.19	----------	----------	----------
Blue Ridge:					
North Carolina	252.32	235.34	11.38	----------	5.60
Virginia	216.68	216.68	----------	----------	----------
Colonial, Virginia	23.24	23.24	----------	----------	----------
Foothills, Tennessee	69.69	10.25	12.46	6.78	40.20
Foothills Spur, Tennessee	4.30	[2] 4.30	----------	----------	----------
Gatlinburg Bypass, Tennessee	4.02	----------	3.62	.40	----------
George Washington Memorial Parkway:					
Maryland	17.60	6.50	----------	----------	11.10
Virginia	30.70	22.61	----------	----------	8.09
Natchez Trace:					
Alabama	32.76	13.52	7.14	----------	12.10
Mississippi	314.24	193.08	39.50	----------	81.66
Tennessee	101.06	49.79	1.25	6.25	43.77
Palisades, District of Columbia	3.03	----------	.24	.76	2.03
Rock Creek and Potomac, District of Columbia	4.43	3.43	1.00	----------	----------
Suitland:					
District of Columbia	3.00	[2] 3.00	----------	----------	----------
Maryland	6.00	[2] 1.90	----------	----------	----------
	----------	[2] 4.10	[3] (4.10)	----------	----------
Total	1,102.57	807.24	76.59	14.19	204.55

[1] Projects programed but not started.
[2] 4 lanes.
[3] 2 lanes.

2. Roads and trails, $22,500,000

The amount of $22,500,000 requested for 1967 will be needed to make payments as requirements therefor accrue in the liquidation of obligations incurred under the contract authorization for roads and trails construction.

The roads and trails construction program to be carried out in 1967 under the contract authorization, as proposed in the estimates, totals $23,037,700, which is $1,236,300 less than the $24,274,000 program level approved for the 1966 fiscal year.

Need for funds.—Projects included in the program are those of highest priority within the Service's long-range program for the construction and reconstruction of roads and trails in the 230 authorized park areas to meet visitor and administrative needs.

Of the total of $23,037,700 program, $841,000 is for projects in seven new areas for which roads and trails construction funds have not heretofore been provided. These new areas and the amounts included in the program for each are as follows:

Area	*Amount*
Agate Fossil Beds National Monument, Nebr	$40, 500
Amistad Recreation Area, Tex	264, 300
Arbuckle Recreation Area, Okla	100, 500
Assateague Island National Seashore, Md. and Va	20, 000
Delaware Water Gap National Recreation Area, N.J. and Pa	248, 600
Golden Spike National Historic Site, Utah	159, 000
Herbert Hoover National Historic Site, Iowa	8, 100
Total	841, 000

Roads and trails projects in seven new park areas activated during the past 5 years, for which only an initial start has been made toward providing physical facilities, account for $2,035,900 of the total $23,037,700 program. It is essential that minimum roads, trails, and other facilities be provided in the new areas as lands are acquired and as visitor use increases. The areas in this category for which roads and trails projects are included in the 1967 program, and the amounts programed for each, are as follows:

Area	*Amount*
Canyonlands National Park, Utah	$74, 300
Cape Cod National Seashore, Mass	519, 400
City of Refuge National Historical Park, Hawaii	6, 600
Fire Island National Seashore, N.Y	245, 200
Fort Bowie National Historic Site, Ariz	142, 800
Padre Island National Seashore, Tex	705, 100
Point Reyes National Seashore, Calif	342, 500
Total	2, 035, 900

The remainder of the program, or $20,160,800, is for new and reconstruction projects in areas activated more than 5 years ago, and is required to meet visitor and administrative needs and to protect the Government's investment in roads which are now in need of major reconstruction.

Many of the existing park roads are antiquated and do not measure up to present day standards. Many of them have been in use longer than the normal life expectancy. Road bases and surfaces have deteriorated and some structures are outdated. In many instances, final surfacing has not been applied. In some instances, relocation is the only means of meeting minimum traffic requirements and of eliminating steep, narrow, and winding sections of road which are unsafe for present day vehicular traffic volumes.

As public use of the parks has increased the Service has had to open up new sections of individual parks to public use. Early access roads and other developments usually followed the stream valleys, as they were the most easily accessible routes and the least costly sites to develop. The newer sections in most instances involve much more difficult routes through rough terrain and the roads and trails, as well as other physical facilities, are generally more costly to construct.

The increased interest in physical fitness, outdoor recreation, and conservation has brought about a heightened public interest in trails, paths, and walks of many types, such as back-country trails in remote locations; well-developed hiking trails of varying lengths which keep the hiker within reasonable time and distance of developed areas; trails with surfacing and grades designed for the rapidly increasing older segment of our growing populace; bicycle trails; and pleasant paths and walks to serve in varying situations. The 1967 program includes approximately $1,500,000 for constructing and reconstructing about 200 miles of these facilities.

Program of work.—The 230 areas authorized for administration are located in 45 States, 2 territories, and the District of Columbia. Responsibility for execution of the construction program in them lies primarily with the Service's design and construction offices located in San Francisco, Philadelphia, and the District of Columbia. Overall guidance and direction is provided by a staff in the Washington office under direction of an Assistant Director for Design and Construction.

Some of the road construction projects are accomplished for the Service through facilities of the Bureau of Public Roads under the terms of a cooperative agreement. Usually, these roads consist of the principal entrance or main park roads,

having high traffic density and designed to higher standards (heavier duty) than those normally associated with other park roads. The 1967 program provides $9,263,700 for work on roads to be accomplished through the facilities of the Bureau of Public Roads. The remainder of the program, to be carried out through Service facilities, provides for numerous minor roads and trails projects, including parking areas, overlooks, campground roads, drainage structures, etc.; and for advance planning, reconnaissance surveys, topographic surveys, etc., all estimated at $13,774,000.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$37,909,822	$41,682,877	$32,037,700	−$9,645,177
Unobligated balance brought forward:				
Appropriation	−12,900	−12,900		+12,900
Contract authorization	−53,107,499	−49,197,677	−41,527,700	+7,669,977
Unobligated balance carried forward:				
Appropriation	12,900			
Contract authorization	49,197,677	41,527,700	43,490,000	+1,962,300
Unfunded balance, start of year	82,602,500	87,602,500	83,102,500	−4,500,000
Unfunded balance transferred to: Proposed for separate transmittal, "Parkway and road construction"		−5,500,000		+5,500,000
Unfunded balance, end of year	−87,602,500	−83,102,500	−87,102,500	−4,000,000
Appropriation to liquidate contract authorization	29,000,000	33,000,000	30,000,000	−3,000,000
Obligations by objects:				
11 Personnel compensation	5,816,028	6,307,000	7,034,000	+727,000
12 Personnel benefits	394,142	446,000	494,000	+48,000
21 Travel and transportation of persons	523,911	523,000	523,000	
22 Transportation of things	127,038	129,000	124,000	−5,000
23 Rent, communications, and utilities	154,045	157,000	157,000	
24 Printing and reproduction	48,955	49,000	49,000	
25 Other services	350,684	352,000	297,000	−55,000
Services of other agencies	2,003,997	2,014,000	1,979,000	−35,000
26 Supplies and materials	460,013	492,000	467,000	−25,000
31 Equipment	214,027	215,000	180,000	−35,000
32 Lands and structures	27,815,104	30,985,977	22,139,700	−8,846,277
41 Grants, subsidies, and contributions		12,900		−12,900
42 Insurance claims and indemnities	1,878			
Subtotal	37,909,822	41,682,877	33,443,700	−8,239,177
96 Portion of the foregoing obligations originally charged to object 32			−1,406,000	−1,406,000
Total obligations	37,909,822	41,682,877	32,037,700	−9,645,177

PARKWAYS

Chairman HAYDEN. $7,500,000 are for parkways, and roads and trails have been allocated $22,500,000. Would you comment on your proposed programs?

Mr. HARTZOG. Mr. Chairman, this program is at a level which would permit us to continue with the work at a minimum level on seven of the nine authorized parkways. It includes work on the Blue Ridge Parkway, the Natchez Trace Parkway, the Suitland Parkway, and minor work on the George Washington Memorial Parkway. It also includes improvements to the Baltimore-Washington Parkway for the acceleration and deceleration lanes in the interest of safety, and includes an item for the Colonial Parkway in Virginia and an item for the Foothills Parkway.

The roads and trails program includes new construction and reconstruction projects in various park areas as have our programs for the past 10 years or so. Of the $22,500,000 provided in the program, $841,000 is for initial work in seven new areas and $2,035,900 is for projects in areas that have been activated during the past 5 years.

STATUS OF ROAD FOR VISITOR CENTER AT LAKE MEAD

Chairman HAYDEN. Last year $120,000 was authorized for use for construction of an access road to the Visitor Center at the Lake Mead National Recreation Area. Have you been able to build this road yet?

Mr. HARTZOG. Sir, the road is not yet under contract. The construction of the Visitor Center hasn't advanced to that point. We are going to invite bids in March.

GENERAL ADMINISTRATIVE EXPENSES

Chairman HAYDEN. For "General administrative expenses" the National Park Service requests an appropriation of $2,562,100, of which $1,577,000 is allocated to departmental expenses, and $985,100 will be for regional office expenses. The justification for this estimate will be placed in the record.

(The justification follows:)

This appropriation finances executive direction and certain administrative functions in the Washington office (departmental expenses) and five regional offices (regional office expenses) incident to the fulfillment of the Service's many responsibilities. The administrative functions are general in nature and include the formulation of policy; prescribing of systems and procedures; legislative, regulation, information, program coordination, management analysis, financial management, personnel management, manpower development, internal audit, property management, and records management functions; and overall executive direction and coordination of the Service's programs and functions. The objective is to have the Washington and regional offices in a position to discharge these administrative and executive functions in a manner that will facilitate fulfillment of the Service's multiple responsibilities to the maximum extent at the least possible cost.

General administrative expenses

Appropriation, 1965	$2,325,000	
2d supplemental appropriation, 1965	97,000	
Total appropriation, 1965	$	$2,422,000
Appropriation, 1966	$2,465,000	
Pay cost supplemental	57,000	
Total appropriation, 1966	$	2,522,000

SUMMARY OF INCREASES AND DECREASES, 1967

Departmental expenses:		
Increased pay costs for fiscal year 1966 positions	+$12,600	
Salary and personnel benefits of a resources planning assistant	+18,400	
		+31,000
Regional office expenses: Increased pay costs for fiscal year 1966 positions		+9,100
Net increase, 1967		40,100
Budget estimate, 1967		2,562,100

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers	Amount available
1. Departmental expenses	$1,460,939	$1,511,000	$35,000		$1,546,000
2. Regional office expenses	892,363	954,000	22,000		976,000
Unobligated balance lapsing	68,698				
Total	2,422,000	2,465,000	57,000		2,522,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Departmental expenses	$1,460,939	$1,546,000	$1,577,000	+$31,000	+$12,600	+$18,400
2. Regional office expenses	892,363	976,000	985,100	+9,100	+9,100	
Unobligated balance lapsing	68,698					
Total	2,422,000	2,522,000	2,562,100	+40,100	+21,700	+18,400

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. Departmental expenses—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Personnel compensation and benefits	$1,203,366	$1,327,000	$1,358,000	+$31,000	+$12,600	+$18,400
(b) General expenses	200,555	169,000	169,000			
(c) Administrative printing	57,018	50,000	50,000			
Total	1,460,939	1,546,000	1,577,000	+31,000	+12,600	+18,400

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. *Departmental expenses.*—The estimate for 1967 is $1,577,000, an increase of $31,000 over 1966. The increase consists of:

(1) An increase of $12,600 for increased pay costs.

(2) An increase of $18,400 for salary and personnel benefits of a resources planning assistant position.

Executive direction and certain administrative functions of the Washington office are financed under this activity. The functions are general in nature and include formulation of policy; prescribing of systems and procedures; legislative, regulation, information, program coordination, management analysis, financial management, personnel management, manpower development, internal audit, property management, and records management; and the overall executive direction and coordination of the various programs of this Service.

Need for increase.—The increase of $18,400 is requested to cover the salary and personnel benefits of a new position of resources planning assistant, GS–15, in the office of the Assistant Director, Administration. Bureau of the Budget Bulletin No. 66–3, dated October 12, 1965, requires each Government agency to establish an integrated planning, programing, budgeting (PPB) system. Secretarial Order No. 2892, dated December 18, 1965, implements this requirement. Implementation and execution of the new system will require a staffing capability not currently available. The incumbent will have primary responsibility for developing and coordinating the Service's planning, programing, and budgeting system, and continuing activities in this area of endeavor, based on guidelines and instructions issued by the Bureau of the Budget and Department of the Interior.

Program of work.—The objective is to discharge the administrative and execu-

tive direction functions in the most effective, efficient, and economical manner, and to facilitate the prosecution of all of the Service's diversified programs to the maximum extent possible. With the substantial expansion in the various programs during the last 10 years and the attendant increase in administrative workload, emphasis is being given to progressive management techniques to assure optimum performance in all of the Service's programs.

2. Regional office expenses—Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Northeast office	$184,054	$193,100	$194,900	$1,800	$1,800	
(b) Southeast office	186,139	197,000	198,900	1,900	1,900	
(c) Midwest office	175,931	194,600	196,400	1,800	1,800	
(d) Southwest office	170,148	191,600	193,400	1,800	1,800	
(e) Western office	176,091	199,700	201,500	1,800	1,800	
Total	892,363	976,000	985,100	9,100	9,100	

[1] To provide for increased pay cost for fiscal year 1966 positions.

2. *Regional office expenses.*—The estimate for 1967 is $985,100, an increase of $9,100 over 1966. This increase is for pay costs.

Executive direction, public affairs, management analysis and program coordination functions in the five regional offices are financed under this activity.

Program of work.—The program contemplates provision of executive direction and the performance of certain administrative functions in the regional offices in support of all Service programs.

Examples of recent accomplishments.—The accomplishments under the various programs during the past year, as discussed under the other appropriation headings, can be credited largely to the functions financed under this appropriation. Without the administrative functions, none of the programs could be carried forward.

Some specific accomplishments are:

1. Continued emphasis was given to the management appraisal program as a principal tool for increasing efficiency and economy and assuring effective manpower utilization.

2. Continued emphasis was placed on training to improve employee job performance and to further the manpower development program. Examples of achievements are as follows:

(a) Most top Washington office officials and regional directors have received formal management training including background in a goal setting improvement program now being implemented.

(b) The Service is using its own staff in the management training of middle managers rather than outside courses. This results in lower participant cost. a higher participant rate, tailormade course content, and scheduling in nonpeak workload periods.

(c) New rangers receive basic training at a training center before initial park assignment rather than after they have been on the job for some time. This is done at some travel cost reduction. Better on-the-job training also is stressed.

(d) Twenty-one students from 16 countries attended the first short course in administration of national parks and equivalent reserves sponsored by the National Park Service and the University of Michigan.

3. A centralized placement program replaces one that formerly was administered in the six regions with much duplication of records and evaluation of candidates, inconsistency of standards, and some parochialism in screening. The new system means better career planning, a Service-wide approach, and improved employee morale.

4. Special emphasis was given to the employee suggestion program for improved management, resulting in an increase in the participation rate per 1,000 employees, from 84 in fiscal year 1964, to 147 in fiscal year 1965.

5. In a continued effort to reduce costs and improve the Service's financial management functions, seven of the Service's park field finance offices were closed.

The accounting, payrolling and financial reporting responsibilities of the park areas involved were transferred to regional offices. The remaining seven park field finance offices are scheduled to be closed during the 1966 fiscal year.

6. A study was made in 1965 of the type of automatic data processing equipment that would be required to consolidate in the regional offices the functions discussed under item 5 above. Automatic data processing equipment has been installed and placed into operation in the offices at Richmond, Va.; Omaha, Nebr.; Santa Fe, N. Mex.; and San Francisco, Calif.

7. Service officials participated in an interagency study group which developed standardized methods for measuring recreation use.

8. An agreement was consummated with Federal Housing Administration providing for FHA professional appraisers to establish rental rates to be paid for all Service quarters occupied by employees.

9. Following studies made between the Service and the General Services Administration, many of the park areas have transferred automotive equipment for operation under the General Services Administration motor pool arrangements. The studies are continuing and it is expected that additional park area equipment will be transferred on the same basis.

Itemization of estimate

	Actual, 1965	Available, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$2,353,302	$2,522,000	$2,562,100	+$40,100
Unobligated balance	68,698			
Appropriation	2,422,000	2,465,000	2,562,100	+97,100
Proposed supplemental due to civilian pay increases		57,000		−57,000
Obligations by objects:				
11 Personnel compensation	1,869,792	2,029,000	2,045,100	+16,100
12 Personnel benefits	137,115	155,000	152,000	−3,000
21 Travel and transportation of persons	110,222	115,000	115,000	
22 Transportation of things	7,241	7,000	8,000	+1,000
23 Rent, communications, and utilities	35,515	36,000	40,000	+4,000
24 Printing and reproduction	92,692	85,000	95,000	+10,000
25 Other services	33,173	33,000	34,000	+1,000
Services of other agencies	28,845	29,000	34,000	+5,000
26 Supplies and materials	25,926	20,000	24,000	+4,000
31 Equipment	12,781	13,000	15,000	+2,000
Total obligations	2,353,302	2,522,000	2,562,100	+40,100

RESOURCE PLANNING ASSISTANT

Chairman HAYDEN. Except for employment of a resources planning assistant, your general administration budget is the same as last year. Would you please explain the need for this new position?

Mr. HARTZOG. Sir, this is to provide support to implement the Bureau of the Budget instruction in connection with the planning, programing, and budgeting phase of our overall management, designed not only to improve budgetary backup, but likewise to improve the overall management program. This is a position we desperately need in order to carry on this part of our work.

ADMINISTRATIVE PROVISIONS

Chairman HAYDEN. I will place in the record your statement entitled "Administrative Provisions."

(The justification follows:)

Authorization is requested for the purchase of 141 passenger motor vehicles of which 105 are for replacement only, including not to exceed 77 for police type use, the cost of which may exceed by $300 each the general purchase price limitation.

The vehicles to be replaced will be within the age or mileage standards for replacement as prescribed by the General Services Administration. Many of them are used for patrol purposes and law enforcement functions by employees such as park rangers and the U.S. Park Police, and often at high speeds for the apprehension of speed and other violators. They must, therefore, be in good condition to insure safety of the operator and the public. Many of the vehicles operated by the Service are used in rugged mountainous and desert terrain and under trying weather and road conditions. The geographical location of many areas, far from railheads or other populated centers where Government business is transacted, makes it mandatory to use this type of transportation.

Vehicles to be purchased:	
Number	141
Estimated gross cost	$246,750
Old vehicles to be exchanged:	
Number	105
Estimated allowance	$56,200
Net cost	$190,550

Expansion of the Service's activities to serve an estimated 127.5 million visitors in 1967 compared with 112.1 million in 1965, and the establishment of new park areas have brought about the need for additional passenger motor vehicles to serve protective, interpretive, and administrative functions of the areas. Nine vehicles are needed incident to the establishment and operation in the 1967 fiscal year of seven new park areas authorized in the 1st session of the 89th Congress and one new area to be operated under a cooperative agreement. The other 27 additional vehicles requested are required to more nearly meet the needs of the staffs in existing areas, of which 7 are for areas activated during the past 5 years.

The language will permit the Service to purchase special features of equipment for vehicles used for law enforcement or police type activities exceeding in cost the maximum amount established for the purchase of a passenger motor vehicle. In the discharge of its responsibilities the Service will need to purchase 77 cars equipped as police cruisers in 1967. Sixty-two of the replacements and 15 of the additional passenger vehicles will need this police type equipment. They are required for patrolling such areas as the George Washington Memorial, Baltimore-Washington, Suitland, and Blue Ridge Parkways, and roads in the larger parks. Special features of equipment for police type vehicles include: heavy-duty front seat and upholstery, heavy-duty police type engine, safety belts, safety padded sun visor and dashboard, special safety tires and tubes, and heavy-duty chassis, springs, shock absorbers, and alternators.

Passenger Motor Vehicles

Chairman Hayden. The statement concerns only purchase of 141 passenger motor vehicles, of which 105 are for replacement. Would you please place in the record a statement showing where each of the 36 additional motor vehicles is to be assigned, and include in that information the total number of passenger motor vehicles which will then be at the stations to which the new vehicles are to be assigned?

Mr. Hartzog. We have a statement to that effect, and I would be pleased to put it in the record.

(The statement follows:)

Increases proposed and total number in 1967 budget

	Increase, 1967	Budget, 1967
Northeast region:		
Assateague Island (new area)	1	1
Cape Cod	2	5
Delaware Water Gap (new area)	2	3
New York City group	1	2
Saratoga	1	2
Subtotal	7	13
Southeast region:		
Blue Ridge	3	39
Cape Hatteras	5	11
Cumberland Gap	1	3
Natchez Trace	8	43
Subtotal	17	96
Midwest region:		
Agate Fossil Beds (new area)	1	1
Curecanti	1	2
Herbert Hoover (new area)	1	1
Flaming Gorge	1	4
Fort Union	1	1
Ozark	2	4
Subtotal	7	13
Southwest region:		
Amistad (new area)	1	1
Canyonlands	1	2
Golden Spike (new area)	1	1
Hubbell Trading Post (new area)	1	1
Subtotal	4	5
Western region: Nez Perce (new area)	1	1
Total	36	128

PROPOSED ALLEGHENY PARKWAY

Chairman HAYDEN. Senator Byrd.

Senator BYRD. Thank you, Mr. Chairman.

Mr. Hartzog, I commend you on a very fine statement.

Mr. HARTZOG. Thank you, Senator. It is a great pleasure to be here, and we appreciate what you have done over the years for us, too.

Senator BYRD. Thank you.

With regard to the proposed Allegheny Parkway, Mr. Hartzog, you and I have discussed this parkway. For the record, would you state your position with respect to the need for such a parkway?

Mr. HARTZOG. Thank you very much, Senator.

Sir, this is, in our judgment, based on our study and analysis, one of the very important parkway proposals to come forward. We think it is feasible. We think that with the tremendous growth in recreational use, and particularly in recreational driving, that it is indeed an extremely important link in the overall outdoor recreational development of America.

PARKWAY PRIORITY AND FEASIBILITY STUDY

Senator BYRD. What priority does this parkway have in the National Park Service program?

Mr. HARTZOG. In the context of our program, sir, it is at the very highest level and we have completed the feasibility study on it.

Senator BYRD. When did you complete that feasibility study?

Mr. HARTZOG. Sir, it was completed in 1965 and we have submitted the report to the staff of the President's Recreational Advisory Council which is coordinating an overall study of scenic roads and parkways.

Senator BYRD. Did the National Park Service recommend this parkway for immediate development as a part of the scenic roads and parkway study?

Mr. HARTZOG. Our recommendation is that; yes, sir.

Senator BYRD. Assuming that the Congress authorizes establishment of Allegheny Parkway, how would it be financed?

CONTEMPLATED FINANCING

Mr. HARTZOG. Sir, we would propose its financing over a period of years as was done in the case of the Blue Ridge Parkway under the general authorization of the Federal Aid Highway Act, programing those amounts, both planning money as well as construction money, that could be used in segments as the plan is developed.

Senator BYRD. Is the present authorization for national parkways in the Federal-Aid Highway Act sufficient to include funds needed for the proposed Allegheny Parkway?

Mr. HARTZOG. No, sir; it is not. We have a statement on the financing on that which I would be pleased to provide for the record, if I may.

Senator BYRD. Does the authorization cover only those previously authorized parkways?

Mr. HARTZOG. Yes, sir; that is all that it covers.

Senator BYRD. Mr. Hartzog, if we may have that for the record.

Mr. HARTZOG. I will put the analysis in the record, sir.

(The statement follows:)

Parkways authorization and program, 1967 fiscal year

Authorized by Federal-Aid Highway Act of 1964 (Public Law 88-423)	$11,000,000
1967 fiscal year program:	
Baltimore-Washington Parkway, District of Columbia and Maryland	671,600
Blue Ridge Parkway, N.C. and Va	1,794,100
Colonial Parkway, Va	258,400
Foothills Parkway, Tenn	1,952,300
George Washington Memorial Parkway, Md. and Va	63,600
Natchez Trace Parkway, Miss., Ala., and Tenn	3,143,400
Suitland Parkway, District of Columbia and Maryland	816,600
Advance planning	300,000
Budget reserve, for authorized parkways	2,000,000
Total, program and authorization	11,000,000

AUTHORIZATION INCREASE REQUIREMENT

Senator BYRD. How much would the authorization need to be raised in your judgment, to provide funds necessary for the Allegheny Parkway for the first 2 years?

Mr. HARTZOG. Sir, we would propose about $6 million. We think that the initial start should be in the terms of a million dollars for the initial development of construction plans and drawings and then as we let construction work based on those plans and the development

of additional plans we could up it in the second year to an additional $5 million.

Senator BYRD. You could with that amount of money continue planning and engineering?

Mr. HARTZOG. That is correct, on the next segment of it.

HARPERS FERRY NATIONAL HISTORICAL PARK

Senator BYRD. In your statement, Mr. Hartzog, you have stated that there is included in the budget estimate $600,000 for Harpers Ferry National Historical Park in addition to $50,000, I believe, for roads and trails there.

Would you comment on this budget request for $600,000?

Mr. HARTZOG. Thank you very much, Senator.

PRINCIPAL INTERPRETER TRAINING CENTER

Sir, this is an extremely needed facility. We have at Harpers Ferry now the principal training center for our interpreters. Harpers Ferry in our judgment has a unique capacity, being located near the C. & O. Canal, to serve as a demonstration project in park interpretation. What we would like to do is to consolidate the publications unit, the motion picture unit, the still pictures unit and the museum laboratories, that we have here in Washington and in San Francisco, with the training center and the Harpers Ferry operation so that the whole thing could be integrated and operated as one unit. The item here in the budget this year is a step in that direction.

Senator BYRD. From the standpoint of personnel, what would this mean?

Mr. HARTZOG. When we complete the total operation there it would mean the addition of approximately 75 people to the Harpers Ferry staff. In that connection I should say that it would result in an overall reduction of about 10 people that are now working in other places.

In other words, we have about 85 people involved at other locations throughout the United States in the kind of activities that we would propose ultimately to consolidate at Harpers Ferry.

FIRST STEP OF LONG-TERM PROGRAM

Senator BYRD. Now, would you anticipate that this consolidation would be completed within a year?

Mr. HARTZOG. No, sir; what we have asked for in this program is the first part of what would be a long-term program of bringing about the overall improvement in our interpretative planning and construction of exhibits and training of personnel so this would not do it now, no, sir.

PROGRAM COST AND BUDGET REQUEST HISTORY

Senator BYRD. What would be the total cost?

Mr. HARTZOG. We estimate an amount of $1,250,000, roughly twice what is in this estimate before us.

Senator BYRD. Did you request the full $1.2 million from the Bureau of the Budget?

Mr. HARTZOG. Yes, sir; we did.

Senator BYRD. So the request was submitted for the full amount?
Mr. HARTZOG. Yes, sir.
Senator BYRD. You have a capability of utilizing $1.2 million?
Mr. HARTZOG. Yes, sir.

ADVANTAGE OF FULL FUNDING IN FISCAL YEAR 1967

Senator BYRD. What would be the advantages, Mr. Hartzog, in having the full amount appropriated in fiscal year 1967? Would there be some savings accrue and, if so, would you explain?

Mr. HARTZOG. There would be, of course, because instead of proceeding with increments, as this plan now envisions, we could proceed in total.

I wish to say, however, that this increment is a usable unit and will result in improvement in our audiovisual and motion picture programs. They can be consolidated. The maximum savings will only accrue when the ultimate construction has been finished, which would be the second unit.

The second portion of this would give us actually more space, usable space, than this first portion because, in designing anything like this the basic items don't have to be repeated again.

For example, when a sewage system is put in to an existing city system, it doesn't take as much sewage pipe for an additional connection as you originally had to have as you have only to connect up to it. On the same basis, air-conditioning equipment and other equipment of this kind would not have to be duplicated. This is a usable unit and some of the savings would result from the consolidation and some improvements would result.

Also it is a fact that building costs have been increasing at a rate in excess of 3½ percent a year. While the estimate for the total facility is $1,250,000, this figure would escalate by any increase in the cost index that takes place depending on how long it takes to get to the next unit.

Senator BYRD. I take it, then, the provision of one-half of the total cost would not give you one-half of the total usable space?

Mr. HARTZOG. That is correct.

Senator BYRD. Are you saying that the full appropriation of $1.2 million this year would result in a saving of at least 3.5 percent of $600,000?

Mr. HARTZOG. Yes, sir, if construction costs continue to rise as they have in recent years. Probably a little more than that, because we figure the construction lag here is going to be 18 to 24 months from the time we get money until we get people in so, on the basis of past increases in cost levels, I would say approximately close to 7 percent of $600,000.

SAVINGS PRINCIPALLY FROM CONSOLIDATION OF MUSEUM LABORATORIES

Senator BYRD. How much of your planned savings, as a result of this consolidation, can be accomplished on the first stage?

Mr. HARTZOG. A very limited amount, because most of the savings will result from the consolidation of the museum laboratories. This is where we will actually bring about a saving in staff and personnel. We have one operating out of San Francisco and one in Washington. What we could do is reduce overhead and personnel.

Senator BYRD. You therefore not only save moneys by having the whole sum made available in 1 year as a result of the escalation in costs, but you also would be able to realize the contemplated and planned savings which would result from the consolidation at an earlier time?

Mr. HARTZOG. Yes, sir.

ANALYSIS OF SAVINGS FROM FULL APPROPRIATION IN FISCAL YEAR 1967

Senator BYRD. Can you supply for the record, if not at this moment, an estimate of the overall savings which would result if you were to secure the full appropriation of $1.2 million in fiscal year 1967?

Mr. HARTZOG. Yes, sir; we have that information.

I would like to recast it in the form of a tabulation in response to the kind of questions you have asked. We have a lot of information on it which we used initially in the analysis but I think we can consolidate it in an analysis for the record.

Senator BYRD. I would like you to do that, if you would, but at the moment can you give me some kind of rough figure?

CONSOLIDATION IN STAFFING AT HARPERS FERRY WOULD SAVE $75,000

Mr. HARTZOG. The ultimate consolidation in staffing will result in the approximate saving of $75,000.

Senator BYRD. Annually or in the overall?

Mr. HARTZOG. Annually.

Senator BYRD. If you were able to get the full appropriation this year, would this mean that there would be an annual saving over and above that saving that would result from your obviating the escalation in cost?

Mr. HARTZOG. Yes, sir.

Senator BYRD. In other words, you are saying this full appropriation would permit you to consummate the consolidation 1 year earlier than will be the case otherwise?

Mr. HARTZOG. Right.

Senator BYRD. Consequently there is an additional $75,000 in savings?

Mr. HARTZOG. That is correct. This is for the existing program level, you see, that we are talking about. We are not talking about growth in program, of course.

As the program continues to grow it would be problematical what the increased savings might be. We do know there are elements of efficiency in having all our people in one place—particularly these people because, you see, they have special talents and skills that are hard to come by. These artists that prepare the drawings for the visitor center, exhibits, and so forth, are extremely talented artists and craftsmen. Just having one man may permit us to have that specialization. It doesn't always reflect in cash savings you can quantify easily but they are, nevertheless, improved efficiencies.

ESTIMATED SAVINGS TO BE REALIZED THROUGH CONSTRUCTION OF ENTIRE FACILITY AT ONE TIME

Senator BYRD. My exercise in arithmetic would lead me to believe 3½ percent of $600,000 would be $21,000 in 1 year, which you would

otherwise not save because of escalation in cost, and that added to $75,000 would mean that there would be a saving of $96,000?

Mr. HARTZOG. Yes, sir.

Senator BYRD. If the Congress were to appropriate the full $1.2 million in fiscal year 1967?

Mr. HARTZOG. That is correct.

You have just made a better analysis than I could put in the record.

Senator BYRD. That is almost a 10-percent saving.

Mr. HARTZOG. Yes, sir.

(The analysis follows:)

Total estimated cost of facility (2 units)	$1,250,000
Amount requested in 1967 budget (1 unit)	650,000
Additional amount required to provide for 2d unit at current cost levels	600,000
Possible increase in cost incident to delay of 1 year in constructing 2d unit should there be an increase in construction costs comparable to those of recent years (3½ percent)	21,000
Total estimated cost of 2d unit	621,000
Ultimate annual saving in operating costs contemplated through consolidation of functions in both units of proposed facility	75,000
Estimated additional cost of total facility to accrue through delay of 1 year in constructing 2d unit as indicated above	21,000
Estimated reduction in total cost of 1st year operations on full consolidated basis utilizing both units of proposed facility plus estimated reduction in construction costs if both units could be placed under construction in 1967 fiscal year	96,000

CAPABILITY AND BUDGET REQUEST HISTORY

Senator BYRD. And there is no question but that you do have the capability of efficiently spending this full appropriation in fiscal year 1967?

Mr. HARTZOG. That is correct.

Senator BYRD. I have not misunderstood you in your saying that this presentation was made to the Bureau of the Budget, and the full amount was requested at the Bureau of the Budget level?

Mr. HARTZOG. If I may answer this on the basis of what Mr. Montgomery, our Assistant Director for Administration, just gave me, the entire amount was in the budget we submitted to the Bureau of the Budget. When the Bureau of the Budget gave us the budget allowance it did not specifically disallow any of this item. We had to adjust the projects to fit the Bureau of the Budget allowance figure. It was at this point I had to decide on the audiovisual-motion picture portion for this year and other projects for later years.

The Bureau of the Budget did not specifically disallow this figure, but gave us a figure we had to fit our projects to. We had to consider our overall needs and the rate at which we were going forward. Some of the items had to be reduced and others completely dropped. This is why I want to make clear this is a usable unit and consolidates only part of what we hope to ultimately consolidate.

Senator BYRD. Your opinion is you need the money this year and can use it this year?

Mr. HARTZOG. Yes, sir.

GRAVE CREEK MOUND LANDMARK, MOUNDSVILLE, W. VA.

Senator BYRD. Now, on registered historical landmarks, I notice you have the Grave Creek Mound at Moundsville, W. Va. included. What research has been done to date in regard to this site?

Mr. HARTZOG. Sir, we have broken the history of the United States down into 41 themes. We assign either our own staff historians or we contract with university historians to research the themes, and identify those persons, places and objects that contribute in a nationally significant way to that facet in American history.

This is one of the sites that contributes to an understanding of it, and from the name of it I would assume this is an Indian mound, pre-European cultural era in America. This is one of the nationally significant Indian sites.

Senator BYRD. Thank you.

Mr. HARTZOG. We do have the background and I would be pleased to provide it for the record or send you an extract of it.

Senator BYRD. If it is not too voluminous I wish you would provide it for the record.

Mr. HARTZOG. We will.

Senator BYRD. Thank you, and I would like to see you get your $1.2 million.

Mr. HARTZOG. Thank you.

(The information follows:)

This mound is one of the largest in the Eastern United States and is representative of the burial mound tradition of the Adena culture. Few Adena sites remain intact today. Thus, although this mound has been extensively excavated, with work at the site going back over 100 years, its preservation is significant. The mound probably dates around 500 B.C. and is one of the oldest such structures extant today. The Adena culture proceeded and paved the way for the slightly later Hopewell culture which was noted for its large mounds and great earthwork structures. Thus the Grave Creek Mound is an important site in the development of aboriginal culture in this country. The mound is located in the town of Moundsville, W. Va., and is owned by the State.

QUESTIONS AND ANSWERS SUBMITTED

Chairman HAYDEN. Senators Bible and Mundt are unable to be present today, but each desired to ask you some questions. I will place them in the record and ask you to supply responses.

(The questions and answers follow:)

QUESTIONS SUBMITTED BY SENATOR BIBLE

BOULDER BEACH WATER SYSTEM

Question. I note in your justification that you are proposing an appropriation of $677,800 for a water supply system for Boulder Beach at Lake Mead National Recreation Area. As you know this item has been the subject of much correspondence between myself and the National Park Service. Mr. Chairman, I am delighted that funds are being requested for this project. Please give the committee a brief description of this project, why it is needed, when construction can start, and the estimated completion date.

Answer. During the past 10-year period the National Park Service has gradually increased its use of water in the Boulder Beach area to some 20 million gallons per month during the summer. Until 1964 the Bureau of Reclamation had no problem supplying this increase over the National Park Service commitment because their total pumping capacity at high lake elevation was 4,700 gallons per minute and Boulder City with a population of less than 4,000 was not using their total commitment. Boulder City has now grown to some 5,000 people and esti-

mates indicate it will use the maximum commitment by June of 1966. The National Park Service water allotment is 80 gallons per minute, but it has been using approximately 700 gallons per minute to maintain an adequate supply for the Boulder Beach campground and picnic areas.

It was anticipated that the southern Nevada pipeline project might include capacity for meeting National Park Service needs. Of utmost importance is the fact that it would require 4 or 5 years before water could be made available, whereas the need is immediate. Also, the proposed southern Nevada system would not have sufficient head to elevate water from the southern Nevada line to the Boulder City system. These factors rule out this source of increased supply to the Boulder Beach area, and the Service and the Bureau of Reclamation are in agreement that the best approach is for the Service to construct an independent system to supply existing urgent needs as well as the future expansion of Service requirements.

If funds are appropriated, it is planned to advertise for contract bids about October or November 1966, with bid openings and acceptance in December; with favorable working conditions it is anticipated construction will be started in December 1966, or January 1967, with completion about July or August of 1967.

Boulder Beach Visitor Facilities

Question. I also note in your justifications that in addition to the sum of $677,800 for the Boulder Beach water system, you also propose to spend an additional $375,000 at this location. Please describe to the committee what work will be done.

Answer. The Boulder Beach visitor center is programed for construction during the 1966 fiscal year. Additional funds are needed to complete the utilities, and to surface an access road and parking for this structure. Funds already available will provide for a new 300-site campground, but additional utility funds are needed to serve the new comfort stations in this new campground, and for irrigation to allow planting and shade development in this desert location. Funds for additional campground roads and parking spurs are also needed.

Callville Bay Visitor Facilities

Question. Relative to Callville Bay at Lake Mead, I note you are requesting a total of $544,000 for this area. Please give the committee a brief description of what work is contemplated.

Answer. The Service has started developments at Callville Bay, including an access road and boat launching ramps. A great deal of visitor use is expected here, and it is expected that public needs will be met largely through private concessions operations. In conformity with past practice and policy, the Service will provide the basic utility systems, roads, and parking areas to serve the buildings and other facilities provided by the concessioner. The estimates provide $460,000 for this purpose. The Service will also provide camping and picnicking facilities here and $84,000 is included in the 1967 estimates for the purpose of grading and filling of a suitable site. It is planned that future year programs will provide the equipment, plantings, and other developments for this campground.

Cottonwood Cove and Callville Bay Concessions

Question. I should like to know the status of negotiations with prospective concessionaires at Cottonwood Cove and at Callville Bay. Relative to Cottonwood Cove, I am informed that a problem has arisen relative to long-term leases so that those who are awarded the concession can secure long-term financing. Please comment on this problem.

Answer. The contract for concession operations at Cottonwood Cove covered the period July 1, 1954, through December 31, 1964. Because of the concessions policy matters under consideration by committees of Congress, we were unable to proceed with long-term contracts at the expiration of that contract. Therefore, the contract was extended through December 31, 1965, and a proposed extension through December 31, 1966, is presently pending before Congress. Our field officials have indicated that the concessioner wishes to undertake a substantial building program and desires a long-term contract in order to obtain financing. The field has been advised that before action can be taken on such a contract, in view of the President's request upon the signing of Public Law 89-249 that concession authorizations be limited to terms of 1 year whenever practicable, the concessioner should submit an application setting forth the details of the proposed

program, with estimated costs and dates for starting and completion, and the term desired for consideration in the light of the President's request.

A prospectus was issued in May 1965 for the construction and operation of concession facilities in the Callville Bay area of Lake Mead National Recreation Area, as a result of which seven offers were received. That submitted by L. M. Enterprises, Inc., was considered to be the best, and negotiations have been undertaken with that group on the terms of a long-term contract. The building program is to be started within 60 days after notification of the completion of utilities installation by the National Park Service, and to be completed within 3 years after that date. The construction program calls for a 50-slip boat dock with sales facilities for gasoline for boats, and marine and fishing supplies; rental boats; a 24-unit motel; a 50-unit trailer village; store building, with dining room, office, and kitchen; boat storage area, and shower-laundry facilities for campground visitors.

Campground at Echo Bay, Nev.

Question. I note in your justifications that you are requesting a total of $156,700 for Echo Bay. Please give the committee a brief description of what work is contemplated.

Answer. At Echo Bay, Nev., funds provided in 1966 for a 120-site campground have been used for grading and earth borrow as the best available campground site is underlain by rock. Additional campground funds ($48,000) are requested in 1967 for installing irrigation facilities, planting, site delineation, and for installation of campground equipment; for construction of paved campground roads ($76,900). The concessioner at Echo Bay has completed a $1 million supermarket, and a parking area will be constructed for this store under Service policy ($31,800). The foregoing totals $156,700.

Question Submitted by Senator Mundt

Damage Caused by 1964 Range Fire in Wind Cave National Park

Question. In your justifications, on page NP51, you talk about 3,500 acres of grassland in Wind Cave National Park that was revegetated. I wonder if you could provide to my office an outline of just what damage the 1964 range fire caused and what specific steps you took to correct the damage?

Answer. This man-caused fire started in Wind Cave National Park on September 2, 1964. It burned a total of 13,524 acres, 5,468 acres of which were on Federal lands within the boundaries of Wind Cave National Park. The other 8,056 acres were on State and private lands outside the park.

In addition to loss of grass, brush and forests, developments such as fences, corrals and haystacks were destroyed on private lands. Four different ranches were involved. Two of the ranchers estimated losses at approximately $20,000. The estimated dollar loss at the other ranches is not known. Those who made inquiry regarding reimbursement for losses caused by the fire were advised to submit their claims in accordance with the Tort Claims Act.

Approximately 3,500 acres of the burned area in the park was aerially seeded. Favorable weather following the planting resulted in good germination and a lush cover of grass. This work was accomplished under the soil and moisture conservation program. In addition, the natural recovery of range plants has been excellent.

The fire prevention program has been stepped up at Wind Cave National Park by wider use of fire prevention signs, increased patrol activity and increased use of news releases and radio and television coverage during periods of high fire danger. Fire hazard reduction is brought about by the mowing of road shoulders, strip burning and the use of soil sterilant to reduce roadside vegetation.

Excellent cooperation was received during the suppression of this fire by the U.S. Forest Service, State forestry service, Custer State Park, volunteer fire departments from adjacent towns, and other local residents.

Measured Drawing Projects and Photo Data Projects in South Dakota

Question. On page NP 67 and 68 of your justifications you talk about four measured drawing projects and eight photo data projects in South Dakota. Just where are these projects located? Include a narrative explanation of what was done.

Answer. These projects were at three locations, Cheyenne River Agency in Dewey County, Fort Bennett in Hughes County, and the vicinity of Pierre in Hughes County.

The four measured drawing projects were as follows:

	Drawings
Chapel at St. John's Episcopal Mission, Cheyenne River Agency	4
Rectory at same mission and location	4
Fort Bennett	1
Oahe Congregational Mission near Pierre	3

The eight photo-data projects were as follows:

	Photos
Chapel, St. John's Episcopal Mission Cheyenne River Agency	5
Rectory, same mission and location	7
Overall mission	10
Tombstone of William Welsh	1
Old blacksmith shop, Fort Bennett	4
Barracks	2
Overall fort site	1
Oahe Congregational Mission near Pierre	3

These materials are on file in the HABS archive in the Library of Congress. The measured drawings were prepared by architectural students under the supervision of an architecture professor, like the students, a summer employee of the National Park Service. The overall supervision was provided by the chief historical architect, western office of design and construction, National Park Service, in San Francisco. The Service's Historic American Buildings Survey Manual was used, stating the standards the drawings, photographs, and data pages must meet before being admitted to the National Archives. The photographs were taken by the Service's official photographer.

VISITOR CENTER AT JEWEL CAVE

Question. Do you have adequate funds in this budget for the development work at Jewel Cave? Please give us a rundown of work you expect to accomplish during fiscal year 1967.

Answer. The $873,800 in the 1967 development estimates is adequate to meet scheduled needs. The estimate will provide a new cave visitor center, estimated to cost $268,500, which will be the focal point in the development which has resulted from the discovery of new cave sections; a duplex residence, eight units of seasonal employee housing and a utility building are included at an estimated cost of $236,500; an elevator installation estimated at $247,200; and lighting, trails, and stairways estimated to require $121,600. These facilities will permit continuance of development started with 1965 and 1966 funds at the new caverns site. These new caverns, explored for a distance of about 10 miles, are far superior to those previously exhibited to the public.

GRASSLANDS NATIONAL PARK

Question. What is the current status of the proposal to establish a Grasslands National Park? You will recall that we have had considerable correspondence about the possibility of establishing this park in South Dakota.

Answer. For many years the Department of the Interior has been interested in preserving within the national park system a portion of the grasslands. Studies were made throughout the prairie and plains region.

A special study was conducted in 1965 by the National Park Service's Midwest regional office in Omaha, Nebr., of the Big Bend area between Pierre and Chamberlain, S. Dak. This investigation and earlier studies by the late Dr. F. W. Albertson and Dr. Gerald Tomanek of Fort Hayes State University, Kansas, indicated that the grasslands in this vicinity are actually a mixture of the tall grass and the mixed prairie types, and are not typical of the true prairie which has been most seriously depleted by the inroads of civilization. Examples of mixed prairie may be found at Badlands National Monument and Wind Cave National Park in South Dakota. Since a national park must contain natural features of outstanding scenic or scientific interest of significance to the entire Nation, these investigations raised serious questions as to whether or not this area would qualify for inclusion in the national park system as a major prairie park. Furthermore, it is believed the huge Big Bend Dam and Reservoir will become the major attractions in this area dominating the natural scene and creating a primary interest in development of the water-based recreation resource.

Possibilities for a Prairie National Park were eventually narrowed to a relatively few areas; and analysis of these led to a specific proposal for a Prairie

National Park in Pottawatomi County, Kans. Proposed legislation was introduced into the 87th Congress to establish such a park, but this was tabled and the Senate subcommittee requested continuing studies. Field investigations of areas which might be suitable for inclusion in the national park system indicate that the only remaining relatively undeveloped segments of true prairie are in the Flint Hills region of Kansas and Oklahoma. The latest studies culminated in a study report "The Living Prairie" dated June 1965 which is now undergoing review in the Washington office.

The National Park Service has also initiated studies of a proposed Prairie-Great Plains Tourway extending some 1,400 miles from Tulsa, Okla., to the North Dakota-Montana border. The tourway is thought of as a combination of scenic roads and parkways, including a Sioux-Badlands National Parkway in South Dakota from Rosebud to the vicinity of Rapid City. These studies are in a preliminary stage.

Great Falls Park, Va.

Question. You will recall that in last year's hearings we discussed Great Falls Park, Va. The discussion is on page 460 and 461 of last year's hearings. Can you provide us with a report of progress made in developing this park?

ACQUISITION OF LAND

Answer. Authorization to acquire the 783 acres of land, which have been leased from the Potomac Electric Power Co., has been granted in Public Law 89-255.

The law authorizes the acquisition of the Great Falls, Va., land in exchange for federally owned land in Prince George's County, Md., known as the Blue Ponds area, with any difference to be made up from donated or appropriated funds. Appropriations may not exceed $1 million.

In accordance with section 5 of the act, a cooperative agreement has been entered into, with the Fairfax County Park Authority, under which they have agreed to execute a deed conveying a certain 16 acres of land to the United States and permitting them to operate public parking facilities and collect fees for such service.

The deed has been executed and is to be held in escrow and delivered at such time as the authority shall have collected the sum of $600,000 from the users of the parking facilities, or at the expiration of 20 years from the date of acceptance of the deed, whichever shall occur first, at which time all rights of the authority in connection with the operation of the parking facilities shall cease.

DEVELOPMENT OF FACILITIES

Picnic areas, including comfort station facilities, have been completed.

Construction of parking areas for 477 cars is scheduled for completion June 1, 1966.

A visitor center, including concessioner facilities, is being designed and will be advertised in May 1966. The construction of this facility should be completed before the 1967 visitor season.

Funds are included in the 1967 budget for the development of trails.

Badlands National Monument Land Appraisal

Question. Recently I have had correspondence with you concerning my constituent John R. Richardson who owns land in the Badlands National Monument. I received an answer signed by Jackson Price (code L1425-SLR). I wonder if you could provide us with a figure as to what you feel it would cost to purchase the 7-acre tract of land owned by Mr. Richardson?

Answer. The National Park Service has not secured an appraisal of Mr. Richardson's property, because his asking price has been considered to be high. However, based on acquisition prices paid for other property in the area, it is believed that a reasonable price for the property would not exceed $1,000 for the 7 acres involved.

SUBCOMMITTEE RECESS

Chairman HAYDEN. We thank you for your appearance.

We will recess until 10 a.m. tomorrow, Friday, when we shall take up the Bureau of Outdoor Recreation.

(Whereupon, at 11:40 a.m., Thursday, February 24, 1966, the subcommittee was recessed, to be reconvened at 10 a.m. Friday, February 25, 1966.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

FRIDAY, FEBRUARY 25, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senators Bible and Byrd.

DEPARTMENT OF THE INTERIOR

LEWIS AND CLARK TRAIL COMMISSION

STATEMENT OF EDWARD C. CRAFTS, EXECUTIVE OFFICER, ACCOMPANIED BY SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

JUSTIFICATION

Chairman HAYDEN. The subcommittee will be in order.

For fiscal year 1967 there is an appropriation proposal of $25,000 for the Lewis and Clark Trail Commission, the same as the amount appropriated in fiscal year 1966. The justification for this request will be placed in the record.

(The justification follows:)

Appropriation, 1965	0
Appropriation, 1966	$25,000
Budget estimate, 1967	25,000

The estimate of $25,000 for 1967 covers the second full fiscal year of operations of this Commission, which was established by Public Law 88-630, approved October 6, 1964.

This law established a Commission for a 5-year period to advise on and coordinate activities of agencies and individuals interested in preserving and marking as much as possible of the route followed by Lewis and Clark in 1804-06. This law supplements a resolution approved in 1963 expressing the sense of the Congress that the route traversed by these two explorers should be marked and kept available for the inspiration and enjoyment of the American people.

The House Concurrent Resolution 61 stated in part: "* * * that the route traversed by Capts. Meriwether Lewis and William Clark on their expedition of 1804-6 from St. Louis, Mo., to the Pacific Northwest should, to the greatest extent feasible, be identified, marked, and kept available for the inspiration and enjoyment of the American people. * * *"

The Commission is composed of members on behalf of the 10 States involved; four members each from the House of Representatives and the Senate; four members to be appointed by the J. N. "Ding" Darling Foundation; and the Secretaries of the Interior, Agriculture, Defense, Health, Education, and Welfare and

Commerce, or their designated representatives. The Director, Bureau of Outdoor Recreation was designated to serve on the Commission as the representative of the Secretary of the Interior.

The members of the Commission shall serve without compensation; however, upon approval of the Chairman, they shall be entitled to reimbursement for travel, subsistence, and other necessary expenses incurred in the performance of their duties as members of the Commission.

The second meeting of the Commission was held in the early fall of 1965. The Commission considered actions to be taken to have the trail marked by the States and to improve the recreation opportunities and water quality along the trail. Also, consideration was given to means of advancing public awareness and appreciation of the historic significance and vast resources of the region.

The third meeting of the Commission wil be held in February of 1966 at which time reports will be presented from the States and Federal agencies concerning activities planned or actions taken to implement the trail program.

The estimate for 1966 provides for a portion of the salary and expenses of a staff assistant covering services for the Commission and for reimbursable expenses of the members in the continuation of their work in furthering the objectives set forth in House Concurrent Resolution 61.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967
Obligations by objects:			
11.1 Personnel compensation		$7,932	$8,262
12.0 Personnel benefits		595	620
21.0 Travel and transportation of persons		11,473	13,518
23.0 Rent, communications, an.. utilities		1,000	1,000
24.0 Printing and reproduction		1,000	300
25.2 Services of other agencies		1,250	1,000
26.0 Supplies and materials		750	300
31.0 Equipment		1,000	
Total obligations		25,000	25,000

PREPARED STATEMENT

Chairman HAYDEN. Mr. Crafts, would you please present a statement indicating the activities of the Commisison during the past fiscal year and also its plans for the coming fiscal year?

Mr. CRAFTS. Yes, Senator Hayden.

I have a brief statement that I will insert in the record at this point.

(The statement follows:)

The $25,000 requested for fiscal year 1967 will provide for the second full year of operation of this Commission, which was established by the Congress for a 5-year period.

The purpose of the Commission is to advise and coordinate activities of Federal agencies, States, and others interested in preserving, marking, and making available for public enjoyment as much as possible of the route followed by Lewis and Clark in 1804–06.

The Commission has held three meetings since it was authorized. At the second meeting, in September of 1965, the Bureau of Outdoor Recreation presented to the Commission a report entitled, "The Lewis and Clark Trail, A Proposal for Development." The Commission adopted 13 resolutions to implement the program proposed in the report.

A third meeting was held by the Commission in the middle of February 1966. At this meeting the Commission considered reports from each State along the trail and from certain Federal agencies concerning activities planned or accomplishments in implementing trail recommendations. The Commission also considered a preliminary outline of a first report which will be made to the President and the Congress, as required by the authorizing act, Public Law, 88–630.

COMMISSION COMPOSITION, ACTIVITIES, AND OBJECTIVES

Mr. CRAFTS. I might briefly say that the Commission has recently completed the first year of its 5-year life. It is a rather large Commission established by special act of Congress, made up of the Governors, or their designated representatives, of the 10 or 11 States involved, 5 Federal departments, 4 members of the "Ding" Darling Foundation, and 8 Members of Congress.

The Commission has met three times, first in Washington, second in St. Louis, the beginning of the Lewis and Clark Trail, and recently concluded its third meeting in Portland, Oreg., the terminus of the trail.

The Commission's objectives are to preserve the true Lewis and Clark Trail, to advance conservation objectives in this area, and to obtain recognition of the significance of this expedition which in effect opened the Louisiana Purchase and the Oregon Territory to settlement and trade. It also has a very specific responsibility to report to the President, to the Congress, to the States involved, with recommendations for action to commemorate the trail.

Under the act the first report of the Commission is required next fall and the final report at the end of its life in 5 years. It is a promotional commission. It is a commission to make recommendations for States and local governments to take leadership in taking actions to commemorate the trail. It has adopted an official symbol.

Chairman HAYDEN. How many States are involved?

Mr. CRAFTS. I think there are 10 States and there is a bill pending in Congress now to add Illinois because the expedition was headquartered its first year on the Illinois side of the Mississippi River.

These are about the actions. It meets twice a year. There is quite active competition by the States to have the Commission meet in their States—the next meeting is scheduled in July in Billings, Mont. There is a good bit of publicity attached to the Commission's meeting and attention to the trail and attention to conservation objectives along the trail. This is one of the objectives contained in the act, so I would say the Commission is making progress in furthering what the act directed it to do.

It has to come up with fairly specific recommendations to the President and the Congress and it is aware of this and it is moving in this direction.

FRIDAY, FEBRUARY 25, 1966.

BUREAU OF OUTDOOR RECREATION

SALARIES AND EXPENSES

STATEMENTS OF EDWARD C. CRAFTS, DIRECTOR; LAWRENCE N. STEVENS, ASSOCIATE DIRECTOR; JOHN F. SHANKLIN, ASSISTANT DIRECTOR; A. HEATON UNDERHILL, ASSISTANT DIRECTOR; DANIEL M. OGDEN, JR., ASSISTANT DIRECTOR; HARRY W. RICE, ASSISTANT DIRECTOR; ALBERT F. TITLOW, BUDGET OFFICER, BUREAU OF OUTDOOR RECREATION; JACKSON E. PRICE, ASSISTANT DIRECTOR, NATIONAL PARK SERVICE; M. M. NELSON, DEPUTY CHIEF, FOREST SERVICE; ABRAM V. TUNISON, DEPUTY DIRECTOR, BUREAU OF SPORT FISHERIES AND WILDLIFE; SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

JUSTIFICATION

Chairman HAYDEN. The Bureau of Outdoor Recreation proposes for fiscal year 1967 an appropriation of $3,910,000 for necessary salaries and expenses. This is $512,000 more than the appropriation of last year, although there will be a supplemental appropriation estimate for fiscal year 1966 in the amount of $68,000. The justification will be printed in the record.

(The justification follows:)

The budget for fiscal year 1967 covers the fifth full year of operations of the Bureau of Outdoor Recreation. To finance its programs for that year, other than those authorized by Public Law 88-578 which are set forth in a separate section, the Bureau is requesting $3,910,000, an increase of $446,003 over the amount for fiscal year 1966. The increase will be used mainly to strengthen the Bureau's programs concerning water resource projects and special area studies.

The funds requested for fiscal year 1967 are compared with fiscal year 1966 amounts by subactivities:

Subactivity	Fiscal years		Increase or decrease (−)
	1966	1967	
Nationwide planning	$1,578,000	$1,587,000	$9,000
Water resources and special area studies	451,000	906,000	455,000
Research and education	84,000	103,000	19,000
Federal coordination	832,997	793,000	−39,997
Technical assistance	518,000	521,000	3,000
Total	3,463,997	3,910,000	446,003

Funds requested for fiscal year 1967 are needed to—

(1) Continue the development of a nationwide outdoor recreation plan that has a statutory completion date of 1968.

(2) Conduct studies concerning the recreation potential of water resource project areas and major river basins—an increase of $331,000 is requested to carry out added responsibilities under the Federal Water Project Recreation Act approved July 9, 1965 (Public Law 89–72).

(3) Conduct studies of "special areas" of the Nation that have regional or national recreaton significance—an increase of $124,000 is requested for this work mainly to review the recreation potential of military bases which have closed or are scheduled for closing.

(4) Continue a small research and education program which is directed mainly to providing data for the nationwide outdoor recreation plan.

(5) Continue efforts to achieve coordination of outdoor recreation programs of the Federal Government through reviews of programs, budgets, and legislative proposals, as well as by carrying out special reviews and studies of problems or practices of common concern to the Federal agencies.

(6) Provide technical advice and assistance to States, local governments, and the private sector on resolving problems related to outdoor recreation.

These programs individually and collectively contribute greatly to meeting the needs of the American people for outdoor recreation opportunities. That the needs are great is evidenced by the fact that visitations to Federal recreation areas exceeded 550 million during 1964 compared to about 150 million in 1952, whereas the increase in recreation resources has failed to keep pace. The result is overcrowded conditions in most areas throughout the country.

The Bureau is requesting funds for two new programs which impose a heavy workload on it but are important to the outdoor recreation effort. These are:

(*a*) Studies and reports required under the Federal Water Project Recreation Act, approved July 9, 1965. Under this act, the Bureau is required to assess the recreation potential on Corps of Engineers and Bureau of Reclamation water projects, and to insure that such projects conform to the statewide outdoor recreation plans developed pursuant to section 5(d) of the Land and Water Conservation Fund Act of 1965.

(*b*) Review of military bases closed or scheduled for closing to evaluate the recreation potential of these bases. The President has indicated a definite interest in this program, and it is the Bureau's responsibility to insure that adequate reviews are made.

With exception of the above two programs and the Recreation Advisory Council services, other Bureau programs are being conducted in fiscal year 1967 at approximately the current level of funding. Additional funds are being requested for the Recreational Advisory Council services in order to provide the staff needed to carry out the many assignments given to the Bureau by the Council. With the President's interest in natural beauty, the Council will be giving increased attention to implementing this program throughout the Federal Government.

Significant accomplishments have been made by the Bureau within the past year and others will have been affected prior to the end of the current fiscal year. In addition to the preparation of necessary guideline materials, operating procedures, and other necessary tasks the Bureau has:

(*a*) Established plans and procedures needed to develop the nationwide outdoor recreation plan.

(*b*) Completed an inventory of the recreation areas and facilities of Federal, State, and local governments. Tabulated much of the information and made it available to States for use in developing statewide plans.

(*c*) Completed an inventory of the recreation resources of the private sector. This will be the first time data of this kind has been available.

(*d*) Has underway a study being conducted by the Bureau of the Census on public preferences for types of outdoor recreation activities.

(*e*) Participated in studies of about 20 major river basins to determine recreation potential of these basins and in about 76 studies of individual water projects for similar purposes. The Federal Water Project Recreation Act increases substantially the Bureau's workload on individual projects.

(*f*) Screened about 800 military bases scheduled for closing to determine their recreation potential. Of these, about 132 areas involving 580,000 acres appear to have recreation value. Many of these will have been studied more extensively before the end of fiscal year 1966.

(*g*) Prepared an award-winning movie on "Wild Rivers." This movie which is in color, lasts about 27 minutes and has impressive scenes of these beautiful areas. The Bureau also developed proposed legislation and supporting materials to establish a National Wild Rivers System.

(*h*) Cooperated in a study of the recreation opportunities and needs of the New York City area.

(*i*) Conducted a study of the Lewis and Clark trail in cooperation with several other Federal agencies, concerned States, and local agencies. Prepared and released a comprehensive report on the study.

(*j*) Participated extensively in studies, preparation of reports and in many instances proposed legislation relative to many national areas having recreation significance, such as: Assateague Island, Maryland-Virginia; Delaware Water Gap (Tocks Island), Pennsylvania-New Jersey; Whiskeytown-Shasta-Trinity area, California; North Cascades, Washington; Redwoods area, California; Allagash, Maine.

(*k*) Established, in cooperation with the Department's library, a retrieval system whereby technical data concerning outdoor recreation can be retrieved quickly for planning and other purposes. Such information received from other countries will be incorporated in this system as a part of this program.

(*l*) Prepared a report on a survey of Federal agencies to learn the extent and nature of research relating to outdoor recreation.

(*m*) Prepared a report entitled "Analysis of Federal Allocation to: Outdoor Recreation Land Acquisition and Development/Construction, Fiscal Year 1965, and Outdoor Recreation Loans and Grants, Fiscal Year 1964." This report compares regional allocation patterns of the Federal recreation investment with regional needs.

(*n*) Prepared at the request of the Recreation Advisory Council a policy statement on "Guides for Federal Outdoor Recreation Investment."

(*o*) Prepared a report on planning efforts of 17 Federal agencies concerned with outdoor recreation and set forth recomendations for certain improvements in these efforts.

(*p*) Will complete before June 30, 1966, an inventory of Federal programs involved in outdoor recreation.

(*q*) Substantially completed a study on Federal credit programs for outdoor recreation which identifies the availability of Federal credit to private sector.

(*r*) Developed substantial materials for use of the Recreation Advisory Council in conjunction with the White House Conference on Natural Beauty.

(*s*) Under the direction of the Recreation Advisory Council, the following studies are expected to be completed before June 30: scenic roads and parkways; role of the private sector; land management responsibilities of Federal agencies at land and water resource projects; coordination of highway location with recreation and conservation areas plans.

(*t*) Conducted studies and made reports containing recommendations to General Services Administration concerning the transfer of 29 surplus Federal properties to States and other agencies for park and recreational purposes.

(*u*) Made onsite inspections and prepared reports on 173 properties transferred to State and local agencies for recreation purposes and reviewed 139 compliance reports submitted by States and local governments. Also involved in 22 complex land cases some of which concerned the preparation of exchange deed or release documents.

(*v*) Reviewed 90 applications from State and local agencies to acquire public domain lands for park and recreation areas. These lands are under the administration of the Bureau of Land Management and involve approximately 30,000 acres.

Appropriation, 1965	$2,780,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration (building rent)	−31,615
Total available, 1965	2,748,385
Appropriation, 1966	3,398,000
Pay cost supplemental	68,000
Total appropriation, 1966	3,466,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration (building rent)	−2,003
Total available, 1966	3,463,997

Summary of increases and decreases, 1967:

Planning and research:	
To provide for expansion of work in connection with studies and reports as required by the Federal Water Project Recreation Act (Public Law 89-72) and for increased workload in connection with studies and reports of "special areas," particularly with respect to excess military lands	$450,000
To strengthen the Bureau's capability in conducting studies on methods for deriving information for the development of the 1st nationwide outdoor recreation plan and for other necessary research work	18,000
To provide for the full-year cost of pay increases for 1966 positions	15,000
Total, planning and research	+483,000
Federal coordination:	
To strengthen 1 of the Bureau's very important coordination functions in the review and analysis of existing and proposed legislation relating to outdoor recreation	11,000
Expansion of Recreation Advisory Council services, particularly with respect to interagency efforts to implement proposals in the national beauty message of the President	118,000
A decrease in Federal program reviews at the regional level	−172,997
To provide for full-year cost of pay increases for 1966 positions	4,000
Total, Federal coordination	−39,997
Technical assistance: To provide for full-year cost of pay increases for 1966 positions	+3,000
Net increase, 1967	+446,003
Budget estimate, 1967	3,910,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers [1]	Amount available
1. Planning and research	$1,402,009	$2,075,000	$38,000		$2,113,000
2. Federal coordination	813,788	816,000	19,000	−$2,003	832,997
3. Technical assistance	506,037	507,000	11,000		518,000
Unobligated balance lapsing	26,551				
Total	2,748,385	3,398,000	68,000	−2,003	3,463,997

[1] Represents transfers to General Services Administration unless otherwise footnoted.

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−) 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Planning and research	$1,402,009	$2,113,000	$2,596,000	+$483,000	+$15,000	+$468,000
2. Federal coordination	813,788	832,997	793,000	−39,997	+4,000	−43,997
3. Technical assistance	506,037	518,000	521,000	+3,000	+3,000	
Unobligated balance lapsing	26,551					
Total	2,748,385	3,463,997	3,910,000	+446,003	+22,000	+424,003

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. Planning and research

Subactivity	Amount available, 1965	Amount available, 1966	Estimate, 1967	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(*a*) Nationwide planning	$995,481	$1,578,000	$1,587,000	+$9,000	+$9,000	
(*b*) Water resources and special area studies	334,100	451,000	906,000	+455,000	+5,000	+$450,000
(*c*) Research and education	72,428	84,000	103,000	+19,000	+1,000	+18,000
Total	1,402,009	2,113,000	2,596,000	+483,000	+15,000	+468,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

(a) Nationwide planning

The estimate is $1,587,000, an increase of $9,000 over 1966, which is for pay costs.

Plan of work.—In accordance with Public Law 88–29, the Bureau is developing a nationwide outdoor recreation plan to meet the outdoor recreation needs of this Nation. Funds requested for 1967 will aid materially in bringing this plan close to completion.

The nationwide outdoor recreation plan is intended fundamentally as a guide to sound public policy in outdoor recreation to insure that the variety of recreation opportunities desired by the American people will be available in the general locations they desire and in sufficient quantity and quality to serve them adequately within the range of available resources. Specifically, the plan will guide the outdoor recreation programs of other Federal agencies which are required by the Organic Act of the Bureau of Outdoor Recreation to carry out their responsibilities in general conformance with the nationwide plan. The plan also will provide a framework for regional, State, local, and private outdoor recreation programs. To accomplish these purposes it will develop recommendations for action programs for Federal, State, and local governments and for private enterprise to meet current and future identified outdoor recreation needs.

The need for a nationwide outdoor recreation plan is well stated in House Report 160 on proposed legislation which subsequently became the Bureau's Organic Act. The Committee stressed that the success of the program—

"Must ultimately rest on sound knowledge and up-to-date information about the needs of the resources available to the American people for outdoor recreation and on the development of a truly comprehensive plan for satisfying the diverse wants of these people—wants that range all the way from snow skiing through horseback riding to fishing, swimming and walking and driving for pleasure. With a population that is growing by leaps and bounds, with ever-increasing leisuretime available to that population with the growth of financial ability both on the part of the economy as a whole and on the part of the families that comprise it to satisfy their wishes along this line, and with ever-diminishing open space in which to do so, this is a task of no small dimensions. It requires constant study and research, constant alertness to the availability of new outdoor recreation resources and to the development of those that we have, constant coordination, and constant planning and revising of plans to keep them up to date. This will be one of the major tasks of the Bureau of Outdoor Recreation for which authority is provided * * *."

The plan itself will provide an appraisal of the variety, quantity, and quality of outdoor recreation opportunities which Americans actually seek. It will attempt to project these demands into the future to the years 1980, 2000, and 2020.

The plan also will appraise the present and potential future supply of outdoor recreation resources in terms of location, variety, quantity, and quality.

The demand and supply data will then be analyzed to establish the picture of outdoor recreation needs. Based upon these findings, the plan will identify critical outdoor recreation problems and recommend actions to solve those problems.

Under the statutory requirement, the plan is to be completed by May 1968. Work on the plan is on schedule.

In fiscal year 1967 an analysis and evaluation will be made of a substantial amount of information which will have been gathered on the supply of outdoor recreation areas and facilities, the demands for outdoor recreation opportunities and the needs to meet unsatisfied demand. The data will be analyzed through automatic and other processing techniques to determine imbalances of existing supply and demand and critical problems in meeting needs. Assessments will be made of the location, quantity, and quality of imbalances on a national and regional basis. Emphasis will be placed on the availability of outdoor recreation to all income groups. Control of waste products to improve the natural environment will be considered. The need for the enjoyment of the out-of-doors by people in highly populated urban areas will be determined. Evaluation will be made of the capabilities of public and nonpublic sectors to meet needs. From these analyses will come the preliminary recommendations and action programs to be proposed in the nationwide outdoor recreation plan. A review draft of the plan is scheduled for completion by July 1, 1967.

Status of program.—Fiscal year 1965 was devoted to the development of a plan of work and orderly scheduling of actions needed to devise the plan.

Also during fiscal year 1965, major effort was devoted to the design and initiation of a comprehensive inventory of Federal, State, and county areas and facilities now available for public use and enjoyment of cities and towns on a selected basis. In addition, staff effort was required to determine other supply, demand, and needs data essential to support sound conclusions and recommendations for meeting the Nation's needs and to the design of the techniques and studies to obtain this information in a consistent and statistically sound manner. These efforts encompassed the areas and facilities being provided by the private sector, the use of such facilities by the public, the constraints faced in meeting public demands, and studies to determine public demand for present and future outdoor recreation opportunities. An agreement was consummated with the National Bureau of Standards for the development on an experimental project basis, of automatic data processing systems to be used by the Bureau for the storage and retrieval of information needed for analysis purposes.

Work during fiscal year 1966 will be devoted essentially to studies and data collection for the plan. Data is being collected to determine and project public demands for outdoor recreation opportunities. A survey of about 9,000 households is being conducted under contract by the U.S. Bureau of the Census to determine public participation in and preference for certain outdoor recreation activities. The survey will also obtain information on various factors which appear to be substantial determinants in predicting future demands. The data being collected will be analysed in comparison with the data obtained by the Outdoor Recreation Resources Review Commission in 1960 to establish trends. This is the keystone in the approach to the estimation and projection of demand for the Nation. An origin and destination study is being planned and designed to check on a sample basis the data collected by the household survey and to provide information on the extent of travel connected with the fulfillment of outdoor recreation needs.

An inventory was completed in January 1966 of the kinds and quantity of outdoor recreation areas and facilities now being provided by the private sector and to determine the problems concerning its capacity to meet additional public demands in the future. This study was performed under contract and is the first such study conducted on a nationwide basis.

Summarization, through automatic data processing techniques, is underway of the results of the inventory of recreation areas and facilities administered by Federal, State, and local governments. The development of the system and the program effort needed to store and retrieve data on approximately 40,000 areas is being carried out through the cooperation of the National Bureau of Standards.

In summary the following has been accomplished to date:

(*a*) Completed inventory of Federal, State, and county areas and facilities as well as for selected cities and towns.

(*b*) Tabulated inventory data by use of electronic equipment and transmitted this data to the States for use in statewide planning.

(*c*) Completed inventory of privately owned areas and facilities throughout the Nation. This task was performed under contract. Inventory data and reports are presently under review.

(*d*) A study on demand is underway. This will show preferences of the public for types of recreation opportunities. Field work is completed, and data are being processed by the contractor, the Bureau of the Census.

(*c*) Planning is underway in developing the format and contents of the nationwide plan.

(*b*) *Water resources and special area studies*

The estimate for 1967 is $906,000, an increase of $455,000 over 1966. The increase includes $5,000 for pay costs and $450,000 for program responsibilities.

Need for increase.—The increase requested is to provide for the expanded workload in connection with studies of water resources projects, and identifying, evaluating, and reporting on special areas with outstanding potential for meeting national outdoor recreation needs. Emphasis will be placed on reviewing military bases recently closed or scheduled for closing.

The expanded workload will occur in three activities:

(*a*) Review and evaluate the recreation potential of water resource projects. This is a new and heavy responsibility imposed on the Bureau by the Federal Water Project Recreation Act, approved July 9, 1965.

(*b*) Assess the recreation potential of military bases recently closed by the Defense Department or scheduled for closing. The President has expressed direct interest in the possibility of converting such areas to recreation use.

(*c*) Review of "special areas" throughout the Nation and assess their recreation potential. Examples of such areas are the Redwoods area in California, North Cascades in Washington, and the Nationwide System of Trails.

Plan of work.—(*a*) *Water resources.*—The Bureau has responsibility for studies of the recreation potential of selected river basins and of water resource projects of the Corps of Engineers and the Bureau of Reclamation. Such studies are designed to assure that outdoor recreation and protection of natural beauty are adequately considered in the planning of such projects. Insofar as Interior responsibilities are concerned, the studies are carried out in conformance with the memorandums of understanding between this Bureau and the National Park Service and the Bureau of Sport Fisheries and Wildlife, and with guidelines mutually agreed upon by this Bureau and the Corps of Engineers.

Under date of July 9, 1965, the President approved the Federal Water Project Recreation Act (Public Law 89–72). This act provides uniform policies with respect to recreation and fish and wildlife benefits and costs of Federal multiple-purpose water resource projects. It stipulates that in investigating and planning any Federal navigation, flood control, reclamation, hydroelectric, or multiple-purpose water resources project, full consideration shall be given to the opportunities, if any, which the project affords for outdoor recreation and for fish and wildlife enhancement. It further provides that planning with respect to the recreation potential of any project is to be coordinated with existing and planned Federal, State, or local public recreation development.

The Solicitor's Office has given its interpretation of the Bureau's responsibility for recreation planning under this act. An excerpt from the interpretation is as follows:

"Recreation uses and costs allocable thereto are now to be fully considered in all feasibility reports of projects within the purview of the act. The constructing agency will have the responsibility of incorporating in its project plan the recreation capabilities which the area possesses, in order that costs may be properly allocated to such uses. The views of the Bureau must be presented in regard thereto. In order to facilitate the work of the constructing agency in the preparation of its report, and to ascertain that an adequate recreational plan is being presented, thereby avoiding conflicts at a later stage prior to authorization, it would seem to be necessary for the Bureau to assist the constructing agency in initial preparation of its plan.

"Further, since recreation is being given great importance as a project purpose, the views of the Secretary as to the adequacy of planning for recreation will be subject to as close scrutiny by Congress as the planning for other purposes. Testimony and recommendations not based upon field experience, but only on data supplied by other agencies, would probably be unsatisfactory to the congressional committees, especially as Senator Jackson has indicated, figuring recreation benefits is 'an area of great uncertainty' and 'speculative.'"

The Bureau of Outdoor Recreation will be required to assume heavy responsibilities under this act. In general, these responsibilities will include:

1. An investigation or review of each project area to determine its recreation potential and the preparation of a report thereon.

2. A determination as to the extent to which proposed recreation developments conform to and are in accord with the appropriate State comprehensive plan developed pursuant to section 5(d) of the Land and Water Conservation Fund Act of 1965.

3. Carrying out Federal coordinating responsibilities involving interagency coordination procedures, assessing the impact of providing recreation areas at water projects upon the plans for land acquisition of Federal and State agencies financed by the land and water conservation fund, and distinguishing between Federal and non-Federal responsibilities.

The Bureau expects to participate in 167 individual project studies for the Bureau of Reclamation, the Corps of Engineers, and the Bureau of Indian Affairs; and to review 125 reports by the Bureau of Reclamation, the Corps of Engineers, and the Federal Power Commission. In addition, on a reimbursable basis, the Bureau expects to continue its participation in about 20 comprehensive river basin studies, to participate in a Public Health Service study of the Great Lakes, and Illinois River, and to continue studies on the Missouri River Basin project.

The assessment of the recreation potential at each project will impose the greatest workload on the Bureau. It is estimated that 106 projects of the Corps of Engineers and 57 projects of the Bureau of Reclamation and 4 projects of the Bureau of Indian Affairs will require study by the Bureau of Outdoor Recreation during fiscal year 1967. It will be necessary to determine the suitability of the area for recreation, the types of recreation activities indicated, the recreation demand, the lands and facilities required to meet the demand, and the costs allocable to recreation. A separate report on each project must be prepared in order to comply with section 6(a) of the act, which requires the views of the Secretary of the Interior to be included in any report covering the outdoor recreation aspects of any project or unit thereof falling within the purview of the act.

Section 6(a) requires also that the report shall indicate the extent to which proposed recreation and fish and wildlife development, related to the projects, conform to and are in accord with the State comprehensive outdoor recreation plans developed pursuant to section 5(d) of the Land and Water Conservation Fund Act. Early coordination conferences will be needed to help achieve the greatest possible correlation between Federal water resources project plans and the States comprehensive outdoor recreation plans. Criteria and procedure for this review responsibility must be developed and carried out.

In order to carry out effectively the heavy responsibilities imposed, the Bureau will need an increase in its staff of professional and clerical employees.

(*b*) *Special area studies.*—A function of increasing significance in which the Bureau will be heavily involved in 1967 is the study of special areas to determine whether they are suitable for outdoor recreation purposes, whether they should be managed for public outdoor recreation purposes and, if so, to recommend the type of development that should be undertaken and the proper agency to administer the areas.

These special studies involve areas that appear worthy of consideration as national recreation areas, as additions to the proposed wild rivers system, as part of the proposed nationwide system of trails, or in some instances, as national parks or monuments. They also involve the recreation or conservation values of excess military lands and other areas such as the proposed Hudson River Scenic Waterway. These studies are undertaken upon request from various sources, including the President, Secretary of the Interior, Recreation Advisory Council, and Members of Congress.

The workload under this program is difficult to project in a reliable manner because conditions and circumstances change rapidly. The current interest in natural beauty, conservation of military lands, and the proposed nationwide system of trails could not have been foreseen clearly a year ago, yet these items have imposed a heavy workload on the Bureau. Following are examples of the more important projects that will receive attention in fiscal year 1967: Conservation inventory of military lands, wild rivers, nationwide system of trails, national recreation area and national seashore studies, scenic roads, Allagash River, Maine, California Redwoods, Missouri River National Recreation Area, and Lewis and Clark Trail.

During 1967, work will continue on the review and evaluation for recreation or conservation purposes of military installations that are currently or soon

to be declared excess to military needs. Approximately 40 surveys are expected to be performed that year. These installations are located throughout the country and range from 2 to over 100,000 acres.

In addition, initial screening of the December 8, 1965, announcement of bases to be closed by the Department of Defense must be accomplished and is expected to require 40 additional studies, of which 20 will be carried out in fiscal year 1967.

Pending final congressional action on the various wild rivers bills, the Bureau will continue to bear major responsibilities in meeting requests of the Congress and the public for data and information. With enactment, the role of the Bureau would be to assist in carrying out those provisions in the bill that require study and consideration of additional proposals for inclusion in the proposed wild rivers system and in assuring that the wild rivers concept receives proper attention in Federal water resource planning. During 1967, it is estimated the Bureau will be involved in studies of 20 rivers or segments of rivers that have potential wild river aspects.

In his natural beauty message, the President directed the Secretary of the Interior to assess the need for a nationwide system of trails. The designation of the Bureau to coordinate necessary studies resulted in the start of the nationwide trails study during the last half of 1965. An interagency steering committee was established by the Bureau and plans developed for a nationwide study involving public and private interests at all levels.

Based on plans developed by the steering committee, a nationwide trails study is being coordinated by the Bureau in cooperation with the various Federal land management agencies, States, and private interests. This study includes an evaluation of a number of major national scenic trails, and an analysis of how the trail programs on Federal, State, or private lands nationwide might be bolstered to meet future needs, with special attention to the needs in and near metropolitan areas. The study will culminate in a report to the President recommending "* * * a cooperative program to encourage a nationwide system of trails * * *," scheduled so that legislation as required can be submitted early in the 2d session of the 89th Congress. The trails study has stimulated wide public interest and resulted in a large volume of correspondence to the Bureau.

A substantial workload is expected in 1967 relative to proposed legislation to establish a nationwide system of trails. The Bureau will have a primary role in providing the statements, reports, maps, and related data and information required by the Congress in the consideration of the legislation, in the event such legislation is considered. Enactment of a Federal trails program would necessitate further investigations to identify and plan the orderly establishment of a nationwide system of trails. The Bureau would be expected to have major responsibilities for such studies. The following trails may be proposed for authorization by the Congress: Appalachian, Continental Divide, Pacific Crest, and Potomac Heritage. In addition, investigations of other potential trails identified in the nationwide trail study may be necessary. These may include one or all of the following: Lewis and Clark Trail, Natchez Trace Trail, North Country Trail, Oregon Trail, and Santa Fe Trail.

Status of program.—There follows a listing of accomplishments effected during the past year or to be effected during the remainder of fiscal year 1966:

(1) Participated in studies of about 76 individual water projects.

(2) Completed studies on 22 rivers or segments thereof to determine their potential as wild rivers.

(3) Prepared an award winning movie on "Wild Rivers."

(4) Prepared legislation and supporting materials to establish a national wild rivers system.

(5) Cooperated in development of plans for the New York City area concerning recreation opportunities and needs.

(6) Screened about 800 military bases scheduled for closing to determine their recreation potential—of these about 132 areas involving 580,000 acres appear to have recreation value. Many of these will have been studied more extensively before the end of the fiscal year 1966.

(7) Conducted a study of the Lewis and Clark Trail in cooperation with several other Federal agencies, the concerned States and local interests. Prepared and released a comprehensive report on the study.

(8) Participated in a number of special area studies. Some of these studies and the actions which have been taken based on recommendations and coordinating efforts of the Bureau are shown:

Area	*Action*
Assateague Island, Md.-Va.	Legislation establishing Assateague Island as a National Seashore was enacted September 1965 (Public Law 89–195).
Delaware Water Gap (Tocks Island), Pa.-N.J.	Legislation establishing the Delaware Water Gap National Recreation Area was enacted September 1965 (Public Law 89–195).
Whiskeytown-Shasta-Trinity Recreation Area, Calif.	Legislation establishing the Whiskeytown-Shasta-Trinity National Recreation Area was enacted November 8, 1965 (Public Law 89–336).
North Cascades, Wash.	A report on the results of the 2-year study of the federally owned lands in the North Cascades region of Washington was released in early January 1966. The report includes recommendations for the realinement of Federal agency management responsibilities in this region.
Apostle Islands, Wis.	Field studies evaluating the potential of the area as a possible national lakeshore were completed and a report summarizing the recommendations of the field committee was published in September 1965. Bills have been introduced in both the Senate and the House.
Redwoods Area, Calif.; Oregon Dunes, Oreg.; Big Horn Canyon, Mont.-Wyo.; Flaming Gorge Area, Utah-Wyo.; Sleeping Bear Dunes, Mich.; Indiana Dunes, Ind.; Pictured Rocks Area, Mich.; Cape Lookout Area, N.C.; Mount Rogers Area, Va.; Guadalupe Mountains, Tex.; and Sawtooth Mountains, Idaho.	Continuing attention by the Bureau will be needed pending action on bills presently before the Congress. Most of these areas were included in the President's message on natural beauty.

(c) *Research and education*

The estimate for 1967 is $103,000, an increase of $19,000 over 1966. The increase includes $1,000 for pay costs and $18,000 for program responsibilities.

Need for increase.—The small increase requested is to strengthen the Bureau's capability in conducting studies on methods for deriving information for the development of the first nationwide outdoor recreation plan; to enlarge and improve the recreation literature and technical information retrieval program of the Bureau; to develop more effective methods for evaluation of recreation benefits and costs at proposed Federal multiple-purpose water resource projects; and to further stimulate and guide recreation research at colleges and universities.

Program of work.—Continuation of the types of programs referred to above will be carried into fiscal year 1967, with added emphasis on studies to ascertain the impact of recreation developments on regional and local economics; to determine the value of water and water impoundments for outdoor recreation purposes; to predict future trends in individual and group participation in various recreation activities; to derive information on the optimum use of areas not yet fully developed for outdoor recreation activities, and on studies which will provide reliable ways of establishing valid standards and criteria for translating demand into kinds and acreages of recreation lands now and in the future.

The Bureau is also developing plans for compiling and publishing statistical information on several aspects of State and local recreation programs, and survey data on private recreation enterprises. These data are now being collected for use in the development of the nationwide outdoor recreation plan, and it is planned to make this useful information available to other Federal agencies, and to States as well. The State information would continue a report series started

in the 1930's by the National Park Service, and urgently needed and much sought after by planners. State legislators, and recreation officials.

The Bureau will cosponsor with Utah State University a 3-day national conference on policy issues in outdoor recreation to be held in September 1966 at Logan, Utah. This will be attended by an estimated 250 national leaders and top-level administrators in the recreation field. Important issues such as financing recreation; user charges; allocation of effort among public agencies; and economic, political, and legal problems of outdoor recreation, will be discussed.

Status of program.—Research efforts have been and will continue to be devoted to providing assistance to the Bureau in the development and perfecting of demand methodology to assess present and projected future requirements for outdoor recreation areas and facilities. The work involves a review and evaluation of current demand projection practices; outline of a specific technique for adjusting local participation rates and application of the technique nationally.

A report on the survey of Federal agencies to learn the extent and nature of research related to outdoor recreation is now in final manuscript stage. The report shows: "who is doing what"; "where current emphasis is"; "where gaps exist"; "identification of overlaps"; and "how the Bureau of Outdoor Recreation might be of greatest assistance in research for outdoor recreation."

A report is being prepared in recreation research. This reviews the contributions being made to outdoor recreation research by various fields of science and by various agencies and institutions, leading to some major conclusions and proposals for direction of effort by the Bureau of Outdoor Recreation.

Plans started in 1965 for storage and retrieval of scientific and technical literature in the field of outdoor recreation have progressed to the point where the implementation of this program has begun in cooperation with the Department's library service. The great diversity of unassembled sources and subjects of study in outdoor recreation led to a recommendation by Outdoor Recreation Resources Review Commission that "one of the principal functions of the proposed Bureau of Outdoor Recreation should be to act as a central clearinghouse of information on outdoor recreation." This program will provide a methodical organization of this type of literature and a single complete bibliographic source of reference will be available to recreation planners, administrators, researchers, and coordinators.

The extension of this program to include the significant literature of other English-speaking countries is being planned with Canadian officials. This will result in greater efficiency and depth of coverage at less cost to the Bureau.

2. Federal coordination

Activity	Amount available 1965	Amount available 1966	Estimate, 1967	Increase (+) or decrease (−) 1967 compared with 1966		
				Total	Pay cost [1]	Program
Federal coordination	$813,788	$832,997	$793,000	−$39,997	+$4,000	−$43,997

[1] To provide for increased pay costs for fiscal year 1966 positions.

2. Federal coordination

The estimate for 1967 is $793,000, a net decrease of $39,997 under 1966. The net decrease includes $4,000 additional for pay costs and a decrease of $43,997 in programs. The net decrease consists of the following:

(1) An increase of $4,000 for increased pay costs.

(2) An increase of $11,000 to strengthen one of the Bureau's very important coordination functions in the review and analysis of existing and proposed legislation relating to outdoor recreation.

(3) An increase in Recreation Advisory Council services of $118,000 to meet anticipated increased workload, particularly with respect to interagency efforts to implement proposals in the "Natural Beauty Message" of the President.

(4) A decrease of $172,997 in Federal program reviews at the regional levels since the major studies planned will be coordinated with agency headquarters in Washington.

Plan of work.—The primary purpose of the Bureau's Federal coordination program is to promote a unified, comprehensive effort in the Federal Government's

activities in outdoor recreation which will, to the greatest extent possible, aid in alleviating the Nation's needs, both efficiently and economically. In this effort the Bureau is attempting to analyze, report on, and make recommendations with respect to all efforts of the Federal Government in this area; a task that has heretofore not been done. Overlaps, duplications, and gaps in Federal outdoor recreation programs will be identified, and recommendations will be made for necessary adjustments to promote a more coordinated and effective effort in the outdoor recreation field. Studies made of Federal programs contribute directly to the Bureau's efforts in developing the nationwide outdoor recreation plan. These studies will provide data for decisionmaking and will influence recommendations contained in the plan.

The Bureau has identified six major segments in outdoor recreation programs of the Federal Government. It is believed the initial study scheduled for completion by March 1967 of these segments will lead to more effective Federal effort in this area. These six categories are as follows: 1. Planning; 2. land acquisition and facility development; 3. research; 4. technical and financial assistance; 5. management and operations; and 6. revenues.

The Federal program review effort will continue studies already underway and will initiate studies on as many of the above numbered items as possible. Fiscal year 1969 preliminary budgets of certain Federal agencies will be analyzed, and studies of previous budgets and the amounts and effects of appropriations for outdoor recreation will be updated and evaluated.

The Bureau of Outdoor Recreation has the principal responsibility for furnishing staff services and assistance to the Recreation Advisory Council. The Bureau normally provides the leadership in conducting various studies on outdoor recreation problems for consideration by the Council.

Recreation Advisory Council studies undertaken which are not completed in 1966 will be carried into 1967. In addition, it is anticipated the Bureau will be involved, under the auspices of the Council, in the conduct of studies to develop policies and/or guidelines, review proposals, and coordinate activities in the following areas:

1. Recommendations of the White House Conference on Natural Beauty.
2. Implementation of natural beauty proposals.
3. Coordination of interagency programs for wild rivers and wilderness areas.
4. Meeting the outdoor recreation needs of urban areas.
5. Recreation on private lands.
6. Coordination of highway programs with recreation development.
7. The protection and appropriate management of scenic areas, natural wonders, primitive areas, historic sites, and recreation areas of national significance to preserve their natural beauty and recreation values.

In addition to the above there are other items which have been proposed for consideration by the Recreation Advisory Council, and it is expected that others will be added from time to time.

The Recreation Advisory Council has increased its effectiveness during the past year and is giving greater consideration to many pressing outdoor recreation problems. It is giving specific attention to implementing the President's natural beauty program, and action is underway to incorporate the words "natural beauty" in the title of the Council.

Because of the broad scope of the Bureau's functions in the field of outdoor recreation and conservation generally, the relationship to other Federal agencies in this field, and the cooperative work with the States, the Bureau is necessarily concerned with a large segment of legislative proposals that originate in the Congress or that are suggested by the executive agencies. Also, the increased activity in outdoor recreation and related legislation during the past several years is expected to continue during fiscal year 1967, with more bills being introduced in the Congress.

The Bureau provides an impartial review and analysis of proposed legislation in the outdoor recreation field, making recommendations to the Secretary, and in some cases, to the Bureau of the Budget regarding the effect of such legislation, as to whether it should be supported and suggesting amendments if considered appropriate.

The legislative proposals include a wide range of conservation and resource development subjects and usually affect existing laws and administrative policy. A considerable amount of staff work is required to analyze these proposals in laws and programs.

Status of program.—During 1965 a study was conducted of certain aspects of outdoor recreation programs and budgets of 13 Federal agencies. A report of

this study compared regional allocation patterns of the Federal recreation investment studies with regional needs for recreation opportunities. The report included recommendations for adjustments in future budgets for outdoor recreation programs. This report was entitled "Analysis of Federal Allocations To: Outdoor Recreation Land Acquisition and Development/Construction, Fiscal Year 1965, and Outdoor Recreation Loans and Grants, Fiscal Year 1964."

At the request of the Bureau of the Budget for information on investment criteria, a statement was prepared and presented on "Guides for Recreation Investment." This was expanded at the request of the Recreation Advisory Council as policy statement on "Guides for Federal Outdoor Recreation Investment."

In the latter part of fiscal year 1965, a review was made of development and construction, and land acquisition, (excluding projects under the Land and Water Conservation Fund Act program) aspects of 1967 preliminary outdoor recreation budgets for certain bureaus in the Department of the Interior. The review analyzed regional allocations against patterns recommended in the fiscal year 1965 budget study. A study will be made of all outdoor recreation elements of the 1967 President's budget. This study will involve an analysis of the outdoor recreation opportunities added through the 1967 program and an evaluation of the pattern of these additional opportunities against regional needs.

Two other major studies involve (*a*) the review of planning efforts of 17 Federal agencies with recommendations for certain improvements in these efforts, and (*b*) the inventory of all Federal programs involving outdoor recreation. This latter study is to review the objectives, functions, authorities, and type of involvement of Federal programs which directly or indirectly affect outdoor recreation. This study is being conducted in connection with the preparation of the nationwide outdoor recreation plan and involves programs of over 40 Federal agencies. A report is planned late in fiscal year 1966.

Another analysis, which is now underway is on Federal credit programs for outdoor recreation. This study will assess the need for adjustment in the Federal credit programs by examining the nature and effect of the various existing loan programs in outdoor recreation.

The Bureau continued to provide staff assistance to the Recreation Advisory Council. Because of the wide range of subjects, many of the studies which were requested to be undertaken by the Council required the assistance of professional personnel from other agencies and departments.

Highlights of significant accomplishments by the Council during the past fiscal year include:

1. Adoption by the Council of the recommendations of the Bureau of Outdoor Recreation which led to the settlement of a longstanding disagreement between the Forest Service and Corps of Engineers regarding the management of recreation facilities at the Allegheny Reservoir project, Pennsylvania. As a result of this settlement, guidelines were established which would apply to similar situations involving Corps of Engineers projects and Forest Service areas throughout the county.
2. Development of materials for the Council meeting held in conjunction with the White House Conference on Natural Beauty.
3. Drafting a proposed Executive order which would expand the scope of the Council to include natural beauty and also provide for the establishment of a Citizens Advisory Committee on Recreation and Natural Beauty.
4. Development of a proposed procedure for the operation of the Council and staff together with a detailed plan of action for the Council to undertake.

Activities by the Bureau during the current fiscal year will also include the preparation of policy and procedural papers for the Council, which guide the policies and coordination of the various Federal agencies whose programs bear on outdoor recreation and the preservation of natural beauty.

Studies completed or now underway and expected to be completed during fiscal year 1966 include the following:

1. Scenic roads and parkways.
2. Role of the private sector.
3. Land management responsibilities of Federal agencies at land and water resource projects.
4. The effect of highway construction on recreation and conservation areas.

Additional studies may be undertaken by the Council during the current fiscal year and may include such subjects as guidelines for recreation investment;

user fee systems by States; use of zoning, easements, and other devices; public education for outdoor recreation; and others.

Under the legislative review services program, substantive and policy positions of the Bureau have been developed and prepared covering a wide range of conservation, resource development, fish and wildlife, and outdoor recreation legislation. Such work includes legislative research into the history of existing laws and programs that may be affected, and also includes the preparation of testimony for use at congressional hearings.

3. Technical assistance

Activity	Amount available, 1965	Amount available, 1966	Estimate, 1967	Increase (+) or decrease (−) compared with 1966		
				Total	Pay cost [1]	Program
Technical assistance	$506,037	$518,000	$521,000	+$3,000	+$3,000	----------

[1] To provide for increased pay costs for 1966 positions.

3. Technical assistance

The estimate for 1967 is $521,000, an increase of $3,000 over 1966, which is for increased pay costs.

Plan of work.—The Bureau will continue to provide technical assistance on a wide variety of outdoor recreation problems generated by the soaring interest in outdoor recreation at all levels. The need for such services is verified by current studies of privately operated outdoor recreation facilities, the Outdoor Recreation Resources Review Commission report and its study reports, and more recently by recommendations of the White House Conference on Natural Beauty. It is necessary that the Bureau, as the Federal Government's focal point in outdoor recreation, be in a position to carry out this program as effectively as possible. Although the Bureau will work directly with agencies and individuals in some cases, the program is designed to provide the skills and know-how to the States so that they may assume the major share of providing technical assistance to local governments and the private sector.

There are tremendous opportunities and potentials for the States, local governments, and the private sector to provide and develop outdoor recreation facilities. Also, the importance of outdoor recreation opportunities is being felt more and more in the economy of many sections throughout the Nation. The States are well aware of the increase in demands for outdoor recreation and of their responsibility in meeting these needs. Also, the benefit of providing these needs is becoming more meaningful to the States and the private sector. The Federal Government should foster these interests and encourage increased efforts by non-Federal entities as a means of helping to meet the ever-growing national demands for outdoor recreation opportunities.

The country's outdoor recreation needs will in a large part, have to be met by private organizations and agencies and by private recreation enterprises. However, a tremendous gap exists in technical know-how and information that is needed by public and private interests in order to assure successful development and operation of facilities designed to fulfill outdoor recreation needs. Present technical assistance programs are limited in scope and to a large degree oriented toward helping farmers, rural associations, and rural landowners. A broad and all inclusive program is needed that will make available to the development agencies or investors essential information, in the form of consultations, workshops, meetings, and technical bulletins, on such subjects as the size of the market to be served; present and potential supply; quality and suitability of the opportunities offered; capacity and type of facilities desirable; construction, operation, and maintenance costs; liability laws; insurance requirements; etc.

A technical assistance information clearinghouse service has been started by publication in fiscal year 1966 of a "Summary of Significant State Outdoor Recreation Actions, 1960–65." This will be supplemented quarterly. Such a service was recommended by the White House Conference on Natural Beauty and is expected to be very useful to State, local, and private officials and groups pressing for timely action to protect and enhance outdoor recreation resources.

Work will also continue in providing assistance to the Department of Housing and Urban Development in the review of applications for grants to State and local governments in connection with recreation, conservation, and scenic areas within urban complexes.

In connection with the sale of surplus property deeded to State and local agencies for park and recreation purposes, the Bureau will review the reports made every 2 years by the purchaser to determine whether the terms of the deeds of transfers are being met. On-site reviews will be made in many cases. Approximately 150 of these reports will be handled in fiscal year 1967. Also, applications to General Services Administration from State and local governments for the purchase of Federal surplus land for park and recreation purposes will continue to be reviewed for suitability of the area for such purposes. Closures of military bases should make more surplus land available to States and local agencies for these purposes.

The Bureau will also continue its assistance to the Bureau of Land Management in previewing applications from States, local governments, and public nonprofit organizations desiring to acquire public lands for outdoor recreation purposes as authorized by the Recreation and Public Purpose Act. Classification of public domain lands now underway by Bureau of Land Management will disclose additional lands that are available for recreation and is expected to increase appreciably the numbers of applications that will be reviewed by the Bureau.

Status of program.—The Bureau has provided technical assistance to numerous non-Federal interests in an effort to help meet national outdoor recreation needs. Advice has been provided on financing programs, on recreation planning, and on a variety of technical problems. A large part of this assistance is in the form of publications provided local agencies and the private sector by the Bureau. These cover data on financial and technical assistance sources as well as information on a variety of outdoor recreation matters. A great deal of work was devoted to assisting and advising individual State planning agencies with their planning programs. This consisted of conducting training sessions, and furishing information on standards, socioeconomic factors, demand, and planning methods.

The study now underway on Federal credit programs should provide information of value to the private sector as should the material that is being accumulated under the private sector inventory of recreation resources. In providing such assistance, the Bureau also learns of programs that have already proven successful, and where the information would be of interest and helpful to others, such information is collected and later disseminated for use by others in the same field.

The Bureau is also providing assistance to Federal agencies in regard to outdoor recreation matters.

During the past 18 months, investigations were made and reports prepared recommending to General Services Administration transfer of 29 surplus Federal properties for park and recreation or historic monument purposes. Nine more are underway.

For a period of 20 years after such land is sold, this Bureau is responsible for enforcing compliance with the terms of the deeds of transfer. There are now over 300 such properties. This work is done by review of the buyer's biennial reports and in some instances by on-site inspections of the property involved. The Bureau made on-site inspections and reports on 173 properties and reviewed 139 compliance reports submitted by States and local governments. It was also involved in 22 major compliance cases, some of which concerned the preparation of exchange deeds or release documents. The buyer may request relief from the terms of the deed and such requests, before granted, must be carefully considered to determine whether they would be beneficial and in conformance with requirements of law.

The Bureau has reviewed 90 applications from State and local agencies to acquire public domain lands for park and recreation areas. These lands are under the administration of the Bureau of Land Management and involve approximately 30,000 acres.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and Financing:				
Total obligations	$2,721,834	$3,463,997	$3,910,000	+$446,003
Unobligated balance lapsing	26,551			
Transferred to General Services Administration	31,615	2,003		−2,003
Appropriation	2,780,000	3,398,000	3,910,000	+512,000
Proposed supplemental appropriation		68,000		−68,000
Obligations by Objects:				
11.0 Personnel compensation	1,956,313	2,253,000	2,665,000	+412,000
12.0 Personnel benefits	143,696	168,000	192,000	+24,000
21.0 Travel and transportation of persons	152,874	211,000	233,000	+22,000
22.0 Transportation of things	12,297	33,000	17,000	−16,000
23.0 Rent, communications and utilities	51,504	62,997	100,000	37,003
24.0 Printing and reproduction	69,452	88,000	88,000	
25.1 Other services	148,607	83,000	56,000	−27,000
25.2 Services of other agencies	97,190	475,000	460,000	−15,000
26.0 Supplies and materials	44,885	52,000	61,000	+9,000
31.0 Equipment	45,016	38,000	38,000	
Total obligations	2,721,834	3,463,997	3,910,000	+446,003

PREPARED STATEMENT

Chairman HAYDEN. Mr. Crafts, you may file your statement for the record and then summarize it orally for the committee.

Mr. CRAFTS. All right, Senator Hayden. I will file it for the record. (The statement follows:)

Mr. Chairman and members of the committee, we appreciate the opportunity to appear before this committee to explain the need for and justify the funds requested for fiscal year 1967 to carry out the Bureau's programs in the field of outdoor recreation. The Bureau has been in existence for almost 4 years. We believe that significant accomplishments have been made since its establishment, and we will be glad to discuss these with the committee as we cover specific programs.

The Bureau's responsibilities may be divided generally into two segments—those authorized by the act of May 28, 1963 (the Bureau's Organic Act), and the Federal Water Projects Recreation Act of 1965 for which we are requesting $3,910,000 for fiscal year 1967 and those authorized by the Land and Water Conservation Fund Act of 1965 for which we are requesting $110 million.

The $3,910,000 requested to finance programs authorized by the Organic Act, and the Federal Water Projects Recretation Act is a net increase of $446,000 over the current appropriation. Funds requested are needed to:

(1) *Continue the development of a nationwide outdoor recreation plan that has a statutory completion date of May 1968.*—This program will be conducted in fiscal year 1967 at its current funding level of $1,587,000 plus a small increase of about $9,000 for pay costs. The Bureau expects to have completed in draft form the nationwide outdoor recreation plan by the end of fiscal year 1967.

Considerable progress has been made in developing this plan. An inventory has been completed of existing Federal, State, county, and municipal outdoor recreation areas totaling over 40,000, and the Bureau has carried out a nationwide sampling inventory to determine kinds and quantity of outdoor recreation areas and facilities now being provided by the private sector. In addition, a survey of about 9,000 households has been completed to determine public participation in and preferences for outdoor recreation activities.

During fiscal year 1967, the voluminous data that have been collected will be analyzed and evaluated and systematically made available to the public. Determinations will be made of the imbalances between supply and demand, and tentative recommendations will be developed concerning programs and actions needed to meet the Nation's outdoor recreation needs.

(2) *Conduct studies concerning the recreation potential of water project areas and major river basins—an increase of $331,000 is needed to carry out added responsibilities under the Federal Water Project Recreation Act approved July 9, 1965 (Public Law 89-72).*—During the current fiscal year the Bureau has

participated or expects to participate in 20 comprehensive river basin studies and about 76 studies of individual water resource development projects of the Bureau of Reclamation and the Corps of Engineers. In addition, about 148 reports of the Bureau of Reclamation, Corps of Engineers, Federal Power Commission, and Soil Conservation Service will have been reviewed.

The major workload in fiscal year 1967 wll involve studies of about 167 proposed individual projects of the Bureau of Reclamation, Corps of Engineers, and the Bureau of Indian Affairs to determine recreation demand, supply, and needs to assist Federal construction agencies in the formulation of plans for the development of recreation potentials of the projects. Work will continue on the studies of about 23 major river basins.

(3) *Conduct studies of "special areas" of the Nation that have regional or national recreation significance—an increase of $124,000 is needed for this work mainly to review the recreation potential of military bases which have closed or are scheduled for closing and to conduct studies of special areas which the Bureau has been asked to do by the President, Members of Congress, or the Secretary.*—Studies have been completed on 22 streams throughout the Nation to determine their suitability for designation as wild rivers and legislation has been prepared to establish a national wild rivers system.

The Bureau has screened 790 proposed military-land-disposal actions to determine if further study should be made on the suitability of these areas for outdoor recreation and is now making detailed studies of 39 areas that appear to be particularly suitable.

It has conducted nationwide interagency study of trails and has been involved in studies and other actions concerning areas of national significance such as Assateague Island National Seashore, Delaware Water Gap National Recreation Area. Whiskeytown-Shasta-Trinity, North Carolina, and California Redwoods.

The Bureau also completed a report "The Lewis and Clark Trail: A Proposal for Action" which was acted upon favorably by the Lewis and Clark Trail Commission.

During fiscal year 1967, the Bureau will be involved in the study of an estimated 20 rivers or streams as possible additions to a wild rivers system, the planning of a nationwide system of trails, the study of approximately 60 military lands, and the study of at least 8 national seashores. The Bureau will participate in studies of other areas of national significance such as Sawtooth Mountains, Idaho; California Redwoods; and Allagash River, Maine.

(4) *Continue a small research and education program which is directed mainly to developing techniques of immediate use to the Bureau.*—This program will continue in fiscal year 1967 on a slightly expanded scale. An increase of $19,000 is requested. Emphasis will be directed to developing uniform methods for estimating recreation demand at individual water resources projects and at new parks and recreation areas, evaluating recreation use, and determining the economic impact of the establishment of new park areas such as the California Redwoods. Statistical data obtained as part of the nationwide outdoor recreation plan will be published. The literature and technical information retrieval program and participation in the science information exchange initiated this year in collaboration with the Departmental Library, the Bureau of Sport Fisheries and Wildlife, and Department of Northern Affairs and Natural Resources of Canada will be fully implemented. Further efforts will be made to stimulate and guide recreation research in colleges and universities. A major National Outdoor Recreation Conference is scheduled at Utah State University in early September.

(5) *Continue efforts to achieve coordination of outdoor recreation programs of the Federal Government through reviews of programs, budget, and legislative proposals, as well as by carrying out special reviews and studies of problems or practices of common concern to the Federal agencies.*—The Bureau has conducted several studies of the Federal Government's programs in the field of outdoor recreation. These include the review of the budget of agencies administering outdoor recreation programs, a review of outdoor recreation planning conducted by Federal agencies, a review of the availability of Federal credit to the private sector for outdoor recreation programs, and an inventory with comments) of all Federal programs involved in outdoor recreation which will be completed in the near future.

(6) *Provide staff services to the Recreation Advisory Council—an increase of $119,000 is requested for this important activity.*—The Recreation Advisory Council is assuming an increasingly active role in coordinating Federal efforts

in outdoor recreation. In 1967, it will be involved in establishing policy guidelines for the incorporation of natural beauty into Federal proposals, coordinating interagency programs for wild rivers and wilderness areas, coordination of highway programs and recreation development, giving consideration to the projection and appropriate management of scenic areas, natural wonders, primitive areas, historic sites, and recreation areas of national significance to preserve their natural beauty and recreation value.

(7) *Provide technical advice and assistance to States, local governments, and the private sector on resolving problems related to outdoor recreation.*—The Bureau's technical advice and assistance program to States, local governments, and the private sector will continue at its present level. Reports will be released quarterly covering significant Federal, State, local, and private outdoor recreation actions—an information clearinghouse on technical assistance to State, local, and private groups. This was one of the recommendations of the White House Conference on Natural Beauty.

Reviews will be made of applications submitted to General Services Administration from State and local agencies to purchase surplus Federal property for park and recreation purposes and compliance reviews will be made on properties previously made available to such agencies. The Bureau will provide similar assistance to the Bureau of Land Management in reviewing applications from State and local governments to acquire public domain lands for outdoor recreation purposes.

These programs individually and collectively contribute greatly to meeting the needs of the American people for outdoor recreation opportunities. That the needs are great is evidenced by the fact that visitations to Federal recreation areas exceeded 550 million during 1964 compared to about 150 million in 1952; whereas the increase in recreation resources has failed to keep pace. The result is overcrowded conditions in most areas throughout the country.

LAND AND WATER CONSERVATION FUND

We are requesting $110 million under the land and water conservation fund program. Of this amount $43 million will be made available to the National Park Service, Forest Service, and Bureau of Sport Fisheries and Wildlife for acquiring land and water areas; $64,440,000 will be made available to the States to be matched on a 50–50 basis for recreation planning, land acquisition and development; and $2,560,000 will be made available to the Bureau of Outdoor Recreation to administer the Federal and State aspects of this program.

The breakdown of the total request between Federal and State is 40 percent Federal and 60 percent for States. This is in accord with the Land and Water Conservation Fund Act which prescribed such a percentage breakdown in the absence of a provision to the contrary in the act making an appropriation from the fund. The fiscal year 1966 budget was submitted on a 40–60 basis but the Congress changed this to roughly 32 Federal and 68 State.

We believe that significant progress has been made by the Federal and State agencies concerned with the programs financed from the fund. Since the inception of this program in January 1965, $26,688,000 has been made available to the National Park Service and $18,050,000 has been made available to the Forest Service for the acquisition of recreation lands and waters. No funds have heretofore been appropriated to the Bureau of Sport Fisheries and Wildlife from the land and water conservation fund. As of December 31, 1965, the Park Service had obligated $4,659,000 and the Forest Service had obligated $3,222,000 of available funds. Both agencies expect to obligate all remaining funds by June 30, 1966.

The House and Senate Appropriations Committees in reporting on the 1966 appropriations bill placed certain responsibilities on the Bureau for the review and evaluation of proposed acquisitions of land and water areas by National Park Service, Forest Service, and Bureau of Sport Fisheries and Wildlife. Also, certain reprograming authorities were given to the Bureau concerning these acquisitions. The Bureau has reviewed the proposed acquisitions included in the fiscal year 1967 budget and has prepared a report on its review which is available to the committee.

The proposed acquisitions were reviewed by the Bureau against requirements and limitations of project authorizations policies established by the House and Senate Appropriations Committees, and criteria prescribed by the Bureau of Outdoor Recreation.

Each acquisition was subjected to a general or detailed analysis, some with and others without field examination, depending upon the magnitude of expenditure proposed, number of acres to be acquired, cost per acre and improvements to be

purchased. We believe that the areas proposed for acquisition are highly desirable for meeting outdoor recreation needs.

The fiscal year 1967 Federal land acquisition program would provide for the acquisition of 182,373 acres of recreation lands at an estimated cost of $43 million, or an average of $236 per acre, distributed as follows:

Agency	Acres	Dollars	Cost per acre
Forest Service	140,994	13,170,000	$93
National Park Service	33,696	28,316,000	840
Bureau of Sport Fisheries and Wildlife	7,683	1,514,000	197
Total	182,373	43,000,000	236

Recently authorized areas of special significance for which lands are scheduled for acquisition in 1967 are: Delaware Water Gap National Recreation Area, Pa. and N.J.; Assateague Island National Seashore, Md.; Fire Island National Seashore, N.Y.; Whiskeytown-Shasta-Trinity National Recreation Area, Calif.; Cape Cod National Seashore, Mass.; and Spruce Knob-Seneca Rocks National Recreation Areas, W. Va.

Without exception, the States have expressed a keen interest in this program and most of them have moved ahead in developing plans and becoming organized to administer a greatly accelerated recreation program. The Bureau's relationships with the States have been extremely good.

The Land and Water Conservation Fund Act, as you know, requires a State to prepare a comprehensive outdoor recreation plan prior to obtaining matching funds for acquiring lands and developing recreation areas. Financial assistance can be made available to the States to assist in developing the plan. As of January 31, 1966, 46 States had submitted initial plans and the Bureau has determined 36 of these to be adequate for the purposes of the act. This allows these States to submit projects for land acquisition and development. We expect to have received plans from the remaining States prior to the end of this fiscal year. We did not expect that a major portion of the $94 million, which has been appropriated for State purposes, would have been obligated at this time, since the States had first to develop plans. However, those that have plans approved as well as those that will have plans approved in the near future should now move ahead rapidly in acquiring lands and developing recreation areas. As of January 31, the Bureau had approved 78 project proposals covering planning, acquisition, and development totaling $6,435,000 of Federal funds. An additional 289 project proposals totaling $29,913,000 have been received and are being reviewed. We expect that by the end of the current fiscal year a major portion of the funds appropriated for State purposes will have been obligated notwithstanding the fact that under the provisions of the act a State has the current and 2 succeeding fiscal years in which to obligate its allocated share.

Most of the States have taken action to obtain State funds in order to share in the benefits of this program. This has been done through State appropriations, bond issues, and other means. Many States have more money available for recreation programs than can be matched by the Federal Government under the Land and Water Conservation Fund Act. In view of the actions taken by the States in organizing to conduct this program, the interest expressed by the States and the momentum that has been developed, we are sure that no difficulty will be encountered in utilizing the funds requested for fiscal year 1967. We believe that revenues to the fund will be adequate to cover the amount of the requests and we believe also that failure to appropriate the amount requested for State purposes would have an adverse effect throughout the Nation. The States supported this legislation and have geared their operations to meet a workload base comparable to what could be financed with funds made available.

BUREAU OF OUTDOOR RECREATION AND FEDERAL WATER PROJECTS RECREATION ACT

Mr. CRAFTS. This statement covers activities authorized under the organic act for the Bureau of Outdoor Recreation, and also the activities under the recently enacted Federal Water Projects Recreation Act.

Land and Water Conservation Fund

My statement also includes the justification for the land and water conservation fund but I will not comment on that at this point.

Planning and Research

With respect to the "Salaries and expenses" item, the increase is about a half a million dollars. Most of that increase is under the planning and research activity that we carry on and most of that increase is in two items.

Water Resources Work

One is in connection with our water resources work under the new act passed last year by the Congress and we are asking for an increase of about $330,000 and about 30 persons, and the other is in our so-called special area studies function.

We are asking for an increase of about $125,000 there and about 10 persons. I might say under the water resources work which we are directed to do by delegation from the Secretary we will be engaged in the recreation phase of about 20 river basin studies, about 165 special water project studies, and about 125 review reports before the recommendations from the principal agencies go to Congress.

This increase that we are asking for of some $300,000 on this item is offset to a considerable extent by the fact that we will receive about $200,000 less next year in reimbursable moneys from the Corps of Engineers and the Bureau of Reclamation than we had this year, so the net increase is roughly the difference between $330,000 and $200,000 or about a $130,000 increase.

Special Area Studies

On the special area studies, this is the segment of our work in which we are involved in the military land survey for conservation and recreation purposes as directed by the President. There are about 790 such areas that have been announced by the Secretary of Defense. About 130 of these appear to have value for recreation and conservation purposes covering about 600,000 acres.

Field Surveys

We are engaged in field surveys on these lands in cooperation with some of the other concerned agencies. In this area also we deal with such proposals as the new Redwoods National Park, the North Cascades National Park proposal, a national system of trails which was recently announced in the Presidential message a year ago, the Hudson River, a new Missouri River study which we recently have been directed to undertake, a wild rivers proposal, and a whole series of things of this sort, so we are asking for about $125,000 to more adequately handle that work.

Other Activities

In the "Other activity" under our "Salaries and expense" item there really is no significant or substantial change. We do a small amount

of research work. We are engaged in our nationwide plan which is due up here in another year and a half. There are some small adjustments in these items, but no significant changes, so the basic request here is for an increase for water resources studies and an increase for our special area studies geared to the military land surveys and some of these items which I have just mentioned.

I think, Mr. Chairman, that summarizes my statement on this item and I would be glad to answer questions if you would like.

Nationwide Outdoor Recreation Plan

Chairman Hayden. Over a third of your budget next year will be allocated to nationwide planning. For how long has work on the nationwide plan been carried on, and what is its present status?

Mr. Crafts. The nationwide plan started about, as I recall, 2 years ago. The status is that the fieldwork is done. The contract surveys that we have made on particular aspects of it are completed. The data are largely in. We are going through the analytical stages of it now.

We will have a report ready in draft form within another year and then it will take about another 6 months to process it through the Bureau of the Budget, the President, and the other agencies.

This nationwide recreation plan will in a sense be an updating of the Rockefeller Commission Report 5 years ago which set the pattern for both the establishment of this Bureau and for the passage of the Land and Water Conservation Fund Act, so I think we are making good progress on this nationwide plan.

Water Resources and Special Area Studies

Chairman Hayden. For water resources and special area studies you are asking $906,000, an increase of $455,000 over the amount provided for you last year. Would you explain in some detail the reasons for this fairly large increase in water resources studies?

Mr. Crafts. As I mentioned a few moments ago, this increase is due to really three things: The response that is needed to the Federal Water Projects Recreation Act, passed by Congress last session. We will be engaged in some 167 projects in 20 river basins. This is the first item.

The second item is that this increase is offset somewhat by a decrease in transfer funds from the Corps of Engineers and the Bureau of Reclamation.

And the third item are these special areas which I have previously enumerated that we are engaged in, either by direction of the President or the Secretary, or the Recreation Advisory Council.

Proposed Water Resources Studies Projects

Chairman Hayden. I note that you expect to study 167 projects of the Corps of Engineers, the Bureau of Reclamation, and the Bureau of Indian Affairs during fiscal year 1967. Do these studies include existing projects, or is this only proposed new projects?

Mr. Stevens. Those refer to proposed new projects, Senator Hayden, and do not include the existing projects.

STAFF FOR WATER RESOURCE STUDIES

Chairman HAYDEN. How much staff, both professional and clerical, do you now have for this purpose, and how much do you propose to add next year?

Mr. CRAFTS. We now have in the water resources studies 30 persons. We propose to add 30 or a total of 60, but there will be some offsetting reduction of 23 persons, so a net increase, if I figure it out correctly, of 7 people.

SPECIAL AREA STUDIES

Chairman HAYDEN. How much do you propose to expend next year on special area studies, and how much was appropriated for this purpose this year?

Mr. CRAFTS. This year there is $125,000 appropriated for this purpose. We propose to have $247,000 next year and an increase in personnel from 10 positions this year to 20 positions next year.

NATIONWIDE TRAILS STUDY AND REPORT

Chairman HAYDEN. One of the studies which you are making concerns nationwide trails. I believe that you began this study in the last half of 1965. When do you expect that it will be completed?

Mr. CRAFTS. This study is concluded, Senator. It is culminating in two ways. In the Presidential message of the day before yesterday the announcement was made that legislation would be submitted to recommend to Congress that a national system of trails be created, so it will culminate in this legislation which is apt to come up almost any day now. Secondly, there will be a nationwide trail report of the joint Department of Agriculture and Interior study group that was appointed by the two Secretaries to carry out this undertaking.

This report is completed and I would say that, subject to approval of the two Secretaries, it will be published in about 2 months.

STUDY OF RECOMMENDED OUTDOOR RECREATION PROJECTS FOR BUREAU OF THE BUDGET

Chairman HAYDEN. You indicate on page 25 of your justifications that a study will be made of all outdoor recreation elements of the 1967 President's budget. What will be the purpose of such a study, when will it be completed, and how much will it cost?

Mr. CRAFTS. This is largely what I would call a service and advisory function which we carry out annually for the Bureau of the Budget. In its preliminary reviews of the recommendations submitted to it by the various departments and agencies for recreation activities, they ask us to take a look at this and assess the balance, the validity, the desirability of changes and so on. We do this for the Bureau of the Budget.

It is an intermittent process. I can't tell you offhand how much this particular survey costs or the present cost, but I will be glad to submit that for the record.

(The information follows:)

This study is being done at the direction of the Recreation Advisory Council as expressed in RAC Circular No. 5, "Guides for Federal Outdoor Recreation Investment," of October 20, 1965.

This study will attempt to identify the total Federal outdoor recreation budget for fiscal year 1967 for those budget elements which lend themselves to forward

programing; i.e., development/construction, land acquisition, operations and management, technical assistance, research, planning, and administration.

This study will be the first attempt to identify the entire amount of Federal expenditures for outdoor recreation. It will include both programs which are directly involved and those which are indirectly involved in providing outdoor recreation opportunity. It will provide a basis for future functional outdoor recreation studies to be done by the Bureau of Outdoor Recreation. It will provide a basis for assessing trends in outdoor recreation expenditures in the future by budget elements, by geographic areas and for the total outdoor recreation effort. Recommendations for adjustments in the budget elements to be studied will be presented to the Bureau of the Budget and to the involved Federal agencies for use in planning for future outdoor recreation efforts.

It is estimated that the study will cost $34,340 and take 2.5 man-years. It is scheduled for completion by June 30, 1966.

Motion Picture on Wild Rivers

Chairman Hayden. You also indicate in your highlight statement accompanying your justifications that you prepared an award-winning movie on wild rivers. What was the purpose of the movie, its nature, and what was the cost of it?

Mr. Crafts. That motion picture was prepared in connection with carrying forward the recommendation of the administration for a wild rivers system. Incidentally, the Senate has this session passed its bill to establish such a system and it is now before the House.

This motion picture cost $80,000, of which only $15,000 were Federal funds. It was largely a public service philanthropic undertaking by Humble Oil Co. and Humble spent about $65,000 on this.

This picture won an award for the best photography at the International Film Festival in January and it has had very wide response. It has probably been viewed by 125,000 or 150,000 people. I just want to say one thing. The public funds expended in this were very minor. It was mainly paid for by private moneys from the Humble Oil Co.

West Virginia Outdoor Recreation Plan

Chairman Hayden. Senator Byrd?

Senator Byrd. Thank you, Mr. Chairman.

Mr. Crafts, what is the current status of the West Virginia Outdoor Recreation plan?

Mr. Crafts. The West Virginia Outdoor Recreation plan has been approved, Senator. This question relates to the Land and Water Conservation Fund Act which I shall come to later. However, after the West Virginia plan was approved we received four specific projects from West Virginia for consideration.

They would total some $345,000. They are pending at the moment. We have had, and maybe I might as well get into this now——

Senator Byrd. I didn't intend to get you into this area of questioning at this point.

Mr. Crafts. Well, the specific answer to your question is, The West Virginia plan has been approved.

Senator Byrd. All right. Has the State submitted any proposals to the Bureau of Outdoor Recreation?

Mr. Crafts. Yes, it has submitted four.

Senator Byrd. We will get into this area then a little later?

Mr. Crafts. That is correct; yes, sir.

WATER RESOURCES AND RECREATION POTENTIAL STUDIES IN WEST VIRGINIA

Senator BYRD. Would you please brief the committee on studies of river basin or water resources projects underway or planned for the next year for West Virginia?

Mr. STEVENS. Senator, the major effort in West Virginia in the water resource study field will be in connection with the Appalachian Commission which was established by special act of Congress. The Corps of Engineers is directing a special water resources study with funds from the Appalachian Commission.

We, in turn, are cooperating with the Corps of Engineers in studying the recreation potential of the corps projects in that special study and they have transferred some money to us for this purpose.

Mr. CRAFTS. May I supplement that, Senator?

Senator BYRD. Yes.

BUREAU OF OUTDOOR RECREATION/CORPS OF ENGINEERS PROJECTS IN WEST VIRGINIA

Mr. CRAFTS. I could put it in the record at this point the particular projects that we are carrying on with the corps in West Virginia. There are a little over 10 of them and I would be glad to put that in the record at this point.

(The information follows:)

Project	Status of project	
	Fiscal year 1966	Fiscal year 1967
Comprehensive river basin studies:		
Ohio Basin	To be completed	
North Atlantic Basin	In progress	In progress.
Kanawha Basin	do	Do.
Special river basin study: Potomac Basin	do	To be completed.
Special regional study: Appalachian program	do	In progress.
Individual Project Studies:		
Bloomington Reservoir	To be completed	
Stonewall Jackson Reservoir	do	
Middle Island Creek	In progress	To be completed.
Wheeling Creek	do	In progress.
Mill Creek at Ripley		Do.
West Fork River and tributaries		Do.
Birch River Reservoir	To be completed	Do.
R. D. Bailey (Justice) Reservoir	do	

LISTING OF STUDIES AND PROGRAMS AND THEIR LOCATIONS

Senator BYRD. Would you enumerate them also at this point?

Mr. CRAFTS. Yes, sir.

On the comprehensive studies there are the Ohio Basin, the North Atlantic Basin, and the Kanawha Basin. There is the Potomac Basin. There is the special Appalachian program, and individual project studies: Bloomington Reservoir, the Stonewall Jackson Reservoir, Middle Island Creek, Wheeling Creek, Mill Creek, West Fork River and tributaries, Birch River Reservoir, and the R. D. Bailey Reservoir.

Senator BYRD. Is that the West Fork of the Little Kanawha or the West Fork of the Monongahela?

Mr. OGDEN. That would be the Monongahela, Senator.

ACTIVITIES UNDER APPALACHIAN REGIONAL DEVELOPMENT ACT IN WEST VIRGINIA

Mr. CRAFTS. Senator, you asked about the Appalachian program. I have a statement here that I think would be appropriate to put in the record at this point, a one-page statement describing our activities in the Appalachian region in connection with the Appalachian Act.

Senator BYRD. I was just going to ask you to tell us what you were doing in the State of West Virginia with regard to the Appalachian Regional Development Act; so you have this?

Mr. CRAFTS. I have this statement right here and I can put it in the record or I can summarize it for you or do both.

Senator BYRD. Mr. Chairman, if there are no objections, I would like to have this in the record and I would also like Mr. Crafts to briefly summarize the statement, if he would, at this time.

Chairman HAYDEN. That may be done.

Mr. CRAFTS. I will put it in the record, Senator.

(The statement follows:)

RELATIONSHIP OF BUREAU PROGRAMS TO THE APPALACHIA PROGRAM

The Bureau participates in four programs of the Appalachian Regional Commission established by Public Law 89–4: (*a*) Surface mine rehabilitation, (*b*) water resources studies, (*c*) research, and (*d*) grants supplementation.

(*a*) In the surface mining program under section 205 of the Appalachian Act, the Bureau has provided appropriate technical advice about the recreation values of mineral areas.

(*b*) In the water resources studies under section 206, being conducted by the Corps of Engineers, arrangements have been completed whereby the Bureau will prepare the recreation aspects of individual project preauthorization feasibility studies at a total 3-year cost of $81,000. Fiscal year 1966 transfer of funds for this purpose is $35,000. Seven persons are handling this work. About 27 projects will be undertaken during the 3-year program.

(*c*) In the research program under section 302, the Bureau expects to undertake a recreation study which will analyze the outdoor recreation resources in the Appalachian region, project probable public use of the resources if they were systematically developed, and identify key areas where the recreation resources and probable demand coincide to indicate a potentially significant economic asset to the region.

With such information the Appalachian Commission will then be able to decide whether recreation would constitute a nucleus for economic growth centers worthy of the Commission's financial support in a particular area. Because many such recreation-based areas may be rural and without other significant economic development potential, it is hoped that the recreation study will make a major contribution to a balanced program to stimulate the economic recovery of the region.

Although negotiations have not yet been completed with the Appalachian Commission, it is anticipated that the study will cost about $175,000 and will be completed by June 30, 1967.

(*d*) Under section 214, the Commission may supplement Federal grant-in-aid programs. One such program specifically mentioned in the Appalachian Act is the land and water conservation fund program which provides for assistance to States for acquisition of land and construction of facilities for outdoor recreation purposes. Supplementation by the Commission may be up to 80 percent of total acquisition or development costs. This means that the Commission may supplement the land and water conservation fund program by 30 percent, inasmuch as the Bureau's program provides for payment of 50 percent of the total costs.

Procedures have been worked out whereby, upon request from the appropriate State, supplemental grant applications relating to outdoor recreation projects will be jointly screened by the Commission and the Bureau to determine their potential for stimulating economic growth in the region. Under these procedures the Bureau will make its recommendation to the Commission and if the Commis-

sion decides a particular project justifies a supplemental grant, the funds will be transferred to that particular project account administered by the Bureau.

To date, no applications for supplemental grants have been received.

In addition to the above four programs of the Appalachian Regional Commission, the regular work of the Bureau aids the Appalachian region. This is in the form, for example, of special area studies (such as wild rivers), Federal acquisitions under the land and water conservation fund, technical assistance to States and local governments, and coordination with other Federal agencies in joint studies, such as the Potomac River area and scenic roads and parkways study undertaken by the President's Recreation Advisory Council.

Study of Recreational Aspects of Individual Project Studies

Mr. Crafts. There are really three major types of activities. In connection with water resources studies under section 206 of the act, arrangements have been completed for the Bureau to study recreational aspects of individual project studies at a 3-year cost of $180,000.

This started last year and we received $35,000 of transfer funds for this last year, and $180,000 is the expected cost for the next 3 years. About 27 projects would be undertaken during that 3-year period.

Study of Outdoor Recreation Resources and Economic Potential

As a second item also in connection with the Appalachian Act under section 302 of that act, the Bureau will undertake a general recreation study of the outdoor recreation resources and economic potential in the Appalachian region.

This in a sense is a mountain recreation study with the purpose of trying to focus in on those recreation possibilities that can bring economic development, to be feasible to private enterprise, to help stimulate the economy.

In this area and some of the rural areas, as you well know, recreation has perhaps the best economic potential for the future.

Increasing Grants Under Land and Water Conservation Fund

The third item under the act is that the Commission may, if it wishes, supplement the land and water conservation fund by increasing the grants, so that where now the Federal funding is 50 percent of the acquisition and development grants for recreation the Commission has upped this by another 30 percent, so the total Federal funding could be 80 percent.

This is contingent upon requests by the sponsoring agency, which in this case would be the States. Of the four projects which we have so far received we have not received from the State requests for supplementation to the Commission.

Revenues From Permit Sales

Senator Byrd. The revenues from the annual recreation permit are considerably short of your estimates. Are there any limiting factors that you know of which are obstacles to the sale of this permit?

Mr. Crafts. Yes, sir. That also, Senator, bears on the land and water conservation fund and I would be glad to go into that at this point if you would like.

Senator BYRD. I would just as soon you wait until the chairman has gotten into that area.

Thank you, Mr. Chairman.

LAND AND WATER CONSERVATION FUND

1967 BUDGET REQUEST

Chairman HAYDEN. The budget estimate for the land and water conservation fund appropriation in fiscal year 1967 is $110 million. The justifications for this estimate will be printed in the record.

(The justifications follow:)

The Land and Water Conservation Fund Act of 1965 (Public Law 88-578) was approved on September 3, 1964. The provisions of this act make available, subject to appropriation, an estimated average of about $180 million annually for planning, acquisition, and development of outdoor recreation areas and facilities. For fiscal year 1967, the request for appropriations from the fund totals $110 million. Of the total request, $64,440,000 will be available to States, under conditions set forth in the act, for recreation planning, acquisition, and development; $43 million will be available to certain Federal agencies to acquire areas for outdoor recreation purposes or for the preservation of endangered wildlife species, and $2,560,000 will be available to the Bureau of Outdoor Recreation for coordinating and administering the program.

This act creates a fund from which appropriations can be made to provide outdoor recreation areas and facilities at State, local, and Federal levels. It became effective January 1, 1965. The life of the fund is limited to 25 years. Its purpose is to provide a means of bringing our national efforts abreast of our most urgent outdoor recreation needs, principally by assisting the States and their political subdivisions to acquire and develop lands with high recreation potential before such lands are put to other uses or become prohibitively costly to acquire.

This fund derives revenue from (1) admission and user fees at Federal recreation areas designated in accordance with criteria approved by the President as areas at which fees may be charged, (2) net proceeds from the sale of Federal surplus real and related personal property, and (3) existing Federal taxes on motorboat fuels. Provision is also made for advance appropriations up to an average of $60 million annually during an 8-year period beginning with fiscal year 1968. Advance appropriations will be repaid from fund revenues beginning the 11th year. Moneys in the fund not appropriated within 2 years following the fiscal year in which they are credited to the fund shall be transferred to miscellaneous receipts of the Treasury.

Excluding amounts for administrative expenses, and in the absence of a provision to the contrary in the act making an appropriation from the fund, 60 percent of annual appropriations from the fund will normally be available to the States and 40 percent to Federal agencies, but the President during the first 5 years may vary such percentage by 15 points either way. As provided in the authorizing act, grants-in-aid to States may not exceed 50 percent of the cost of planning, acquisition, and development of land and water areas for public outdoor recreation purposes. Appropriations requested herein for State purposes will be used for grants-in-aid amounting to 50 percent of the costs of projects. An approved comprehensive statewide outdoor recreation plan is a prerequisite to a grant for State acquisition and development projects. Funds may be transferred by a State to its political subdivisions for their projects if the latter are in accord with such plan.

Normally 40 percent of the fund will be available to the National Park Service, Forest Service, and the Bureau of Sport Fisheries and Wildlife for acquisition of certain needed recreation areas or for areas to preserve threatened species of wildlife, and for payment into miscellaneous receipts of the Treasury to help offset capital costs of future Federal water development projects which are allocated to public recreation and fish and wildlife enhancement. Possibly other bureaus of the Department of the Interior may, in the future, obtain acquisition money if they are designated to administer Federal recreation areas hereafter authorized.

REVENUES TO THE FUND

Estimated revenues to the fund and advance appropriations authorized are shown below for the fiscal years 1966 through 1970:

[In thousands]

Item	Fiscal year				
	1966	1967	1968	1969	1970
Surplus property	$68,600	$63,000	$72,000	$70,000	$67,000
Motorboat fuel taxes	28,000	28,000	31,000	32,000	34,000
Recreation/conservation permit	11,500	13,000	16,000	17,000	18,000
Admission and user fees	4,500	6,000	7,500	8,000	8,500
Total estimated receipts	112,600	110,000	126,500	127,000	127,500
Unappropriated revenue from fiscal year 1965	12,400				
Advance appropriation			60,000	60,000	60,000
Total estimated amounts available	125,000	110,000	186,500	187,000	187,500

Revenues to the fund from sales of the recreation conservation stickers have fallen short of estimates. There are several reasons for this, among which are:

(1) Because of the short period of time between the date of the act and the start of the recreation season, the concerned Federal agencies were handicapped in getting areas designated and posted and getting the program underway.

(2) The annual permit, good nationwide, was newly instituted and the public was not informed adequately on its existence and benefits.

(3) A change early in the season which provided an annual permit to a given area at a price not more than five times the daily rate probably caused a large number of visitors to use that type of permit rather than the sticker.

There is much to be learned from experiences during the first season this annual permit was in use. It is believed that it will be more widely used in subsequent years. It is evident that the Bureau and other concerned agencies will have to take definite actions toward obtaining greater public awareness of this annual permit.

Revenues from surplus property and motorboat fuel taxes are expected to run at least as high as the initial estimates. The inventory of military lands now underway may cause an increase in the revenues from surplus property sales.

STATUS OF PROGRAM

As of December 31, 1965, 43 States had submitted statewide outdoor recreation plans to the Bureau for approval. Of this number, 29 had been approved and the remainder were being reviewed and evaluated.

As of the same date, 72 projects had been technically approved in amounts totaling $4,807,205.

For fiscal years 1965 and 1966, $94,752,000 has been appropriated for State purposes. While only $3,140,029 had been obligated as of December 31, 1965, information available to the Bureau shows that most of these funds will be obligated by June 30, 1966.

Proposed acquisitions of recreation lands by National Park Service, Forest Service, and Bureau of Sport Fisheries and Wildlife have been reviewed and evaluated by the Bureau. A total of $43 million is requested for land acquisition during fiscal year 1967. This amount will be distributed as shown:

National Park Service	$28,316,000
Forest Service	13,170,000
Sport Fisheries and Wildlife	1,514,000
Total	43,000,000

ACCOMPLISHMENTS

Significant progress has been made by the Bureau and by the Federal and State agencies in getting the program underway.

JUSTIFICATION

Appropriation, 1965		$16,000,000
Appropriation, 1966	$125,000,000	
Transferred to "Operating expenses, Public Buildings Service," General Services Administration (building rent)	−4,457	
Total available, 1966		124,995,543

SUMMARY OF INCREASES AND DECREASES, 1967

Assistance to States: A reduction in the estimate for this item is due to allocating to States 60 percent of the total appropriation requested. This is in accord with section 4 of the act which provides that in the absence of a provision to the contrary in the act making an appropriation from the fund, the appropriation therein shall be available in the ratio of 60 percent for State purposes and 40 percent for Federal purposes	−19,937,000
Federal program: The increase will provide for Federal acquisition of land and water areas for the primary purpose of meeting national outdoor recreation needs, and for the preservation of certain wildlife threatened with extinction	+3,821,457
Administrative expenses: The additional funds will provide the Bureau with further capability to handle the volume of workload anticipated and to insure that the Government's interests are protected	+1,120,000
Net decrease, 1967	−14,995,543
Budget estimate, 1967	110,000,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−) 1967 compared with 1966
1. Assistance to States	$10,375,000	$84,377,000	$64,440,000	−$19,937,000
2. Federal programs	5,555,000	39,178,543	43,000,000	+3,821,457
3. Administrative expenses	70,000	1,440,000	2,560,000	+1,120,000
Total	16,000,000	124,995,543	110,000,000	−14,995,543

1. Assistance to States

Fiscal year 1965 amount available	$10,375,000
Fiscal year 1966 amount available	84,377,000
Fiscal year 1967 estimate	64,440,000
Increase (+) or decrease (−), 1967 compared with 1966	−19,937,000

1. Assistance to States

A total of $64,440,000 is requested for grants-in-aid to States to assist in financing 50 percent of the cost of preparing and maintaining outdoor recreation plans, acquiring land and water areas, and developing areas for outdoor recreation purposes.

Need for funds requested.—The funds requested for assistance to States are needed—

(*a*) To match State funds to provide needed outdoor recreation areas and facilities at State and local levels.

(*b*) To maintain momentum and progress under this Federal-State program and to carry out the Federal Government's financial assistance responsibility under the Land and Water Conservation Fund Act.

This Bureau firmly supports, and is proceeding in accord with, the following views expressed by the Outdoor Recreation Resources Review Commission, "All levels of government share an interest in and responsibility for meeting the outdoor recreation needs of the Nation. However, the State governments have dominant public responsibility and should play the pivotal role." The Bureau's objective is to stimulate State activity and encourage States to assume a leading role in meeting the recreation needs of their people. The Federal assistance provided with the funds requested will serve as a strong incentive to the States to move forward in this area.

The States have shown a real interest in this program and the Bureau's relationships with the States have been very satisfactory. The Land and Water Conservation Fund Act and the matching assistance provided thereunder have been effective factors in obtaining favorable action by State legislative bodies in appropriating State funds for application to this program.

The State programs are being developed and financing obtained on the premise that substantial Federal matching funds will be available. It is important that the momentum which has been generated not be restrained by lack of Federal assistance.

Some of the funds requested are needed to cover retroactive costs incurred by States. Section 5(c) of Public Law 88–578 states in part: "No payment may be made to any State for or on account of any cost or obligation incurred or any service rendered prior to the date of approval of this Act." The Bureau has received advice from the Office of the Solicitor, Department of the Interior, that under the authority of this provision, costs or obligations incurred by the States since September 3, 1964, the date of approval of the act, and which are related to the purposes of this act may properly be considered for partial reimbursement by the Bureau. Subject to the availability of appropriations therefor a portion of the funds requested herein will be used to reimburse the States for those costs which are determined to be appropriate.

Plan of work.—During fiscal year 1967, emphasis will be given to improving and updating statewide plans so that the States and the Bureau will have an agreed upon comprehensive blueprint for meeting current and long-range outdoor recreation needs as well as provide for preserving or enhancing the natural beauty of the Nation. The Bureau will continue to stress the importance of giving attention to meeting the needs of our growing urban population, as directed by the President.

The importance of planning is well stated in House Report No. 900 on the Land and Water Conservation Fund Act:

"The importance of insisting on sound comprehensive statewide planning is self-evident and the bill makes it a prerequisite to any land acquisition or development projects for which Federal assistance is requested or given. In the absence of detailed and reliable statewide estimates of such factors as population and leisure time growth, the types of recreation which people now enjoy and toward which they are moving, the land and water resources that are and will be available for this purpose, and the cost of acquiring and developing these resources, acquisition programs and actual development will be spotty and inadequate, parks and other recreation facilities are likely to be placed where the people are not, suitable and available sites may be overlooked or not used to advantage, and the extent to which people will need and make use of facilities of the sort it is proposed to provide will not be accurately foreseen. In short, planning is essential to avoid unwise use of both State and Federal funds."

Under the expectation that all State plans will have been approved before June 30, 1966, the States should be able to move forward rapidly in submitting acquisition and development projects. A total of over 5,000 projects is expected during fiscal year 1967. The experience that has been gained by fiscal year 1967 and the momentum that has developed should insure the full use of the funds requested for assistance to States. Further, with sufficient staffing in the Bureau, delays in processing and approving project proposals should not occur.

Status of program.—As of December 31, 1965, statewide outdoor recreation plans had been received from 43 States. Of these, 29 had been approved by the Bureau. As of the same date, 340 project proposals had been received. Of this number, 69 had been funded and funds amounting to $3,140,029 had been obligated. The States, in collaboration with the Bureau, have established target

dates for submitting acquisition and development proposals during the remainder of this fiscal year. Based on these target dates and allowing reasonable time for processing, it is estimated that most of the funds appropriated for State purposes will have been obligated by June 30, 1966.

STATE ACTIONS

The States have cooperated wholeheartedly with the Bureau in taking all actions necessary to get the grants-in-aid program underway.

The Governors or Commissioners of the 50 States, the District of Columbia, and the territories have each designated an official to serve as liaison with the Bureau. At least 45 States have taken legislative or top level administrative action directly related to implementing the land and water conservation fund program.

Many States have taken or are taking action to obtain additional funds for outdoor recreation purposes and to match Federal grants. Examples of specific actions include:

California: $150 million bond issue, 1964.

Georgia: $2.3 million bond issue, 1964.

Kentucky: $4.5 million bond issues approved by the 1964 legislature; to be on the 1965 ballot for ratification by the voters.

New York: $200 million bond issue approved by the 1965 legislature; to be on the 1966 ballot for ratification by the voters.

Ohio: $24 million bond issue, 1963; $30 million bond issue, 1965.

Pennsylvania: $70 million bond issue, 1963.

Rhode Island: $5 million bond issue, 1964.

Washington: $10 million bond issue, 1964.

West Virginia: $16 million bond issue, 1964.

Colorado: Instituted a $5 annual windshield sticker for admission to State parks in 1965.

Kansas: Established $3 temporary park permit and $5 motor vehicle annual permit in 1965.

Indiana: Earmarked 25 percent of cigarette tax for conservation department, 1963.

Nebraska: Established 2-cent tax on cigarettes of which 65 percent goes to recreation, 1965.

The above are illustrative. Almost all of the States have taken significant actions to increase finances for planning, land acquisition, and development for outdoor recreation, to provide for easements and zoning regulations, provide for tax incentives to private landowners whose lands serve public needs, provided for State assistance to local governments, or taken other important steps to better meet public outdoor recreation needs.

2. Federal program

Fiscal year 1965, amount available	$5,555,000
Fiscal year, amount available	39,178,543
Fiscal year 1967 estimate	43,000,000
Increase (+) or decrease (−), 1967 compared with 1966	+3,821,457

2. Federal program

A total of $43 million is requested for fiscal year 1967 to provide funds for the acquisition of land and water areas by the National Park Service, Forest Service, and the Bureau of Sport Fisheries and Wildlife. The amount to be made available to each agency is shown:

National Park Service	$28,316,000
Forest Service	13,170,000
Bureau of Sport Fisheries and Wildlife	1,514,000
Total	43,000,000

Need for funds requested.—The funds requested for acquiring land and water areas are to assist in meeting the needs of an increasingly heavy visitor load on Federal recreation areas and to acquire areas suitable for preserving certain species of wildlife threatened with extinction.

One of the best indicators of the need for additional Federal recreation lands

is the overcrowded condition of existing areas. Furthermore, public access to the recreation lands and to the lakes, streams, and the ocean beaches has diminished by reason of such areas being acquired by private interests or converted to other than recreation puposes. Visitations to federally owned or administered areas increases markedly each year. During the calendar year 1964, a total of about 550 million visits were made to such areas. For some agencies this is a threefold increase since 1952.

Section 6(a) of the Land and Water Conservation Fund Act of 1965 authorizes the use of moneys appropriated from the fund for acquisition of land, waters, or interests in land or waters. There are quoted below provisions of the act applicable to this program.

"National park system; recreation areas: Within the exterior boundaries of areas of the national park system now or hereafter authorized or established and of areas now or hereafter authorized to be administered by the Secretary of the Interior for outdoor recreation purposes.

"National forest system: Inholdings within (*a*) wilderness areas of the National Forest System, and (*b*) other areas of national forests as the boundaries of those forests exist on the effective date of this Act which other areas are primarily of value for outdoor recreation purposes: *Provided*, That lands outside of but adjacent to an existing national forest boundary, not to exceed five hundred acres in the case of any one forest, which would comprise an integral part of a forest recreational management areas may also be acquired with moneys appropriated from this fund: *Provided further*, That not more than 15 per centum of the acreage added to the National Forest pursuant to this section shall be west of the 100th meridian.

"Threatened species: For any national area which may be authorized for the preservation of species of fish and wildlife that are threatened with extinction.

"Recreation at refuges: For the incidental recreation purposes of section 2 of the Act of September 28, 1962 (76 Stat. 653; 16 U.S.C. 460 K–1)."

Section 6(a) also provides for payment into miscellaneous receipts as a partial offset of those capital costs, if any, of Federal water development projects hereafter (from January 1, 1965) authorized to be constructed by or pursuant to an act of Congress which are allocated to public recreation and the enhancement of fish and wildlife values and financed through appropriations to water resource agencies. This provision will not become effective until such time as projects are authorized and the areas have been designated as areas where fees may be charged. Therefore, no funds are included in this estimate for payment into miscellaneous receipts.

Plan of work.—Land and water areas scheduled to be acquired by the National Park Service and Forest Service during fiscal year 1967, are priority acquisitions for meeting recreation needs. A significant portion of the estimate is to acquire inholdings needed to round out Federal areas so that they can be managed more effectively and better serve the visiting public. Proposed acquisitions have been scheduled to the extent possible in those areas of the Nation which show the greatest deficit in recreation resources. Proposed acquisitions by the Forest Service, for example, are mainly in the eastern half of the country. This is where the need is greatest and also is in conformance with the above-quoted provisions of the Land and Water Conservation Fund Act that not more than 15 percent of the acreage acquired by the Forest Service shall be west of the 100th meridian. The estimate for National Park Service involves significant acquisitions in the eastern portion of the country for such newly authorized areas as Delaware Water Gap, N.J.-Pa.; Fire Island, N.Y.; Assateague Island, Md.; and Cape Cod, Mass. The estimate for National Park Service also includes proposed acquisitions in the redwoods area of California.

The estimate for the Bureau of Sport Fisheries and Wildlife will provide an area for a species of migratory bird which is seriously threatend with extinction and for acquiring areas adjacent to refuges for recreation purposes.

In accordance with directives contained in the House and Senate reports on the Interior and related agencies appropriations bill, 1966, the Bureau has reviewed and evaluated the lands proposed to be acquired with funds requested in 1967.

The areas proposed for purchase and descriptive data thereon are included in a separate document that will be made available to the committee.

Status of program.—Funds available and those requested for 1967 for purchasing land and water areas are listed:

[In thousands of dollars]

	National Park Service	Forest Service	Fish and Wildlife	Total
Appropriated, fiscal year 1965	4,805	750	----------	5,555
Appropriated, fiscal year 1966	21,883	17,300	----------	39,183
Budget request, fiscal year 1967	28,316	13,170	1,514	43,000
Total	55,004	31,220	1,514	87,738

As of November 30, 1965, National Park Service had obligated $3,600,000 of funds made available from 1965 and 1966 appropriations, and Forest Service had obligated $1,442,000. These agencies have projected estimates which show that by June 30, 1966, all available funds will have been obligated.

3. Administrative expenses

Fiscal year 1965 amount available	$70,000
Fiscal year 1966 amount available	1,440,000
Fiscal year 1967 estimate	2,560,000
Increase (+) or decrease (—), 1967 compared with 1966	+1,120,000

3. Administrative expenses

A total of $2,560,000 is requested to finance the cost to the Bureau of administering the Federal and State programs financed from the Land and Water Conservation Fund. This request covers also the cost of printing and selling the Federal Recreation Area entrance permits and the development and overview of admission and user fees applicable to designated Federal recreation areas.

The amount requested is an increase of $1,120,000 over the amount available during the current fiscal year.

The Bureau requested only $1,440,000 for fiscal year 1966 because it was recognized that during the initial period delays would be encountered by States in submitting plans, the Bureau would need to develop its procedures carefully, and the first year would be devoted in a large sense to becoming organized to carry out this program. It was known at that time that this program could not be administered with that amount of funds when it was in full operation. By the end of the fiscal year 1966, this program will be fully operative and an expansion of staff and funding is necessary in order to administer it properly. It should be recognized also that the estimate for fiscal year 1966 gave no consideration to the substantial program added by Congress in its consideration of fiscal year 1966 budget by requiring the Bureau to review and evaluate the land acquisition programs of the National Park Service, Forest Service, and the Bureau of Sport Fisheries and Wildlife. The 1966 estimates also gave no consideration to the requirements of title VI of the Civil Rights Act of 1964 nor to the necessity of auditing State expenditures. The volume of work is now reaching the point where available personnel, notwithstanding many hours of uncompensated overtime, are not able to process it in a timely manner. Shortcuts are being taken, and adequate review is not possible in all instances. It is expected that, by the end of the fiscal year, a considerable backlog of 1966 work will be on hand that must be handled with fiscal year 1967 staffing.

The Bureau will begin its plans for recruiting additional personnel before the end of fiscal year 1966 based on congressional actions that have been taken. Rosters of desirable employees will have been prepared and other actions taken so that appointments can move as rapidly as possible after July 1.

The administrative expenses of the Bureau, as requested for fiscal year 1967, are slightly over 2 percent of the total dollar program. Other Federal programs of a similar nature run considerably higher. Other Interior Department grants-in-aid programs carry statutory authority to utilize up to 8 percent of available funds for administrative expenses. The Bureau made a comparison of its administrative costs with the administrative costs of several other Federal grant programs. We found no other program being administered more economically.

Need for funds requested.—The funds requested are urgently needed to—

(*a*) Process project proposals from States which are expected to more than double the current-year load.

(*b*) Update and increase the effectiveness of statewide outdoor recreation plans.

(*c*) Inspect on site many projects previously approved, check on State compliance with terms of agreements and insure proper control over expenditures.

(*d*) Provide adequate review and evaluation of proposed acquisitions of land and water areas by certain Federal agencies.

The Bureau will be faced with processing applications covering moneys made available in the fiscal year 1967 appropriation as well as processing a significant number financed from unobligated funds from fiscal year 1966. It is clear that because of delays in submitting statewide plans and normal delays in organizing to carry out this program, several States will not have obligated all of their 1966 apportionment. Thus, these funds will be available in fiscal year 1967. Because of the relatively short period of eligibility granted to States on the basis of their initial outdoor recreation plans, the Bureau will be faced with the review of revised and updated plans and supplements for nearly all States.

In fiscal year 1967, the Bureau will be faced with a substantially increased responsibility of providing on-the-spot reviews on projects. The bulk of applications will shift from requests for planning money to requests for acquisition and development funds. This will require an increase in site reviews to assure that proposed areas and facilities are suitable for recreation needs, that facilities being developed are in harmony with the natural setting and that natural beauty will be preserved or enhanced. The responsibility for compliance reviews will require additional site reviews to insure that construction is being carried out as planned, that the areas are open to the public without any limitation as to race, creed, or color, and that funds have been expended for the purposes for which they were made available and have been accounted for properly.

The Bureau does not take lightly those responsibilities imposed upon it by the House and Senate Appropriations Committees concerning the review and evaluation of proposed acquisitions of lands by the National Park Service, the Forest Service, and the Fish and Wildlife Service. In order to do an adequate job, it is essential that long-range plans be developed, master plans for management units be reviewed, and the Bureau become involved in the selection of tracts at an early date. Also, more adequate criteria needs to be developed to insure that funds are expended for lands that have the highest priority. Admission and user fee schedules must be reviewed or evaluated and checks made to insure a degree of consistency in application of fees by the administering agencies.

The annual Federal Recreation Area entrance permit must be redesigned for printing and sale for the period beginning April 1, 1967. The sales function, involving the development of operating procedures, internal control guidelines, and the seeking of new sales outlets is a continuing activity. The Bureau is faced with the nationwide problem of informing the general public concerning parks, forests, and other Federal areas available for recreational use and enjoyment. In this connection, the public must have knowledge of areas open for use, fees charged, and the types of facilities available.

Especially, the Bureau has a major task to perform in acquainting the public with the new Federal Recreation Area entrance permit authorized by Congress in the Land and Water Conservation Fund Act of 1965. Signs are displayed at the areas in accordance with the Land and Water Conservation Fund Act that designate these areas as fee charge areas. General informational brochures have been prepared that accompany the annual permit to explain its purposes, but the Bureau has not had the staff, funds, or facilities to provide general information on the annual permit and other aspects of this program inform the public adequately and gain the permit wide acceptance. Contacts have been made to seek the free services of the Advertising Council to arrange for spot television, radio, and newspaper releases. The Advertising Council and similar organizations perform services of a public nature without charge for other Federal agencies. The Bureau is hopeful that a similar arrangement can be accomplished regarding the Land and Water Conservation Fund. Some expenses would be involved in preparing informational material, poster designs, etc., in cooperation with such organizations.

Plan of work.—In order to show clearly the scope and volume of the Bureau's workload, each major phase is identified below and explanatory comments are provided:

(*a*) Review of State Plans: To participate in the Land and Water Conservation Fund program each State is required to develop a comprehensive statewide

outdoor recreation plan (1) identifying needs beyond those supplied by existing areas and facilities; (2) projecting State and local needs at least 5 years in the future; (3) setting forth an action program to meet State and local needs on a priority basis. The plan, when found adequate, becomes the controlling document for establishing the State's eligibility for acquisition and development grants. It is a significant quality control instrument of the program and hence is of great importance. Specific requirements have been placed on the States for developing the plans. Accelerated review of the initial versions of all 55 plans will be completed in fiscal year 1966 in order to get the program operative. Initial periods of eligibility based on the initial versions of the plans will be short (average about 16 months), providing a lever to get from the States in fiscal year 1967 updated and strengthened plans with more refined and more detailed information not available in the initial plans.

Review of the updated and refined plans of all of the States in fiscal year 1967 will require much more detailed study and evaluation than the initial plans which justify only the most pressing needs. These second-cycle plans are expected to be orderly blueprints of long-range programs for meeting long-range needs. As such, they will require a more intensive review than was required on the interim plans.

(*b*) Assist States in updating, maintaining and improving State plans: All of the States have prepared, or are now preparing, the initial statewide outdoor recreation plans which are a prerequisite to eligibility for land acquisition and development grants. A few of these plans already are quality products; most are more modest initial efforts. They are recognized by the States and by Bureau of Outdoor Recreation as initial steps in what will be a continuous planning process. Many plans are integrated into broad State plans for land and other resource utilization, thereby assuring that recreation needs are seriously considered in the process of allocating scarce resources.

In its overall coordinating capacity and to insure consistency in plans and objectives, the Bureau has found that it must provide technical assistance to the States in updating, maintaining, and improving the plans. The Bureau has prepared a rather comprehensive manual of guidelines for use of the States, but this alone does not suffice. It is the Bureau's objective that the comprehensive statewide outdoor recreation plans be designed to provide a blueprint for meeting in an orderly fashion the present and future recreation needs of each State's citizens and visitors.

The State outdoor recreation plans can be most useful guides to local, State, and Federal agencies in decisionmaking, investment, and action to meet outdoor recreation needs. In doing this, they can also implement the President's Natural Beauty Program—all across the country.

The plans can be used to help build the necessary consensus of citizen support for investment of State, local, and private funds for outdoor recreation, conservation, and natural beauty objectives much greated than the investment of Federal funds through the land and water conservation grant program.

The plan will be more effective, more quickly, in more States, if the Bureau can provide adequate and timely assistance to the States in formulating that plan.

For example, last spring at Ann Arbor, Mich., the Bureau of Outdoor Recreation's Lake Central regional office in cooperation with the University of Michigan conducted a 1-week outdoor recreation planning seminar for State agency representatives from the nine States in the region. The seminar was a standing-room-only affair. The Bureau believes it is a result of this training session that the State plans from the Lake Central States appear—as a group—to be the highest quality of any region. The Bureau will export the Ann Arbor idea to its other regions during fiscal year 1967—after the first cycle of plans is completed.

The Bureau will issue technical bulletins on key statewide outdoor recreation planning problems in order to cross-pollinate the States with the best State-developed ideas and methods. Important data and information obtained in developing the nationwide outdoor recreation plan will be made available to the States.

Major changes in existing relationships (or lack of relationships) between State agency and city and county agency, between State government and city and county government, and between all levels of government and private sector need to be encouraged. This coordination can only be achieved if trained Bureau of Outdoor Recreation personnel are able to work with the State agencies in the field as plans are developed.

(c) Review of proposed projects covering planning, acquisition, or development. This function involves five steps of processing, including the receipt and review of the proposal, a preaward survey, complete evaluation, and final review. Upon receipt of a proposal, it must be logged in and given a control number; and file must be established and clerical and mathematical checks must be made.

The project officer evaluates the proposal according to established criteria. Care is given to see that proposals seek to provide quality environments and will enhance the capacity of the applicant to provide significant outdoor recreation opportunities. Consultations, as necessary, are held with representatives of other Federal, State, and local agencies, and on occasion with private groups and individuals. In some instances, it may be necessary to visit the site prior to award. Each project must be evaluated in relation to other projects to assure that the State is maintaining a balanced approach to meeting the needs set forth in the State plan. Careful judgments are needed to determine whether the needs of urban populations are being met and whether general interest needs are being considered along with special interest needs.

The project officer must ascertain the practices, procedures, and past performance of the applicant as these have a bearing on the project.

Findings and recommendations of the project officer are recorded and a letter is prepared informing the State of the Bureau's action.

The number of proposals to be received is estimated to increase from 2,600 in fiscal year 1966 to 5,660 in fiscal year 1967. In order to protect the Government's interests, the proposals must be given careful and complete review.

(d) Assure that acquisition and development project proposals are in accord with State plans: A critical point in the review of project proposals for acquisition and development grants is the determination of the manner and extent to which they are in accord with the State plans and with priorities set forth in the action programs in the State plans. Continuous updating of State plans, the application of new requirements from time to time, and rapid increase in the number of proposals as States become eligible for full participation in the program increases the Bureau's workload. Careful judgments are needed when reviewing project proposals to determine whether there is coordination with local government programs for comprehensive planning and compatibility with open-space acquisition and development planning and programing.

(e) Review of technical aspects of requests for planning assistance: Review of two types of planning proposals is required: (1) those which are to be financed with the Land and Water Conservation Fund, and (2) those which are to be financed with Department of Housing and Urban Development "701" funds as an element of State comprehensive planning.

(f) Administration of approved projects: It will be necessary in 1967 to carry out a systematic program to supervise projects underway which are estimated to number 4,250 during that year. This function represents a major part of the total increase under the grants-in-aid program.

Project progress reports must be reviewed, and on-site visits will be made, as necessary, to check for compliance with terms of the project agreements and for compliance with civil rights laws and regulations.

Title VI of the Civil Rights Act places a burden on the Bureau that has not existed previously. Under this act and based on instructions issued thereunder, it will be necessary to: (1) assure that States agree to comply, (2) obtain reports periodically on compliance and review these reports, (3) make on-site reviews to assure compliance and check with local sources, (4) investigate complaints, hold hearings, issue requests thereon, and take corrective action, and (5) report weekly and monthly on this activity.

Without prior experience, an accurate workload pattern cannot be projected, but it seems reasonable that title VI reviews (on a cycle basis) would run as high as 2,000 projects annually. Considerable travel will be involved.

The rate of progress on the project will also be measured. Consideration wil be given to proposed amendments of projects and negotiations will be conducted on changes which involve significant deviations from the scope of the original agreement or in the amount of assistance required. Requests for payments will be reviewed, comparing the amounts requested with the rate of progress reports.

In connection with the administration of the projects, it is estimated that engineering and appraisals review and action will be required on approximately 600 complicated appraisals, plans, and specifications. These reviews are essential to assure that Federal funds are not invested in overpriced lands or in projects

which will not provide a significant high quality increase in outdoor recreation facilities.

Approximately 850 projects are estimated to be completed in 1967 which will require final actions and settlements. In many cases, these completed projects will have to be inspected to assure that the project has been completed according to the project agreement and that the end product is a high-quality area or facility worthy of Federal support.

(*g*) Auditing grants to States: The estimate of $2,560,000 provides funds for auditing the expenditures made by States under projects approved by the Bureau. The audit function will be performed by qualified auditors in the Office of the Secretary rather than by Bureau personnel. It has been determined that various grants-in-aid programs administered by the Department of the Interior can be audited more economically on a centralized departmental basis than would be the case if each concerned Bureau established its own audit capability.

(*h*) Program development—Federal land acquisition: In fiscal year 1967, emphasis will be placed on the initiation of a project to coordinate the long-range Federal land acquisition with the master land use and development plans for each management unit (National Park Service, Forest Service, and Bureau of Sport Fisheries and Wildlife). This phase of the Federal land acquisition program has not as yet been given proper attention. It will be necessary to encourage agencies to develop master plans which include the designation of areas to be acquired for recreation purposes, stipulating major uses and priorities for acquisition and development. Such plans will form a base against which current year and long-range acquisition proposals can be evaluated. In 1967, acquisitions are proposed for over 100 management units, all of which should have master plans for land acquisition and development.

(*i*) Review and evaluation of areas proposed for acquisition: The review of the long-range and budget year programs constitute a major function of the Federal land acquisition program.

Acquisition programs proposed by the agencies must be reviewed for—

(1) Compliance with law, legislative intent, and executive policy;

(2) Compliance with program and planning objectives;

(3) Compliance with criteria prescribed by the Bureau for land acquisition; and

(4) Consistency with land use development plan at the National, State, and local levels.

There are listed in tentative order of priority, the general criteria applied to all acquisition proposals for the fiscal year 1967:

(1) Shall be consistent with the 5-year program.

(2) There is a clear and urgent need to acquire in fiscal year 1967 as contrasted to some subsequent year. An example might be an area within a newly authorized unit where there is urgent need to get the program going in order to establish the unit.

(3) There is danger of permanently losing the area for public recreation due to the imminent threat of development which might be inconsistent with existing or potential recreation use or environment.

(4) The area is close to urban centers (generally less than 125 miles) and will provide new opportunities which are now in short supply in the vicinity of the urban center.

(5) Costs per acre are now favorable but are escalating at rates which will preclude or make future acquisition difficult.

(6) The opportunity to acquire is present now and will be in the immediate future, but will not likely be present later (e.g., present owner is favorably disposed to sell at a reasonable price, but he or his successor may not be willing to do so later).

(7) The area is one where a comparatively high volume of use will occur per Federal dollar spent (including additional development, operation, and maintenance costs).

(8) The area is one where recreation fees may be charged after development or which will increase the carrying capacity of an existing designated area.

The tracts of land programed for acquisition in fiscal year 1968 must be reviewed in fiscal year 1967 and a more systematic review of appraisals for tracts to be acquired under the accumulated authorized programs for fiscal years 1966, 1967, and 1968 must be instituted.

The magnitude of this operation is set forth in the table below:

Comparative workload based on estimated cases (tracts) considered for acquisition during fiscal years 1966, 1967, and 1968

1966	2,017
1967	4,200
1968	7,500
Increase 1968 over 1967	3,300

(*j*) Reprograming.—The escalation of values and the removal of many of the programed properties from the market by the owners will result in an increased workload in reviewing reprograming actions proposed by the Federal agencies. Substituted tracts must be inspected and checked for conformance with overall plans and adherence to the criteria for lands to be acquired under the Land and Water Conservation Fund program as well as to the basis used in the establishment of fair market values.

(*k*) Coordination of recreation fees and designation of Federal charge areas.—This operation has a direct effect on the volume of recreation fees collected, and it is essential that the Bureau of Outdoor Recreation take a more active role in the coordination of area designation and fee application. During fiscal year 1966, the Bureau was not able to devote adequate efforts in reviewing at the field level the comparability of charges made at Federal, State, and private recreation facilities and the possibility of expanding the fee system to additional recreation areas operated by Federal agencies.

The number of designated areas at which fees were collected in 1965 is shown by the Bureau of Outdoor Recreation regions below:

Fee areas

BOR regions	*Number*
Pacific northwest	531
Pacific southwest	388
Mid-continent	829
Lake central	97
Northeast	81
Southeast	199
Total	2,125

It is believed that with proper time devoted to the study of other Federal areas, the above number of areas could be increased by about 25 percent.

Status of work.—The Bureau has completed 1 year of operation under the land and water conservation fund. Significant progress has been made in accomplishing program goals considering that funds were first made available only 7 months ago. By supplemental appropriation in May 1965, Congress made available $16 million for Federal and State purposes. In the 1966 regular appropriation act another $125 million was made available.

There follows a listing of accomplishments which gives a fairly clear picture of what has been done and the status of the program at this time:

(*a*) The Bureau conducted a 2-day meeting with all the States in Zion Park, Ill., in October 1964, to brief State representatives on plans and procedures expected to be developed in administering the program and to obtain the views of the State representatives on the various aspects of this program. Subsequent meetings were held in June 1965, with the States. A 2-day meeting was held in San Francisco for the Western States and a 2-day meeting was held in Chicago for the Eastern States. These latter meetings were arranged in order to review the procedures and guidelines developed by the Bureau in administering the program, to discuss planning requirements, and discuss the general mechanics of obtaining financial assistance. These meetings were very productive and assisted in establishing excellent relations with the States.

(*b*) Developed and issued a manual of instructions for use of the States covering criteria for developing statewide plans, procedures and criteria for obtaining grants for planning, acquisition, and development and general administrative aspects of the program.

(*c*) The Bureau's staff visited most of the States to assist in developing interim statewide plans and to advise the States on various matters concerning State participation in the program.

(*d*) Developed an apportionment formula for allocating funds to States under the provisions of the Land and Water Conservation Fund Act and computed and distributed to the States information on State apportionments for both the fiscal year 1965 and fiscal year 1966.

(e) The Bureau and the Department of Housing and Urban Development have developed satisfactory operating procedures for clearing statewide outdoor recreation plans under the provisions of Executive Order 11237. The Bureau has developed operational procedures for acting on acquisition projects located in urbanized areas and in urban places, as required by the order. These are now being reviewed by the Department of Housing and Urban Development.

(f) The tabulation shown below is a summation of the Bureau's actions on statewide outdoor recreation plans and on project proposals submitted by the States as of December 31, 1965:

(1) Total States involved (includes Guam, Virgin Islands, American Samoa, Puerto Rico, and the District of Columbia)	55
(2) State plans received	43
(3) State plans approved	29
(4) State plans expected prior to June 30, 1966	12
(5) Project proposals received covering planning, acquisition, and development	340
(6) Project proposals funded	69
(7) Federal funds obligated	$3,140,029
(8) Project proposals expected between Dec. 31, 1965, and June 30, 1966	2,260

(g) Prepared a draft of an Executive order, subsequently identified as 11200 providing for the designation of areas and establishment of user fees pursuant to the fund act.

(h) Developed a schedule of user fees and the Secretary's regulation's concerning such fees.

(i) Designed, printed, and distributed to selling locations the 1965 recreation/conservation stickers together with explanatory pamphlets and have designed the 1966 permit and drafted the necessary regulations.

(j) Issued guidelines to selling agencies on control and accountability of stickers and revenue therefrom.

(k) Prepared publications showing locations where stickers could be purchased and a listing of designated areas where the stickers would be valid.

(l) Developed an agreement with the American Automobile Association to sell stickers nationwide at no cost to the Government.

(m) Developed written guidelines for use of Federal agencies for recreation use measurement and reporting requirements.

(n) Reviewed and evaluated 1965, 1966, and 1967 fiscal years land acquisition programs of National Park Service, Forest Service, and Bureau of Sport Fisheries and Wildlife.

(o) Developed criteria and guidelines in cooperation with the concerned Federal agencies for use in (1) selecting the classes of lands that are to be acquired for recreation and other purposes from the fund, and (2) determining priorities of lands to be acquired.

(p) Prepared written guidelines for use of participating agencies in the development of the 1967 fiscal year land acquisition program and a long-range (5-year) land acquisition program.

(q) Developed criteria, forms, and guidelines for use by Federal land administering agencies in reprograming land purchases. The House and Senate reports on the fiscal year 1966 appropriations act formed the basis for such procedures. As of December 31, 1965, the Bureau had acted on 28 proposals to reprogram acquisitions amounting to a total of $1,584,234.

Itemization of estimates

	Actual 1965	Estimate 1966	Estimate 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$1,722,452	$134,263,333	$115,000,000	−$19,263,333
Transferred to: "Operating expenses, Public Buildings Services," General Services Administration		4,457		−4,457
Unobligated balance lapsing	9,758			
Unobligated balance available, start of year		−14,267,790	−5,000,000	+9,267,790
Unobligated balance available, end of year	14,267,790	5,000,000		−5,000,000
Appropriation	16,000,000	125,000,000	110,000,000	−15,000,000

Itemization of estimates—Continued

	Actual 1965	Estimate 1966	Estimate 1967	Increase (+) or decrease (−)
Obligations by objects:				
BUREAU OF OUTDOOR RECREATION				
11 Personnel compensation	$22,805	$660,000	$1,433,000	+$773,000
12 Personnel benefits	1,658	49,000	108,000	+59,000
21 Travel and transportation of persons	10,050	67,000	101,000	+34,000
22 Transportation of things	24	36,000	24,000	−12,000
23 Rent, communications, and utilities	4	72,000	78,000	+6,000
24 Printing and reproduction	648	86,000	90,000	+4,000
25 Other services		25,000	197,000	+172,000
Services of other agencies	700	376,000	456,000	+80,000
26 Supplies and materials	15,153	13,000	35,000	+22,000
31 Equipment	9,198	56,000	38,000	−18,000
41 Grants, subsidies, and contributions	204,167	89,548,000	69,440,000	−20,108,000
Total, Bureau of Outdoor Recreation	264,407	90,988,000	72,000,000	−18,988,000
ALLOCATION ACCOUNTS				
11 Personnel compensation	77	1,823,000	2,175,000	+352,000
12 Personnel benefits	3	135,000	162,000	+27,000
21 Travel and transportation of persons	961	343,000	306,000	−37,000
22 Transportation of things		29,000	30,000	+1,000
23 Rent, communications, and utilities		48,000	50,000	+2,000
24 Printing and reproduction		24,000	25,000	+1,000
25 Other services	21,083	1,627,000	1,567,000	−60,000
Services of other agencies		59,000	61,000	+2,000
26 Supplies and materials	876	215,000	193,000	−22,000
31 Equipment	950	101,000	89,000	−12,000
32 Lands and structures	1,434,095	38,871,333	38,342,000	−529,333
Total, allocation accounts	1,458,045	43,275,333	43,000,000	−275,333
Total obligations	1,722,452	134,263,333	115,000,000	−19,263,333
Obligations are distributed as follows:				
Bureau of Outdoor Recreation	264,407	90,988,000	72,000,000	−18,988,000
National Park Service	1,458,043	25,225,333	28,316,000	+3,190,667
Bureau of Sport Fisheries and Wildlife			1,514,000	+1,514,000
Forest Service		18,050,000	13,170,000	−4,880,000

Land and Water Conservation Fund

Chairman Hayden. Now, Mr. Crafts, will you please summarize your statement relating to the land and water conservation fund?

Mr. Crafts. The land and water conservation fund carries two principal parts, the State aid aspects and the Federal acquisition aspects. I would like first if I may to summarize where we stand with respect to the State aid aspects.

I would like to mention briefly the recreation permit and the income to the fund and then get to the Federal acquisitions, so I would like to touch on it in these four ways.

STATEWIDE RECREATION PLANS

With respect to the States, under the act, a statewide recreation plan needs to be prepared and then we can match the State acquisition and development projects 50–50. Insofar as the statewide rcreation plans are concerned, there are 42 States that have approved plans at this time, and this has all happened within this year.

There are five more that are pending and we expect the remaining eight very shortly. This sums up the total of 55 State and territorial plans that would be involved.

We can assist the States in planning projects; some 37 States have asked for such assistance and we have allocated some $2 million to the States for this purpose.

On the acquisition and development projects, 24 States have submitted acquisition projects totaling 150 individual projects, involving about $20 million of Federal matching funds and covering about 159,000 acres of land to be acquired by the States or by the local governments.

On the development projects, 31 States have come in with some 256 individual projects involving about $35 million, so I think the effective way to say this is that the State program is moving very rapidly at the present time.

The States without exception are responding to the requirements of the act to prepare and submit statewide recreation plans. As far as requests for acquisition and development projects some States are moving much more rapidly than others, but the number of projects submitted up to now have pretty well kept pace with the income to the fund.

Next year we expect to receive several thousand such projects from the States. The State programs I would say are going very well. They were a little slow getting started, as would be expected in a new program, but they are moving very rapidly at the present time.

I would say also that I think we have had very good working arrangements with the States. We have had numerous problems of interpretation of the law and questions of policy to decide in the new program this year, but in view of the size of the program and the number of States that we deal with, I personally am pleased with it and I think the States likewise are pleased with the way it has been moving.

LIMITATIONS ON FUNDS TO STATES

Chairman HAYDEN. Is there any limitation on the amount of money available for a particular project?

Mr. CRAFTS. Not for a particular project. The money is apportioned between States according to a formula. No State can receive more than 7 percent of the money in a given year, but there is no limitation on a particular project as such.

LOW REVENUES FROM SALE OF PERMITS

On the revenues which Senator Byrd inquired about, the money in the land and water conservation fund is, of course, dependent on the appropriation action of the Congress and if money does not accumulate in the fund there is no money to be appropriated.

We have been disappointed this year in the revenues from the sale of the annual permit, particularly. We had estimated about $25 million to come in from the sale of the annual permit. Instead of that there has been about $2 to $2½ million, only about 10 percent of what has been estimated.

There are a number of reasons for that. One is the slowness in getting started. Another is what you might call consumer resistance to paying to go into Federal areas which traditionally have been free. Another is the problem of training the Federal personnel to handle this program.

Another is the length of the recreation season, and adjustments that have been made in the annual fee as contrasted to the seasonal fee and the daily fee.

INCOME FROM SALE OF REAL ESTATE

The slack this year has been picked up for the most part by sales of Federal surplus real estate, which were larger than anticipated, and this income likewise goes into the fund. Next year the estimate and the budget request is for $110 million rather than $125 million. This is a $15 million reduction, and the prime reason for that is because the estimated income to the fund next year is smaller than we had expected a year ago.

ANTICIPATED INCOME FROM SALE OF PERMIT

We have reduced our sights, so to speak, but even with that reduction we are counting on an income from the annual permit of about $13 million next year instead of the $2½ million that we have gotten this year. The maintenance of income from the surplus property and fuel tax are estimated at about the same for next year. The permit system and the other user fees charged are going to be something different this year. This is the crux of our success in carrying this program forward over the next few years.

STATE-FEDERAL COOPERATION AND DIRECT FEDERAL LAND ACQUISITIONS

Senator BYRD. When you say "in carrying this program forward," precisely what are you talking about?

Mr. CRAFTS. I am talking about carrying forward the land and water conservation fund program, including the State aspects and also including the direct Federal acquisitions by the Forest Service, Park Service, and Bureau of Sport Fisheries and Wildlife. The simple fact of the matter is, if the money doesn't come into the fund the money isn't going out of the fund and the money won't get into the fund unless we can make a success of the recreation user fees which are an integral component of the four sources of moneys that do go into the fund.

PRICE ESCALATION OF REAL ESTATE

One of our problems is the question of price escalation of real estate which I think applies to both the proposed State acquisitions and I know it applies to the Federal acquisitions, particularly some of those areas more recently authorized by the Congress. I have particular reference to an area like the Delaware River Water Gap and the Assateague Island over on the Maryland shore, and Point Reyes out in California.

This is getting into the Federal acquisition part of it. I can talk to that a little bit later if you would like to have me.

FEDERAL LAND ACQUISITION PROGRAM

I might summarize for you just briefly now the Federal part of the program. I have covered the State part. I have covered the problem of revenues for the fund.

The Federal program which we are ready to put before you on a tract-by-tract basis proposes for the next year the sum of $28 million

to the National Park Service for some 34,000 acres, some $13 million to the Forest Service for the purchase of about 140,000 acres, and $1½ million to the Bureau of Sport Fisheries and Wildlife.

AVERAGE COST PER ACRE OF LAND

The average cost per acre of all of these Federal acquisitions next year is estimated at about $235 per acre, which, interesting enough, is quite similar to the estimated price of the proposed State acquisitions. I think perhaps I should also volunteer a comment at this point on the question of financing for the Redwoods Park proposal which was just the other day submitted to the Congress.

REDWOODS NATIONAL PARK

This is the reason why the National Park Service estimate for next year is substantially higher than the Forest Service estimate, because to arrange for this financing of $10 million recommended for the Redwoods Park, $5 million would come from otherwise planned acquisitions by the Park Service and $5 million from otherwise planned acquisitions by the Forest Service.

In subsequent years the moneys would come from the advance authorization which can become effective in fiscal year 1968 and I think, Mr. Chairman, perhaps I ought to stop at that point and respond to any questions you have.

COST AND FINANCING

Senator BIBLE. Might I ask a question there, Mr. Chairman, about the Redwoods?

Chairman HAYDEN. Yes.

Senator BIBLE. This bill has just been introduced. It has been referred to my Parks Subcommittee and is going to require some rather extensive hearings.

My impression is that it is not without controversy and that there are various proposals as to the size of this proposed park, Mr. Crafts. This is a legislative function and I don't want to take too much time, but do you have any particular idea as to how much the cost will be?

Mr. CRAFTS. Yes, Senator Bible. I have been deeply involved in working on this Redwoods Park proposal for the past year, ever since the President commissioned the Secretary to come up with the proposal. The estimated cost is about $60 million. This is for the administration proposal.

Senator BIBLE. That is what I am talking about, the administration proposal. This is the bill introduced by Senator Kuchel the day before yesterday?

FINANCING THE TIMBERLANDS PURCHASE PRIOR TO AUTHORIZATION

Mr. CRAFTS. Yes. As I was saying, the proposal is to finance it, assuming it is passed of course, by $10 million from the land and water fund next fiscal year and the remaining money the following fiscal year.

The cost factor in connection with developing a proposal for a Redwoods National Park is a very significant item. The old growth Redwood timberlands are costly and I would like to say this: In my

experience it is a little unusual to ask an appropriations committee or the Congress to propose financing something before it is authorized.

Senator BIBLE. This is what has me intrigued, too.

Mr. CRAFTS. This was discussed within the administration at length when it was decided to send up this proposal and we are prepared to offer your committee those specific acquisition items that would be activated by the Park Service or the Forest Service with your concurrence in the event the Redwoods legislation is not enacted this session.

ALTERNATIVES IF REDWOOODS LEGISLATION IS NOT ENACTED

In other words, what I am trying to say is that we would hope that the committee would give us some latitude to submit a reprograming proposal to you toward the end of the session in the event that the Redwoods legislation isn't passed, rather than to have the $10 million that is budgeted for the Redwoods be unavailable and go down the drain. So, I would like to have the opportunity here to take another look at this later in the session when we see how the legislation itself goes.

ALTERNATE PROPOSAL—REDWOOD CREEK

Senator BIBLE. The second question, and it is corollary to this, and I will move very quickly, Mr. Chairman, is what is the cost of the alternate bill or the amendments which were offered by Senator Metcalf on behalf of himself and others? This is a much larger park.

Mr. CRAFTS. A much larger park. It covers an area called Redwood Creek. It did not cover the area proposed in the administration bill. The cost would be twice as much or more.

Senator BIBLE. Twice as much as more?

Mr. CRAFTS. Twice as much or more, $120 million to $150 or $160 million, depending on how it finally works out.

Senator BIBLE. I can see, Mr. Chairman, we have our work cut out for us on the legislative committee.

ORIGINAL FOREST SERVICE LAND AND WATER CONSERVATION PROGRAM

Senator BYRD. Mr. Chairman, while we are on this subject I wonder if I might ask Mr. Nelson of the Forest Service a question or so. Mr. Nelson, how much money was involved in your original program for the Forest Service to be financed out of the land and water conservation fund?

Mr. NELSON. This budget carries $13.17 million for purchase out of the land and water conservation fund. If you are referring to the difference that would be involved because of the Redwoods Park——

Senator BYRD. Yes.

PROPOSED EXPENDITURE ITEM FOR REDWOODS NATIONAL PARK

Mr. NELSON (continuing). There would be an additional $5 million. We have prepared a program of $18.17 million.

Senator BYRD. The Forest Service is being asked to hold in abeyance the expenditure of $5 million which would have been available under the Land and Water Conservation Fund Act as a result of the

contemplated authorization of the Redwoods National Park; is that correct?

Mr. NELSON. That was an administration decision to make adjustments and include the park proposal in this submission.

Senator BYRD. I would presume that this is going to have some delaying effect on your going forward with your program. I would also presume that you have had some firm offers with willing sellers which will be held in abeyance until you can get this matter resolved?

Mr. NELSON. Dr. Crafts has indicated that he could put in the record a plan that would cover the part that would be available to the Forest Service, if the committee decided to make that additional $5 million available. It would involve a total of 279 cases and 45,000 acres of land at a cost of $5 million.

NEGOTIATIONS FOR LAND HELD IN ABEYANCE

We do have, as you indicated, a number of negotiations underway that would have to be dropped because of the $5 million change in our program. In fact, Senator Hayden, I believe one of those is an outstanding tract in Arizona on the Tonto National Forest.

ESCALATING COSTS OF LAND

Senator BYRD. I presume you might be confronted with escalating costs, too, at the time you are able to move forward if this money is not made available to you this year?

Mr. NELSON. I believe Mr. Crafts indicated in his testimony that the costs of land are going up, and we find that so in the purchase of Forest Service land as well as the park land.

EFFECT OF $5 MILLION DECREASE ON LAND ACQUISITION IN WEST VIRGINIA

Senator BYRD. Yes. How does the $5 million cut affect acquisition of lands in West Virginia, Mr. Nelson?

Mr. NELSON. In West Virginia if we had the $5 million added we would acquire 17 additional tracts totaling roughly 3,500 acres and the value would be about $294,000 in West Virginia.

SPRUCE KNOB-SENECA ROCKS, W. VA., LAND ACQUISITIONS

Senator BYRD. Are any of these in the Spruce Knob-Seneca Rocks National Recreation Area?

Mr. NELSON. Yes; six tracts would be in the Spruce Knob area valued at somewhere around $200,000.

Senator BYRD. Six tracts?

Mr. NELSON. Six tracts, about 1,700 acres.

LIST OF LAND PARCELS IN WEST VIRGINIA DELETED BY PROGRAM REDUCTION

Senator BYRD. Would you provide for the record, Mr. Nelson, a list of the parcels in West Virginia which would be involved in the $5 million?

Mr. NELSON. We will supply that list with the acreage in each tract. You understand why we don't like to identify the cost with individual tracts.

Senator BYRD. Yes. If you will please, do that.
(The information follows:)

Monongahela National Forest:

Tract number:	Acres	
874	40	
875	50	
876	125	
877	90	
878	263	
879	60	
880	130	
881	100	
882	100	
883	92	
394	800	
Total, 11 tracts	1,850	$98,285

Spruce Knob-Seneca Rocks National Recreation Area, Monongahela National Forest:

Tract number:	Acres	
868	460	
869	25	
870	127	
871	400	
872	242	
873	425	
Total, 6 tracts	1,679	195,399
Total West Virginia: 17 tracts	3,529	293,684

STATUTORY LIMITATION ON GEOGRAPHICAL LAND PURCHASES IN FOREST SERVICE AND NATIONAL PARK SERVICE

Senator BYRD. As I understand it, the authorization bill has not been considered. Wasn't about 85 percent of the Land and Water Conservation Fund Act moneys originally intended for acquisition of lands in the East?

Mr. NELSON. As far as the Forest Service portion, the law requires that not over 15 percent of the land be purchased in the West, west of the 100th meridian; 85 percent or more of the land has to be purchased east of the 100th meridian. That applies only to the Forest Service. This 1967 program proposes to acquire 141,000 acres in the East. This is 95 percent of our program.

Mr. CRAFTS. Under the statute it applies only to the Forest Service. In connection with the proposals, however, for next year this is true with the National Park Service as well as the Forest Service. The bulk of the acquisition expenditures will be in the eastern part of the country.

EFFECT ON ACQUISITIONS OF DESIGNATION OF $5 MILLION FOR REDWOODS NATIONAL PARK

Senator BYRD. I must say, Mr. Chairman, I have to view with some consternation, concern, surprise, and shock the proposal to withhold $5 million from the Forest Service in particular until we can get an authorization bill passed, and this, as Mr. Crafts has stated and as Senator Bible has indicated, is somewhat of a strange procedure.

Mr. CRAFTS. Senator Byrd, may I make a couple of comments?

I think it would likewise be equitable as long as we are into this question to give you a summary or give the committee a summary not only of the Forest Service acquisitions that would be affected, but also of the acquisitions that would be affected by the National Park Service because $5 million is now proposed for the Redwoods Park from the Park Service allocation as well as the Forest Service, and we would like to give the total picture rather than just one agency picture.

(The information follows:)

State and management unit	Forest Service	National Park Service
Alabama: National forests	$19,000	
Arkansas:		
Ouachita National Forest	108,743	
Ozark National Forest	92,000	
Total, Arkansas	200,743	
Arizona: Tonto National Forest	680,000	
California: Whiskeytown Shasta-Trinity National Recreation Area	250,000	
Georgia: National forests	447,700	
Idaho: Targhee National Forest	34,500	
Illinois: Shawnee National Forest	251,460	
Indiana: Hoosier National Forest	174,123	
Kentucky: Cumberland National Forest	241,500	
Maryland: Assateague Island National Seashore		$500,000
Massachusetts: Minute Man National Historic Park		500,000
Michigan:		
Hiawatha National Forest	245,496	
Huron-Manistee National Forest	77,150	
Ottawa National Forest	3,600	
Total, Michigan	326,246	
Minnesota:		
Chippewa National Forest	52,500	
Superior National Forest	115,136	
Total, Minnesota	167,636	
Mississippi: National forests	99,500	
Missouri:		
Clark National Forest	148,925	
Mark Twain National Forest	527,293	
Total, Missouri	676,218	
New Jersey: Delaware Water Gap National Recreation Area		2,339,500
New York: Fire Island National Seashore		1,000,000
Ohio: Wayne National Forest	252,735	
Pennsylvania: Allegheny National Forest	357,500	
Tennessee: Cherokee National Forest	392,935	
Utah: Zion National Park		141,700
Virginia:		
Jefferson National Forest	66,340	
Mount Rogers National Recreation Area	45,180	
Total, Virginia	111,520	
Washington: Okanogan National Forest	23,000	
West Virginia:		
Monongahela	98,285	
Spruce Knob-Seneca Rocks National Recreation Area	195,399	
Total, West Virginia	293,684	
Wyoming: Grand Teton National Park		518,800
Grand total, all States	5,000,000	5,000,000

ALLOCATION OF FUNDS AMONG FEDERAL AGENCIES IN PROPORTION TO VISITORS USE

Mr. CRAFTS. I should also say to you that there is nothing in the legislative history of the fund account nor in the Appropriations Committee history last year that indicates or gives any guidance as to the division of the Federal moneys between the various Federal agencies, as between the Forest Service, the Park Service, the Bureau of Sport Fisheries and Wildlife.

There are very specific guidelines as to division between the States on the one hand and the total Federal item on the other hand, but not as between agencies. This is a matter of decision and recommendation by the administration to the Congress at this time and a matter for ultimate decision by the Congress.

Perhaps this would be the point where I should insert in the record the report which this committee directed be prepared a year ago with respect to visitor use because there is one part of the Land and Water Conservation Act that suggests that possibly the allocations of moneys between the Federal agencies should be in proportion to the paid entrance or admission fees, and I would say that the recommended division between agencies for next fiscal year is roughly in the percentage of paid admission use, so if I may, Mr. Chairman, I would like to submit that to you at this time.

Chairman HAYDEN. That may be done.

(The information follows:)

Agency	Total visitor-days	At designated areas		
		Admission and entrance fees	Other fees	Total
National Park Service	52,693,000	27,505,000	72,000	27,577,000
Bureau of Sport Fisheries and Wildlife	5,670,650	159,355		159,355
Bureau of Reclamation	21,300,000		180,000	180,000
Bureau of Land Management	10,947,000	1,000		1,000
Forest Service	138,060,200	17,290,000	[1] 533,500	17,823,500
Corps of Engineers	60,132,590			
Tennessee Valley Authority	38,006,741		58,556	58,556
Total	326,810,181	44,955,355	844,056	45,799,411

[1] Includes 225,900 visitor-days at areas where both entrance and special use fees were charged.

NOTE.—The above data cannot be compared with statistics given in previous years as the following definition of a visitor-day was used for the 1st time in calendar year 1965 by all agencies:

Visitor-day: A visitor-day shall consist of an aggregate of 12 visitor-hours.

Visitor-hour: A visitor-hour is defined as the presence of 1 or more persons for recreation purposes in a recreation area for continuous, intermittent, or simultaneous periods of time aggregating 1 hour; e.g., 1 person for 1 hour, 2 persons for ½ hour each, n persons for $1/n$ hours each.

U.S. DEPARTMENT OF THE INTERIOR,
BUREAU OF OUTDOOR RECREATION,
Washington, D.C.

COORDINATION MEMORANDUM NO. 1—RECREATION USE MEASUREMENT AND REPORTING REQUIREMENTS

Pursuant to the requirements of section 2(g) of Public Law 88–29, and consistent with the authority vested in the Secretary of the Interior, by section 6 of Executive Order 11200, and redelegated by him to the Director, Bureau of Outdoor Recreation, the following measures are hereby promulgated:

Section 1: The heads of the National Park Service, the Bureau of Land Management, the Bureau of Sport Fisheries and Wildlife, the Bureau of Reclamation, the Forest Service, the Corps of Engineers, the Tennessee Valley Authority, and the U.S. Section of the International Boundary and Water Commission

(United States and Mexico), shall report annually on a calendar year basis to the Director, Bureau of Outdoor Recreation, recreation use at each area under their respective direct administration. The first report will cover the calendar year 1965 and should be submitted prior to March 1, 1966.

Section 2: For purposes of this memorandum the term "area" is defined as a major agency management unit; i.e., national parks, national monuments, national recreation areas, national forests, national forest purchase units, water resource projects or major units or reservoirs thereof, wildlife management refuges, or comparable management units.

Section 3: Recreation use shall be reported in standard units of visitor-days. A visitor-day shall consist of an aggregate of 12 visitor-hours. A visitor-hour is defined as the presence of one or more persons for recreation purposes in a recreation area for continuous, intermittent, or simultaneous periods of time aggregating 1 hour; e.g., one person for 1 hour, two persons for one-half hour each, n persons for $1/n$ hours each.

Section 4: Areas shall be divided into two types of units for reporting purposes; (1) "Designated areas" pursuant to sections 1, 2, and 3 of Executive Order 11200, and (2) "other areas" that are not so designated. Recreation use reports shall distinguish between (1) "designated area" visitation within each area upon which a report is prepared, and (2) "other area" visitation. Recreation use reports for "designated areas" will further distinguish between (1) visitation where admission or entrance fees are charged, and (2) visitation where other recreation fees are charged, whether or not admission or entrance fees are charged.

EDWARD C. CRAFTS, *Director.*

ESCALATION OF LAND PURCHASE COSTS

Senator BYRD. Mr. Chairman, if you will indulge me for one further question, please, while we are on this subject, I would like to ask Mr. Nelson to express whatever concern he may have with regard to this procedure of withholding $5 million from the Forest Service while we await an authorization measure which would allow that money to be spent for the Redwoods National Park.

What is likely to be the result, Mr. Nelson, in regard to escalating costs? This is going to prove to be somewhat of a costly delay, isn't it?

Mr. NELSON. In the first place I think I ought to make it clear that the Forest Service does back the administration's position as does the Department of Agriculture. You are correct, however, as has been indicated before, that any delay in the acquisition of land does cost more in the end.

We have had a number of records which show that the cost of lands are going up, the recreation lands particularly, and the rural lands as a whole. In fact, purchases that we have made in the Forest Service indicate that with respect to the lands that have been purchased the valuation has been going up faster than the indexed value of farmland. It has been on an escalating basis, so any delay, either to us or the Park Service or any place, is going to cost money as it is delayed, I am sure. It also probably applies to Redwoods Park.

Senator BYRD. Yes, but that hasn't been authorized.

Mr. NELSON. I realize that.

Senator BYRD. You can't help that and neither can we on this committee.

SHORTAGE OF RECREATION LANDS IN EAST

Mr. NELSON. In the national forest purchase program, this program calls for 95 percent of our purchases to be in the East and 100 percent of these purchases will be within 3 hours' driving time of

urban centers, so we do feel that the purchases that we propose have a tremendous value in supplying the recreation lands in the East where the Outdoor Recreation Commission indicated there was a shortage of and need for recreation lands. Our program is all within the national forest system where Congress has authorized purchase—some are within areas newly designated by the Congress such as the Spruce Knob-Seneca Rocks National Recreation Area.

SUPPORT FOR POSITION OF ADMINISTRATION

Senator BYRD. You say that the Forest Service supports the administration's position?

Mr. NELSON. We certainly do.

Senator BYRD. In this matter?

Mr. NELSON. Yes; and the Department of Agriculture supports the administration's position.

Senator BYRD. Of withholding $5 million until you get authorization for the Redwoods National Park?

Mr. NELSON. We always support the administrations position in the Department of Agriculture. We could, however, use the $5 million very handily. It would allow us to buy needed recreation land and still allow us to buy such land prior to the time of escalation in price. We have options or negotiations so that we know we can handle it all right.

Senator BYRD. I realize your sensitive position, Mr. Nelson. It is not good to oppose the administration perhaps, but either there is something about this that I don't understand or——

URGENCY OF FUNDS FOR REDWOODS AREA

Mr. CRAFTS. May I make one comment on this, Senator Byrd?

I think this should be in the record of this discussion. Certainly the administration recognizes the unusual features of this, of submitting an expensive park proposal and providing for partial financing of it in advance of its authorization.

I think a fundamental reason for this, and this is what I would like to get in the record, is because of the fact that if a portion of the old growth redwoods which take 2,000 years or more to grow are not put into a park within the next year or 18 months there isn't going to be any potential for a national park there. This is the urgency, and I think this situation to my knowledge is unparalleled. It doesn't diminish the importance of other acquisitions for the Forest Service or other acquisitions for the Park Service, but some way, somebody has to put first things first. Ultimately it becomes this committee in directing how this money will be spent. The redwoods are not only of national uniqueness, they are of world uniqueness. If you know that area and know what redwoods are now in State parks, know what redwoods are now being cut by the different companies at the different rates, what old growth redwood there will be a few years hence, these are the reasons for the urgency and for the unusual aspect of, in effect, submitting the two proposals simultaneously.

Senator BYRD. I can appreciate that, Mr. Crafts, and I am very glad to have that explanation, and I think I would have to share that view. I am glad to know that you will press for authority to move ahead with the other items in the event that the authorization of the Redwoods National Park is delayed.

STATE RECREATION PLANS APPROVED

Chairman HAYDEN. How many statewide recreation plans have been approved?

Mr. CRAFTS. About 42, Senator Hayden.

Chairman HAYDEN. Will you please list them in the record?

Mr. CRAFTS. Yes, I will be happy to.

(The information follows:)

Alaska	Michigan	Oregon
Arizona	Minnesota	Pennsylvania
Arkansas	Mississippi	Rhode Island
California	Missouri	South Carolina
Colorado	Montana	South Dakota
Connecticut	Nebraska	Texas
Hawaii	Nevada	Vermont
Idaho	New Hampshire	Virginia
Illinois	New Jersey	Washington
Indiana	New Mexico	West Virginia
Kansas	New York	Wisconsin
Louisiana	North Dakota	District of Columbia
Maine	Ohio	Puerto Rico
Massachusetts	Oklahoma	American Samoa

PROPOSED FISCAL YEAR 1967 APPORTIONMENTS TO STATES FROM LAND AND WATER CONSERVATION FUND

Chairman HAYDEN. For assistance to States in the coming fiscal year you propose $64,440,000. Will you please furnish for the record a breakdown of the amounts which it is proposed will be available to each of the States?

Mr. CRAFTS. We would be glad to do that, sir.

(The information follows:)

Proposed fiscal year 1967 apportionments to States from land and water conservation fund (using formula attached to apportion $64,440,000 requested for the States in the fiscal year 1967 budget)

[In thousands of dollars]

States	Factors			Total
	1. Equality	2. Population (total gross population, 50 percent) (total urban population, 50 percent)	3. Federal resources	
Alabama	515.5	399.1	114.9	1,029.5
Alaska	515.5	25.2	34.3	575.0
Arizona	515.5	213.7	85.1	814.3
Arkansas	515.5	203.5	60.5	779.5
California	515.5	2,679.6	119.3	3,314.4
Colorado	515.5	261.1	84.5	861.1
Connecticut	515.5	386.3	84.2	986.0
Delaware	515.5	62.9	16.3	594.7
Florida	515.5	795.6	127.8	1,438.9
Georgia	515.5	502.3	70.3	1,088.1
Hawaii	515.5	96.5	25.5	637.5
Idaho	515.5	75.0	40.5	631.0
Illinois	515.5	1,477.1	323.1	2,315.7
Indiana	515.5	595.8	176.7	1,288.0
Iowa	515.5	313.2	133.7	962.4
Kansas	515.5	270.6	101.9	888.0
Kentucky	515.5	335.3	48.4	899.2
Louisiana	515.5	434.0	147.9	1,097.4
Maine	515.5	110.8	53.1	679.4
Maryland	515.5	462.1	106.9	1,084.5
Massachusetts	515.5	757.3	146.5	1,419.3

Proposed fiscal year 1967 apportionments to States from land and water conservation fund (using formula attached to apportion $64,440,000 requested for the States in the fiscal year 1967 budget)—Continued

[In thousands of dollars]

States	Factors			Total
	1. Equality	2. Population (total gross population, 50 percent) (total urban population, 50 percent)	3. Federal resources	
Michigan	515.5	1,085.1	255.5	1,856.1
Minnesota	515.5	432.8	172.7	1,121.0
Mississippi	515.5	230.6	56.3	802.4
Missouri	515.5	565.7	150.8	1,232.0
Montana	515.5	78.4	128.5	722.4
Nebraska	515.5	168.6	110.1	794.2
Nevada	515.5	57.5	29.1	602.1
New Hampshire	515.5	78.5	10.1	604.1
New Jersey	515.5	989.7	195.9	1,701.1
New Mexico	515.5	128.4	105.1	749.0
New York	515.5	2,587.3	557.9	3,660.7
North Carolina	515.5	495.1	114.9	1,125.5
North Dakota	515.5	63.6	83.9	663.0
Ohio	515.5	1,352.5	314.5	2,182.5
Oklahoma	515.5	304.2	85.5	905.2
Oregon	515.5	231.2	89.2	835.9
Pennsylvania	515.5	1,501.7	343.8	2,361.0
Rhode Island	515.5	132.7	26.0	674.2
South Carolina	515.5	259.9	97.9	873.3
South Dakota	515.5	70.6	93.7	679.8
Tennessee	515.5	432.5	93.3	1,041.3
Texas	515.5	1,408.9	458.7	2,383.1
Utah	515.5	132.5	54.1	701.8
Vermont	515.5	39.5	16.6	571.6
Virginia	515.5	516.2	96.1	1,127.8
Washington	515.5	380.0	81.3	976.8
West Virginia	515.5	180.0	57.3	752.8
Wisconsin	515.5	510.1	166.1	1,191.7
Wyoming	515.5	39.6	82.3	637.4
District of Columbia	[1] 200.0	125.2	22.2	347.4
Puerto Rico	[1] 200.0	271.6	75.0	546.6
Virgin Islands	[1] 75.0	4.6	1.2	80.8
Guam	[1] 75.0	8.4	2.2	85.6
American Samoa	[1] 75.0	2.5	1.5	79.0
Total	25,775.0	25,322.4	6,330.7	58,053.1
Contingency				3,222.0
Out-of-State visitor use factor				3,164.9
Total				64,440.0

[1] Supplemental apportionments to territories, Puerto Rico, and District of Columbia.

NOTE.—Maximum State entitlement under the act would be 7 percent of $64,440,000 or $4,510,800.

STATE PARTICIPATION IN OUTDOOR RECREATION PROGRAM

Chairman HAYDEN. Are there any States not participating in the outdoor recreation program? If so, what is the reason for their not being active?

Mr. CRAFTS. The only States that have not participated up to now are the seven States or territories which have not submitted their plans to us. Actually they are participating, because we know these plans are under preparation and we expect to receive them shortly, so I think it is more appropriate to say that all States are participating. There are seven States, however, that have not moved as fast as the others and have not submitted their plans to us. I can name those States. Those are the States of Alabama, Delaware, Georgia, North Carolina, Tennessee, Utah, and the Virgin Islands.

STATUS OF FEDERAL LAND ACQUISITIONS

Chairman HAYDEN. Please furnish for the committee record a statement showing the status of the proposed acquisitions for which funds were provided in fiscal years 1965 and 1966. This might be done by a listing of the proposed purchases which have not been made, to which should be appended an indication of why they were not made.

Mr. CRAFTS. You ask this for the record, Senator?

Chairman HAYDEN. Yes.

Mr. CRAFTS. Yes, we will be glad to submit this.

(The information follows:)

1965 fiscal year supplemental

ALASKA

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
GLACIER BAY NATIONAL MONUMENT			
1. Coffin	63.71		0.20 acre non-Federal remaining in another Alaska NPS area.
Total	63.71	282.85	

ARIZONA

ORGAN PIPE CACTUS NATIONAL MONUMENT			
5. Gray	157.60		41,015.96 acres non-Federal land remaining within other NPS areas in Arizona.
Subtotal	157.60	2,025.64	
SAGUARO NATIONAL MONUMENT			
54-58. Fuller Evangelistic Foundation	101.60		
37, 39, 40. Elkins	71.35		
Subtotal	172.95	2,283.45	
Grand total	330.55	4,309.09	

CALIFORNIA

KINGS CANYON NATIONAL PARK			
43. Ranch Development Corp	40.00		123,878.78 acres non-Federal lands remaining within other NPS areas in California.
124. Sierra Club	80.00		
Subtotal	120.00	824.52	
LASSEN VOLCANIC NATIONAL PARK			
9B. Hunt	0.42		
9C. Able	.49		
9D. Ingram	.75		
9E. Adams	.37		
9F. Dabrasky	1.44		
9G. Bishop	.50		
9H. Hart	1.64		
9I. McGee	.58		
9J. Edwards	.42		
9K. McLellar	.23		
9M. Ketchall	.20		
Subtotal	7.04	799.66	

1965 fiscal year supplemental—Continued

CALIFORNIA—Continued

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
PINNACLES NATIONAL MONUMENT			
15. Kelly	320.00		
16. Jolly	400.00		
18. Juri	160.00		
Subtotal	880.00		
SEQUOIA NATIONAL PARK			
20. Loverin et al	320.00		
19. Visalia Land Co	44.55		
18. Clark	168.32		
Subtotal	532.87	917.00	
YOSEMITE NATIONAL PARK			
9-B-19, 73, 111, 119. Bondshee	36.22		
Subtotal	36.22	2,779.45	
Grand total	1,576.13	5,320.63	

COLORADO

DINOSAUR NATIONAL MONUMENT (SEE ALSO UTAH)			
38, 38-A, 46, 47, 48, 79, 80. Chew	1,906.17		2,785.83 acres non-Federal lands remaining in other NPS Colorado areas.
31. Alexander	80.00		
50, 53. Mantle	520.00		
88, 89. Caldwell	314.79		
96. Tuttle	81.40		
65. Knute Larson	200.00		
W. R. Chew (S.E.)	352.80		
Subtotal	3,455.16	1,952.72	
BLACK CANYON OF THE GUNNISON NATIONAL MONUMENT			
1. Sanburg	139.17		
Subtotal	139.17	399.98	
GREAT SAND DUNES NATIONAL MONUMENT			
5, 6, 7. White	620.00		
8, 9, 10. Divide Cattle Co	390.00		
Subtotal	1,010.00	750.44	
MESA VERDE NATIONAL PARK			
5. Hindmarsh	232.14		
Subtotal	232.14	315.61	
ROCKY MOUNTAIN NATIONAL PARK			
314-A Dick	4.50		
Subtotal	4.50	1,882.85	
Grand total	4,840.97	5,308.60	

IOWA

EFFIGY MOUNDS NATIONAL MONUMENT			
Ferguson	5.00		
Total	5.00	88.70	

1965 fiscal year supplemental—Continued

MISSISSIPPI

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
NATCHEZ TRACE PARKWAY			
Llewellyn	1.97		0.50 acre of non-Federal land, other than the above, remains in another Mississippi NPS area.
Subtotal	1.97	[1] 10,100	
VICKSBURG NATIONAL MILITARY PARK			
Mary Hebler	1.00		
199. A. Logue	93.49		
201. Latham	.06		
195. Farris	1.50		
240. Harpo	58.00		
270. Hebler	5.00		
196. Bowen	.52		
197. Plummer	20.00		
246. Logue	10.00		
247. Van Duzor	1.00		
248. Shy	4.00		
249. Douglas	6.42		
260. Bobb	4.00		
207. Price	13.93		
208. Haley	.56		
209. Brown	1.60		
210. Harris	2.15		
211. Vaughn & Jones	.85		
278. Hunt	1.18		
279. Garrott	5.50		
280. Fisher	1.00		
311A. Downey	4.00		
311B. Ellis (Hatchett)	1.00		
241. Kleinman	40.00		
242. W. Washington	5.00		
243. M. Washington	1.40		
312. Nutt	5.00		
217. Jones	1.00		
218. Hyman	1.00		
219. Jue	1.00		
220. Rials	1.00		
221. Cogan	1.00		
222. Hyman	1.00		
223. Jue	1.00		
224. Willis & Simpkins	1.00		
225. S. & W. Lyon	1.00		
226. Willis	1.00		
227, 228, 229. Willis	1.00		
	1.00		
	1.00		
230. Wm. Bliss	1.00		
231. W. Bliss	1.00		
232. S. Hardee	1.00		
233, 234. Hill	1.00		
	1.00		
235. Horton	1.00		
236. Matthews	1.00		
237. Sherman	1.00		
238. Burk	1.00		
239. Peters	1.00		
245. Corneil	24.00		
250. M. Emfinger	3.00		
251. E. Emfinger	1.00		
252. M. Emfinger	3.00		
253. B. Emfinger	1.00		
254. F. Agraham	7.00		
261. Holler	2.00		
262. Kirchmayer	2.00		
263. Francis	.50		
266. Jones	.50		
267. Jones	1.00		
268. Jones	2.00		
212. Rogers	4.00		
213. Anderson	2.25		
214. Harwood	8.00		
281. Morrisey	.70		

See footnotes at end of table.

1965 fiscal year supplemental—Continued

MISSISSIPPI—Continued

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
VICKSBURG NATIONAL MILITARY PARK—con.			
282. Howard	1.17		
283. Moore	1.13		
284. Braxton	2.50		
285. Dornbusch	.93		
286. Cook	1.24		
287. Wilkerson	.94		
288. Stokes	1.00		
289. Monroe	1.02		
290. Smith	1.07		
291. McCrey	1.10		
292. Murphy	.16		
293. Murphy	.18		
294. Murphy	.18		
295. Pugh	.08		
296. Reynolds	.07		
297. Murphy	.11		
298. Murphy	.12		
299. Murphy	.15		
300. Barrier	.16		
301. Jones	.11		
302. Jones	.11		
303. Jones	.12		
304. Robinson	.11		
305. Robinson	.12		
306. Robinson	.19		
307. Jacob	.09		
308. Jacob	.09		
309. Jacob	.09		
310. Joyner	.11		
215. Grandison	1.00		
244. Walton	40.00		
313. Rodenbaugh	5.00		
314A. Rudd	1.00		
314B. King	.50		
216. Hall	3.00		
198. Tunstall	28.72		
264. McIntosh	8.00		
265. Kolb	4.00		
Subtotal	478.78		
Grand total	480.75	10,100	

MINNESOTA

GRAND PORTAGE NATIONAL MONUMENT			
235. Hennery et al	56.37		6.65 acres non-Federal land in the only other Minnesota NPS area.
120. Pigeon River Lumber Co	20.30		
Total	76.67	378.33	

MONTANA

BIG HOLE NATIONAL BATTLEBIELD			
Subtotal	119.89	186.11	8,566.06 acres of non-Federal land in another Montana NPS area.
GLACIER NATIONAL PARK			
210. Hogland	.70		
Subtotal	.70	2,852.78	
Grand total	120.59	3,038.89	

See footnotes at end of table.

1965 fiscal year supplemental—Continued

NORTH DAKOTA

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
THEODORE ROOSEVELT NATIONAL MEMORIAL PARK			
McEntee	176.30		
Total	176.30	1,281.36	

NORTH CAROLINA [2]

GREAT SMOKY MOUNTAINS NATIONAL PARK (ALSO SEE TENNESSEE)			
1392-1393. Welch	209.00		285.10 acres of non-Federal land remaining in other North Carolina NPS areas.
264-a-2. Linor-Robinson	1.50		
268, 269. Hannah	61.60		
272. Sutton	22.70		
273. Phillips	32.80		
274. Phillips	38.90		
275. Leatherwood	66.30		
Total	432.80	2,500.00	

NEW MEXICO

CAPULIN MOUNTAIN NATIONAL MONUMENT			
1. Southwestern Monument	40.00		10,488.27 acres of non-Federal lands remain within other New Mexico NPS areas.
Total	40.00	55.00	

PENNSYLVANIA

FORT NECESSITY NATIONAL BATTLEFIELD			
Spaw	20.00		549.43 acres non-Federal lands remaining in the Pennsylvania NPS area.
Subtotal	20.00	125.65	
INDEPENDENCE NATIONAL HISTORICAL PARK			
712-714. Market St. Realty Co	.17		
Subtotal	.17	5.84	
Grand total	20.17	131.49	

SOUTH DAKOTA

BADLANDS NATIONAL MONUMENT			
19. Leiby	139.40		32.50 acres non-Federal land remains in another South Dakota NPS area.
5. Hocking	555.16		
Total	694.56	8,798.96	

See footnotes at end of table.

1965 fiscal year supplemental—Continued

TENNESSEE

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
GREAT SMOKY MOUNTAINS NATIONAL PARK (ALSO SEE NORTH CAROLINA)			
1399. Huskey	45.40		3,364.47 acres of non-Federal land in other Tennessee NPS areas.
1398. Dudley	33.80		
1159-a. Valentine Nursery	10.00		
1404. Burnett	62.00		
1403. Profitt	20.10		
1179-a-6. Brownlie	7.40		
1179-a-5. Valentine	5.90		
1179-a-4. Stokeley	2.40		
1179-a-7. Ball	1.70		
1179-a-8. Jenkins	.20		
1400. Reagan	30.00		
Total	218.90	[3] 1,725.00	

TEXAS

BIG BEND NATIONAL PARK			
20-39, 41-51. 32 owners	620.00		100,389.59 acres of non-Federal lands in other Texas NPS areas.
Total	620.00	1,062.80	

UTAH

DINOSAUR NATIONAL MONUMENT (ALSO SEE COLORADO)			
77. AuMiller	271.99		63,160.82 acres of non-Federal lands in other Utah NPS areas.
Subtotal	271.99	6,068.44	
CAPITOL REEF NATIONAL MONUMENT			
4. Gifford	12.28		
Subtotal	12.28	2,534.66	
ZION NATIONAL PARK			
6, 7, 8, 9. E. Lee	1,899.58		
Subtotal	1,899.58	11,061.92	
Grand total	2,183.85	19,665.02	

VIRGINIA

BLUE RIDGE PARKWAY			
Mattox	138.52		24,328.83 acres of non-Federal lands in other Virginia NPS areas.
Subtotal	138.52	[4] 400.00	
COLONIAL NATIONAL HISTORICAL PARK			
508 (part). Murray et al	70.00		
252. Rischardson	3.05		
Subtotal	73.05	2,334.15	
Grand total	211.57	2,734.15	

See footnotes at end of table.

1965 fiscal year supplemental—Continued

WASHINGTON

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
MOUNT RAINIER NATIONAL PARK			
3. Eagle Peak Copper Mining Co.	41.32		8,042.10 acres non-Federal lands remain in other Washington NPS areas.
4. Eagle Peak Copper Mining Co.	4.75		
Total	46.07	155.84	

WYOMING

DEVILS TOWER NATIONAL MONUMENT			
Thurman	80.00		
Subtotal	80.00		
FORT LARAMIE NATIONAL HISTORIC SITE			
1. Foote	136.18		
Subtotal	136.18	57.30	
GRAND TETON NATIONAL PARK			
93B. Craighead	9.60		
99. Smith	2.50		
Subtotal	12.10	7,809.91	
Grand total	228.28	7,867.21	

[1] State of Mississippi, similar to other States in which the Natchez Trace Parkway is located, is donating the lands needed for parkway construction and wayside beautification. The State will make further donations of almost 10,000 acres. This Service, pursuant to the act of June 30, 1961 (75 Stat. 196), is authorized to purchase lands with dangerous access roads leading into the parkway and to acquire lands to round out boundaries and adjust ownership lines.

[2] *Cape Hatteras National Seashore.*—Fee simple title to all lands vests in the United States. Numerous declarations of taking filed in condemnation suits to adjudicate value and/or title through no default of the National Park Service have been pending many years. Available estimates of value furnished by a disinterested appraiser at the date of filing indicated that available donated funds would suffice to satisfy judgments. In 1956 to meet the then anticipated deficit in funding, the passage of the act of Aug. 6, 1956 (70 Stat. 1066), authorized the expenditure of appropriated funds in the amount of $250,000 when matched by donated funds. This matching was accomplished. To date $88,000 of the appropriated funds have been expended. The balance of the monetary authorization of $162,000 is needed to satisfy the pending deficiency judgments.

No remaining non-Federal acreage in Cape Hatteras National Seashore except minor State road reservations.

[3] State of Tennessee is donating to the United States lands to comprise Foothills Parkway—a part of the park.

[4] Most of the lands within the Blue Ridge Parkway have been donated to the United States by the respective States through which it passes. This Service pursuant to the act of June 30, 1961 (75 Stat. 196), is authorized to purchase lands with hazardous access into the parkway and to acquire lands to round out boundaries and adjust ownership lines.

NOTE.—Total estimated cost of unacquired tracts, $2,002,207.

1966 fiscal year

ALASKA

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
GLACIER BAY NATIONAL MONUMENT			
Alaska Native Service	197.95		0.20 acre non-federal land remaining in another Alaska NPS area.
Total	197.95	84.90	

1966 fiscal year—Continued

ARIZONA

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
CHIRICAHUA NATIONAL MONUMENT			
1-C. Stark	26.04		17,593.68 acres of non-Federal land remaining in other Arizona NPS areas.
1. Riggs	53.69		
Subtotal	79.73		
GRAND CANYON NATIONAL PARK			
Hearst estate	325.80		
Subtotal	325.80		
GRAND CANYON NATIONAL MONUMENT			
Covington	22.66		
1. J. Schmutz	440.00		
2. M. Schmutz	200.00		
3 and 4. S. and R. Schmutz	1,280.00		
5. H. Schmutz	440.00		
6. J. and M. Schmutz	640.00		
Subtotal	3,022.66		
MONTEZUMA CASTLE NATIONAL MONUMENT			
1. Seapy	40.00		
2. Maye	2.17		
3. Webb	16.83		
Subtotal	59.00		
ORGAN PIPE CACTUS NATIONAL MONUMENT			
3. Kalil	133.03		
4. Altherr	[1] 45.34		
Subtotal	178.37		
WALNUT CANYON NATIONAL MONUMENT			
A. P. Railway Co	237.84		
Subtotal	237.84		
LAKE MEAD NATIONAL RECREATION AREA			
Waring	9,000.00		
Arnold	120.00		
Mead Land & Cattle Co	3,000.00		
Subtotal	12,120.00	21,580.00	
Grand total	16,023.40	21,580.00	

ARKANSAS

HOT SPRINGS NATIONAL PARK			
7A. Thornton	1.50		62.70 acres non-Federal lands remaining in other Arkansas NPS areas.
7B. Cyphers	.75		
7C. Rix	5.00		
7D. Thornton	2.50		
7E. Fidelity Mortgage Co	3.74		
7F. Ramseur	1.80		
Total	15.29		

See footnotes at end of table.

1966 fiscal year—Continued

CALIFORNIA

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
KINGS CANYON NATIONAL PARK			
39. Clarke	80.00		122,545.37 acres non-Federal lands remain in other California NPS areas.
Subtotal	80.00	784.52	
LASSEN VOLCANIC NATIONAL PARK			
5-1. Langley	.83		
5-2. Rustad	.23		
5-3. Youngman	.39		
5-4. Schultz	.24		
5-4A. Wipler	.03		
5-5. Kelly	.07		
5-5A. Kelly	.14		
5-6. Ferris	.14		
5-7. Olsen	.28		
5-8. Hanson	.15		
5-9. Vasco	.16		
5-11. Busher	.31		
Subtotal	2.97	796.69	
SEQUOIA NATIONAL PARK			
17. Grunigen	148.18		
33. Maye	160.00		
31. Lee	40.00		
16. Elliott	38.63		
27. McClure, et al	160.00		
32. Ranch Development	80.00		
29. Lemon	80.00		
Subtotal	706.81	210.19	
YOSEMITE NATIONAL PARK			
10-D. Cable	.09		
9-C-13. Fontaine	2.78		
11. Evangelho	.50		
37-B. Bowersox	.57		
9-A-5. Phillips	5.05		
King	.00		
10-C-21	29.98		
10-A-1. A.O. Bruce	37.00		
21. I. Elwell	40.00		
36. Sierra Club	160.00		
5-46. H. T. Leask	.11		
5-47. Wilma Senn	.11		
5-48. Buryl Price	.11		
10-A-25. Lan Lay, Inc	5.10		
9-B-9. E. Swineford	1.00		
9-C-1. E. English	4.25		
5-53. Carl Irby	.11		
5-54. C. Griffin	.11		
5-56. Wesley Dahl	.11		
11-4. Raven & Vaught	.90		
11-6. LeRoy Turner	5.00		
11-12. Emil Nekuda	4.26		
10-B-6. W. Bruce, Jr	1.14		
10-B-7. W. Bruce	1.06		
10-C-1. Harriet Spelt	10.51		
10-B-3. H. Watts	.92		
10-B-4. H. Groves	.26		
9-C-12. Nelson	.25		
10-C-23. Sanders	.93		
10-C-24. Anderson	.78		
10-C-22. Anderson	1.09		
10-C-18. Seventh Day Adventist	.65		
10-C-19. Hoefler	.54		

1966 fiscal year—Continued

CALIFORNIA—Continued

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
YOSEMITE NATIONAL PARK—continued			
10-C-17. Graham	0.26		
10-C-16. Brown	.26		
10-C-15. Shervem	.26		
10-C-11. Graham	.18		
10-C-10. Kaiser	.21		
10-C-12. Graham	.18		
10-C-9. Stephen	.18		
10-C-13. Bulik	.43		
10-C-14. Parks	.25		
10-C-5. Neuman	.33		
10-C-7. Ziegler	.25		
10-C-7. Wilkins	.18		
10-B-1. Drake and Samuels	1.00		
10-B-2. Train	.58		
10-B-5. Sahm	.25		
10-A-24. Yearout	2.66		
10-A-27. Fox	.14		
10-A-28. Wisdom	.28		
10-A-21. Graffina	.55		
10-A-22. Blythe	.21		
10-A-17. Erickson	.14		
10-A-15. Fahlen	3.25		
10-A-14. Nishkian	3.37		
10-A-13. Howell	.40		
10-A-12. Howell	.33		
10-A-11. Whear	.37		
10-A-10. Gordon	.54		
10-A-9. Mowry	.25		
10-A-8. Mowry	.25		
10-A-7. Noli and Gayikian	.43		
9-C-84. Alley	1.20		
9-C-82. Alley	4.57		
9-C-81. Standow	.18		
9-C-80. Moore	.17		
9-C-79. Byers	.50		
9-C-86. Gregg	.53		
9-C-85. Harpers	.54		
9-C-96. Crews	1.13		
9-C-101. Wagner	1.44		
9-C-100. Davis	.66		
9-C-99. Escola	.74		
9-C-98. Escola	.45		
9-C-97. Williamson	.45		
9-C-95. Carrell	.97		
9-C-76. Fortini	.30		
9-C-75. Fortini	.29		
9-C-74. Pennington	.27		
9-C-73. Sisley	.28		
9-C-72. Fortini	.28		
9-C-71. Fortini	.29		
9-C-70. Fortini	.32		
9-C-69. Fortini	.29		
9-C-68. Fortini	.30		
9-C-47. Moore	.24		
9-C-45. Moore	.22		
9-C-44. Moore	.26		
9-C-25. Arnett	.15		
9-C-24. Alley	1.00		
9-C-22. Simmons	.26		
9-C-21. Howard	.23		
9-C-20. Simmons	.23		
9-C-15. Landanaes	1.00		
9-C-11. English	2.24		
9-C-10. Landanaes	.79		
9-C-9.	1.00		
9-C-7. Cahow	.14		
9-C-5. Welborn	.21		
9-C-2. Johnson	.50		
11-5. Comfort	4.74		
11-7. Irving	.57		
11-8. Bourne	1.19		
11-9. Redfern	3.91		
9-B-118. Bossert	.50		
9-B-117. Brunet	.31		

1966 fiscal year—Continued

CALIFORNIA—Continued

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
YOSEMITE NATIONAL PARK—continued			
9-B-103. Forbes	1.01		
9-B-109. Yose	.24		
9-B-102. Forbes	.24		
9-B-101. Huber	.11		
9-B-100. Straughn	.11		
9-B-95. Kessler	.17		
9-B-94. Kessler	.58		
9-B-89. Kessler	.23		
9-B-86. Doss	.11		
9-B-83. Harper	.31		
Subtotal	372.19	2,247.49	
Grand total	1,161.97	4,038.89	

COLORADO

DINOSAUR NATIONAL MONUMENT (SEE ALSO UTAH)			
92. Nichols	149.64		3,308.01 acres non-Federal lands remaining in other Colorado NPS areas.
95. Shank	148.63		
State of Colorado, et al	[2] (2,957.00)		
Hoover	231.38		
23A. Watson	80.00		
Haslam, et al	[2] 188.59		
Subtotal	609.65	1,902.87	
GREAT SAND DUNES NATIONAL MONUMENT			
11. Shockey	31.47		
Subtotal	31.47	718.97	
MESA VERDE NATIONAL PARK			
1. Sheek	181.00		
2. Sheek	131.25		
3. Sheek	3.50		
Subtotal	315.75		
ROCKY MOUNTAIN PARK			
296A. M. Mix	78.57		
297B, 298B. H. G. Slusser	40.00		
297C. William Hall	18.46		
298A. William Hall	12.50		
159B. Misses Smith	3.30		
298B. City of Longmont	43.00		
163A, 163B. Cascade	39.50		
339. R. Fisher	9.60		
334, 335. J. G. Land	161.81		
196. D. E. Moore	.34		
234. Scott Estate	7.13		
174. W. Emch	.87		
240, 241. C. S. Cravens	1.44		
213, 214. W. W. Booth Estate	2.06		
175. D. T. Smith	6.20		
176B. A Christiansen	1.80		
272. V. F. Tinsley	.72		
251, 281. W. Darley	1.75		
205. H. C. Miller	1.50		
173. W. Farrington	1.12		
171A. C. T. Hortz	6.10		
602. Ethel Husted	39.20		
372. E. O. Berge	.29		
370. G. Tillman	.06		
156. MacGregor Estate	393.38		
275. Horlen Estate	4.20		
626. J. Schnuerle	1.50		
628. C. Borland	.50		
645. Mary E. Ball	6.70		
235. White Estate	5.38		

See footnotes at end of table, p. 519.

1966 fiscal year—Continued

COLORADO—Continued

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
[ROCKY MOUNTAIN PARK—continued			
620. Mr. Snell	1.10		
230. F. Stockover	.84		
278. W. Stockover	.33		
220. W. Robinson	1.00		
219. David Rusk	1.00		
216. Arthur Wuth	1.06		
Subtotal	894.31	943.98	
Grand total	1,851.18	3,265.82	
IDAHO			
CRATERS OF THE MOON NATIONAL MONUMENT			
Creek Mining Claim	20.66		
Total	20.66	159.12	
IOWA			
EFFIGY MOUNDS NATIONAL MONUMENT			
Ferguson	10.00		
Total	10.00	78.70	
MARYLAND			
CATOCTIN MOUNTAIN PARK			
Fox	3.30		1,926.14 acres of non-Federal lands remaining in other Maryland NPS areas.
Total	3.30		
MINNESOTA			
GRAND PORTAGE NATIONAL MONUMENT			
225, 234, 15, 17, 240, 236. Tribal allottees, confused ownership.	90.30		
Subtotal	90.30	288.03	
PIPESTONE NATIONAL MONUMENT			
1. City of Pipestone	.32		
Subtotal	.32	3.58	
Grand total	90.62	291.61	
MISSISSIPPI			
NATCHEZ TRACE PARKWAY			
West	16.23		0.50 acre of non-Federal land remains in one other Mississippi NPS area.
Krauss	37.36		
West	.63		
O. Sanderson	40.00		
J. Sanderson	20.00		
Total	114.22	[3] 10,000	

See footnotes at end of table, p. 519.

1966 fiscal year—Continued

MONTANA

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
GLACIER NATIONAL PARK			
273. American Timber Co	30.69		
215C. Veigle	.08		
291–294. Greve	1.40		
260. Althearn	.21		
255, 259. Lewis	.37		
265. Pratt	.51		
253. Stuart, et al	.18		
252. Anderson	.26		
251. Wilcox	.17		
246. Schoknocht	.34		
244. Salansky	.24		
242. Lundgren	.15		
248. Bottomley	.25		
249. Wells	.29		
250. Bunday	.28		
232–A, 236. Copenhaver	.40		
232–D. Oden	.20		
232–E. Greenwalt	.17		
151–A. Trebesch	.07		
187, 188–B. Lee	.40		
125. Krall	.11		
215–G. Trebesch	.11		
215–E. West Glacier Mercantile	.06		
192–193. Rice	.56		
194–199. Dodge	3.10		
280. LaDow	8.95		
397–F. Heckathorn	2.75		
187, 188–B. Lee	.40		
336. Kay	.04		
Total	52.74	2,799.20	

NEBRASKA

SCOTTS BLUFF NATIONAL MONUMENT			
12. Heppe	48.12		83.36 acres of land remains in non-Federal ownership in one other Nebraska NPS area.
8. Heilbrun	9.55		
10,10A. Clema	45.00		
11 (part) Johams	23.00		
Total	125.67	626.79	

NEW JERSEY

EDISON NATIONAL HISTORIC SITE			
Mayer Co	2.50		
Total	2.50		

NEW MEXICO

EL MORRO NATIONAL MONUMENT			
2. Rice	80.00		10,274.47 acres of non-Federal lands remain within other New Mexico NPS areas.
4. Shepard	80.00		
Total	160.00	158.80	

1966 fiscal year—Continued

NORTH CAROLINA

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
BLUE RIDGE PARKWAY (SEE ALSO VIRGINIA)			
Barr	50.00		211.66 acres of non-Federal lands remain in other North Carolina NPS areas.
Bowie and Miller	236.00		
Subtotal	286.00	[4] 95.81	
GREAT SMOKY MOUNTAINS NATIONAL PARK (SEE ALSO TENNESSEE)			
1391. North Carolina Exploration Co	1,989.80		
Subtotal	1,989.80	600.00	
GUILFORD COURTHOUSE NATIONAL MILITARY PARK			
46. Webb and Yates	5.00		
53. Richardson Realty Co	29.00		
Subtotal	34.00	39.47	
Grand total	2,309.80	735.28	

NORTH DAKOTA

THEODORE ROOSEVELT NATIONAL MEMORIAL PARK			
8. Smith	160.00		
3. Baye	72.73		
2. Johnson	181.84		
1. Stutrud	224.74		
Total	639.31	642.05	

SOUTH DAKOTA

BADLANDS NATIONAL MONUMENT			
42, 44, 18-B. Kelly	666.89		35.20 acres of non-Federal land remains in one other South Dakota NPS area.
160A. Richardson	7.18		
206. Deutscher	160.00		
71, 72A. Close	920.00		
112, 113, 114. Baysinger	320.00		
5A. Shull	108.60		
40. C. Huether	116.79		
115. Saunders	80.00		
37, 38. E. Huether	160.00		
Total	2,539.46	6,954.06	

TENNESSEE

GREAT SMOKY MOUNTAINS NATIONAL PARK (SEE ALSO NORTH CAROLINA)			
1396. Headrick	1,025.00		3,364.47 acres of non-Federal lands remain in other Tennessee NPS areas.
1395. Lambert, et al	500.00		
Total	1,525.00	[4] 200.00	

See footnotes at end of table, p. 519.

1966 fiscal year—Continued

UTAH

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
CAPITOL REEF NATIONAL MONUMENT			
Bird	2.69		63,160.82 acres of non-Federal lands in other Utah NPS areas.
Subtotal	2.69	5,812.77	
DINOSAUR NATIONAL MONUMENT (SEE ALSO COLORADO)			
Blue Mountain Rd	388.30		
9. Murray	555.48		
19, 20. Chew	640.00		
14. DeJournette	154.07		
W. E. Chew (S.E.)	352.80		
Subtotal	2,090.65	1,185.11	
ZION NATIONAL PARK			
10. Esplin	3,287.87		
14. Spillsbury	49.90		
11. Cornelius	467.60		
43. Graff	29.00		
9A.M. Lee	155.00		
9-A-1. Clifton	5.00		
46. Lamoreaux	359.56		
12. Lamoreaux	379.53		
15, 16, 17. Spendlove	373.80		
18. Gubler	320.00		
23. Cottam	200.00		
42. Blake	80.00		
44. Gifford	120.00		
45. Blake	35.00		
8A. Brooks	1.25		
8B. Allen	1.00		
Subtotal	5,864.51	4,570.54	
Grand total	7,957.85	11,568.42	

VIRGINIA

BLUE RIDGE PARKWAY (SEE ALSO NORTH CAROLINA)			
Austin	72.00		24,090.96 acres of non-Federal lands remain in other Virginia NPS areas.
Steele	12.00		
Hill	40.00		
Agee	28.00		
Campbell	5.00		
Subtotal	157.00	[6] 234.00	
COLONIAL NATIONAL HISTORICAL PARK			
312. Harrod	2.50		
314. Shiloh Baptist	1.00		
337. Beulah Baptist	1.00		
308. L. Renforth	3.00		
309. Allen	5.00		
410. Blow	1.50		
429. A. Renforth	.10		
321. Washington	1.60		
269. Beer	6.17		
Murray	50.00		
Subtotal	71.87	2,262.28	
Grand total	228.87	2,496.28	

See footnotes at end of table, p. 519.

1966 fiscal year—Continued

WASHINGTON

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
MOUNT RAINIER NATIONAL PARK			
Mount Rainier Mining Co.	164.84		0.79 acre non-Federal land remains in 1 other Washington NPS area.
Subtotal	164.84	37.07	
OLYMPIC NATIONAL PARK			
230. Betty Lenoir	.38		
4. Fisher	37.89		
29. Nealand	4.64		
26, 27, 28. Hoare	16.35		
249. Sweet	106.26		
150, 153. Longfellow	4.72		
183. Longfellow	5.73		
182. Price	.55		
224. Luckman, et al.	4.30		
362. Crown Zellerbach	121.00		
288. Bovee	7.47		
374. Morrison	144.87		
180. Schafer	.53		
181. Miletich	.54		
13. Kindred	8.18		
195. Wood	.40		
347–G. Wallis	39.81		
348–D. Wallis	39.96		
78. Rayonier, Inc.	40.00		
378. Peninsula Plywood	160.00		
379. Rayonier	140.00		
220. Denler	2.65		
359. Crown Zellerbach	4.00		
33. Peninsula Plywood	36.30		
123. Crown Zellerbach	10.70		
272. King	1.80		
285. Wallace	4.78		
287. Peninsula Plywood	5.95		
754, 758, 762. A. Benson	320.00		
217. Polhamus	3.91		
225. Pollock	1.85		
225–A, 226–A. Sisson	5.70		
226. Neer	1.05		
20. Harding	6.34		
43. Loring	.23		
Subtotal	1,288.84	6,752.47	
WHITMAN MISSION NATIONAL HISTORIC SITE			
Sheldon	2.50		
Grand total	1,456.18	6,789.54	

WYOMING

FORT LARAMIE NATIONAL HISTORIC SITE			
4. Urbach	0.70		
5. Shoemaker	1.10		
9. Haynes	27.00		
8. Paules	26.00		
7. Flannery	2.50		
Subtotal	57.30	0	

1966 fiscal year—Continued

WYOMING—Continued

Identity of tract owner	Number of acres	Remaining acres in private ownership (NPS only)	Remarks
GRAND TETON NATIONAL PARK			
67. Tarbell estate	167.00		
Subtotal	167.00	7,642.91	
Grand total	224.30	7,642.91	

[1] Portion.
[2] Scenic easement.
[3] State of Mississippi similar to other States in which the Natchez Trace Parkway is located is donating the lands needed for parkway construction and wayside beautification. The State will make further donations of the approximate indicated acreage. This Service pursuant to the act of June 30, 1961 (75 Stat. 196), is authorized to purchase lands with dangerous access roads leading into the Parkway and to acquire to round out boundaries and adjust ownership lines.
[4] Most of the lands within the Blue Ridge Parkway have been donated to the United States by the respective States through which it passes. This Service pursuant to the Act of June 30, 1961 (75 Stat. 196), is authorized to purchase lands with hazardous accesses to the Parkway and to acquire lands to round out boundaries and adjust ownership lines.
[5] State of Tennessee is donating to the United States other lands to comprise Foothills Parkway, a part of the Park.
[6] Most of the lands within the Blue Ridge Parkway have been donated to the United States by the respective States through which it passes. This Service pursuant to the act of June 30, 1961 (75 Stat. 196), is authorized to purchase lands with hazardous access to the parkway and to acquire lands to round out boundaries and adjust ownership lines.

NOTE.—Total estimated cost of unacquired tracts—$6,127,032.

LAND ACQUISITION PROGRAM

Land and water conservation fund unobligated balances for special projects as of Jan. 31, 1966

Special project	Appropriations			Obligations			Unobligated balance, Jan. 31, 1966
	1965	1966	Total	1965	1966 fiscal year as of Jan. 31, 1966	Total	
Allegheny Portage	$121,000	$304,000	$425,000		$268	$268	$424,732
Assateague Island		100,000	100,000		27,868	27,868	72,132
Cape Cod		4,450,000	4,450,000		500,000	500,000	3,950,000
Delaware Water Gap		250,000	250,000		14,735	14,735	235,265
Fire Island	1,000,000	3,997,000	4,997,000	$706,000	375,000	1,081,000	3,916,000
Fort Bowie	20,250		20,250	870		870	19,380
Fort Larned	125,000	329,000	454,000				454,000
George Washington Memorial Parkway	270,000	2,000,000	2,270,000	266,606	1,827,575	2,094,181	175,819
Herbert Hoover		50,000	50,000				50,000
John Muir	169,000		169,000				169,000
Johnstown Flood	4,000	16,000	20,000				20,000
Minute Man		500,000	500,000		15,500	15,500	484,500
Ozark	500,000	3,598,543	4,098,543	20,000		20,000	4,078,543
Total	2,209,250	15,594,543	17,803,793	993,476	2,760,946	3,754,422	14,049,371

The delay in acquiring the properties listed is attributable to several factors, all of them temporary in nature and for which corrective action is now underway.

The basic cause of the situation is the fact that the Service's organization and staffing for land acquisition has in the past been geared to the relatively modest

program in effect prior to passage of the Land and Water Conservation Fund Act. This organization consisted essentially of a small Washington office staff, just one realty man in each regional office and of professional land acquisition staffing in only the major new area projects.

The National Park Service is now undergoing a reorganization to provide, among other things, for effective and expenditious handling of the greatly expanded real estate program. Under the new system, two planning and service centers will be staffed with adequate numbers of land acquisition personnel—realty specialists, appraisers, water rights engineers, etc.—to handle real estate work throughout the entire national park system.

Recruiting of realty personnel for the two planning and service centers and for new field projects is proceeding rapidly and will result in a thoroughly professional staff of sufficient size to cope with the greatly expanded land acquisition program.

Personnel shortages in land acquisition have, as in many other Service activities, been severely compounded by recent retirements, i.e., three regional land acquisition officers have retired this fiscal year.

Extensive purchases of land in several of the new areas have been delayed solely because of the necessity to complete time-consuming, but essential preliminary work such as surveying, title searches, and appraisals. Progress on this preliminary work is at the point where large acquisitions will be consumated rapidly this fiscal year to catch up and keep pace with the expanded program.

FOREST SERVICE PROGRAM

Land and Water Conservation Fund Act—Summary of program remaining to be negotiated,[1] fiscal year 1965 supplement fiscal year 1966

State	Management unit	Number of cases	Acres	Estimated cost	Remarks
Alabama	Alabama National Forest	3	109	$20,694	
Arkansas	Ozark National Forest	4	660	34,859	
California	Shasta-Trinity-Whiskeytown National Recreation Area.	6	500	197,400	Pending additional planning in implementation of the act.
Do	Shasta-Trinity	4	2,850	350,000	Includes large ownership within a primitive area owned by an operating timber company.
Do	Inyo National Forest	2	80	8,000	
Do	Lassen National Forest	1	640	13,800	
Do	Los Padres National Forest	1	160	27,600	
Do	Mendocino National Forest	1	160	12,000	
Do	Klamath National Forest	1	80	10,000	
Do	Modoc National Forest	1	440	34,500	
Do	Sierra National Forest	1	180	17,000	
Georgia	Chattahoochee National Forest	1	150	19,651	
Kentucky	Cumberland National Forest	5	2,119	99,309	Two tracts of $50,000 and $45,000 respectively.
Michigan	Ottawa National Forest	1	105	35,000	
Minnesota	Chippewa National Forest	6	180	53,100	
Mississippi	Mississippi National Forest	4	233	44,127	
Montana	Gallatin National Forest	1	40	7,000	
North Carolina	North Carolina National Forest	1	45	55,000	
South Carolina	South Carolina National Forest	2	498	17,785	
Tennessee	Cherokee National Forest	3	121	18,800	
Virginia	Jefferson National Forest	2	500	50,000	
West Virginia	Monongahela National Forest	1	400	15,000	
Do	Seneca Rocks-Spruce Knob National Recreation Area.[2]	2	414	250,000	Final negotiation pending.
Wisconsin	Nicolet National Forest	2	2,174	53,375	
Total		56	12,838	1,444,000	

[1] Does not include Sylvania Tract, Michigan, which is a special problem.

[2] State has passed (February 1966) change in State law regarding redistribution of the 25-percent national forest receipts payments that was a key to proceeding in the 2 counties involved (county consent problem).

ADMINISTRATIVE EXPENSES DISTINGUISHED FROM SALARIES AND EXPENSES

Chairman HAYDEN. For administrative expenses pertaining to the land and water conservation fund $2,560,000 is requested. Will you please distinguish between this fund and the approximately $3½ million which you request under your regular "salaries and expenses" appropriation? Is there any overlapping of the two funds?

Mr. CRAFTS. No, sir, there is no overlapping at all. What we request under "Salaries and expenses" is to carry out the functions that we have under the Bureau of Outdoor Recreation Organic Act and under the Federal Water Projects Recreation Act. The administrative expenses under the land and water conservation fund are to review the State plans, to review and act on the State applications for acquisition and development projects, and to cooperate and work with the Federal agencies in connection with their acquisition proposals, and there is no overlapping.

INCREASE IN PROJECT PROPOSALS AND FEDERAL PROGRAM PARTICIPATION

Chairman HAYDEN. Would you explain concisely why you believe that there is a need for $1,120,000 more for administrative expenses in 1967 than was appropriated in fiscal year 1966 in view of the fact that you are asking for less acquisition money in the coming fiscal year?

Mr. CRAFTS. The reason for that is that the program will be really activated on a full scale next year. The money appropriated last year or this year, if not obligated, will carry over. We expect to have several thousand project proposals from the States in contrast to several hundred that we will receive by the end of June this year. Also, the Federal parts of the program will be slightly more than this year. We need funding basically for three purposes: to begin a fiscal auditing and accounting review of the State and local governmental expenditures, which we must do in the handing out of Federal moneys; secondly, to carry out the substantive inspections as to completion of the State and local projects; and, thirdly, to develop more appropriately the Federal acquisition program proposals.

PROGRAMED BUDGET REQUESTS

Chairman HAYDEN. Is it certain that you will expend all of the administrative expense appropriation provided in fiscal year 1966?

Mr. CRAFTS. I would like to ask Mr. Rice to answer that.

Mr. RICE. Yes, sir, Mr. Chairman. We have it programed. Some of this money will be used to enter into agreements with the other agencies such as the Post Office. We hope we can arrange with the Post Office to sell the annual permits for us and we hope to get some of the counties and the States to sell these for us, and there will be costs incurred in doing this, so we believe that we need all the money that is programed for the administrative expense side of it.

FEDERAL LAND ACQUISITION PROGRAM—COST OF REVIEW AND EVALUATION

Chairman HAYDEN. Last year the Congress placed on you a requirement for reviewing and evaluating the land acquisition programs of the Federal agencies which you indicate was not taken into considera-

tion while you were preparing your administrative expenses budget. How much do you estimate that it cost you to do this job?

Mr. CRAFTS. I would like to submit that for the record if I may, Senator. I can't give you an estimate on that offhand. A part of that cost is reflected in the increase in administrative expenses, but I don't know just how much it is offhand.

(The information follows:)

The estimated cost of this function for fiscal year 1966 is $166,540.

DESIGN AND USE OF ANNUAL PERMIT

Chairman HAYDEN. That may be done. Also in your justification statement you indicate that the Federal recreation area entrance permit has to be redesigned for printing and sale for the period beginning April 1, 1967. Is it necessary to redesign it to a greater extent than changing the date?

Mr. CRAFTS. That is a matter of judgment, Senator. As I mentioned earlier, we didn't have very good success with this bumper sticker last year. We were pioneering a program. I think some of the difficulties can be overcome by using a somewhat different approach this year. We propose to use a gold-colored wallet card of this size to be signed by the purchaser that will be good for all areas for a year for himself and a carload of people. It will not be put on the bumper. One of the difficulties last year was that the stickers came off some of the bumpers. Another was that people didn't put them on the bumpers. Another was that some of the hotels and motels would buy these and put them in boxes in the hotels and when people would check in, they would give them a key to their room and also give them one of these stickers. They used them to go through Yellowstone or other areas and when they would check out they would turn in their sticker and turn in their key, and the next person would use it.

ANNUAL, 30-DAY, AND 1-DAY PERMITS

There were evasion possibilities here last year, some of which we are trying to prevent this year. What our system is basically this year, and it has been worked out with the agencies—we think that it is an improvement—is this card which is the $7 golden card, a similar one which is blue, which would be good for 30 days, at about half the price of this one, and then a green 1-day permit. The people have a choice to buy something for a day, they can buy something for 30 days, or they can buy one for the whole year, and experience will tell whether we do better this year or not. I think we will. I think also when the system shakes down, and I hope we have about reached that point, I would agree with you that I don't see a need to redesign it each year and to change it once we can get a workable system. I think the only thing then that will be needed will be a change in the date.

APPRAISAL OF FEDERAL LAND ACQUISITIONS

Chairman HAYDEN. In discharging your responsibility with regard to determining areas for acquisition by Federal agencies, do you participate in any way in appraising the value of the tracts to be acquired?

Mr. CRAFTS. No, sir; we do not appraise lands as such. Our review with the Federal agencies is work with them on the initial budget ceilings as to what their program may be, the total program. Then they develop the individual proposals. We take a look at them with particular reference to cost per acre, large tracts, high cost for improvements, or the other guidelines that the Congress gave us a year ago. If we see a cost figure that looks to us to be out of line, we call it to the agency's attention, but we do not make appraisals of land as such, as they do. This is their function, not our function.

NO DUPLICATION OF LAND PURCHASING AGENCIES EFFORTS

Chairman HAYDEN. What steps do you take to avoid duplicating efforts of land-purchasing agencies who for a long time have carried on a purchase program?

Mr. CRAFTS. I think what I just said attempted to answer that. We exercise a review and a correlating responsibility. There are differences of opinion between the agencies and between ourselves on some items, and we work these out. I can submit to you for the record the results of the three basic reviews before the budget came up to you this year, and show the substantial adjustments and reductions which were made. I would say that our function is generally an oversight function and not a duplicating function. We spot check occasional tracts on the ground. We don't go and look at each tract on the ground by any manner of means, only a very small percentage. I would say very frankly I suppose that some individuals in the agencies probably would prefer that we not have this function. I don't believe this reflects the view of the agency heads. As far as I am aware, it does not, and we have had very good cooperation from the agencies. We share responsibility with them now. I would hope that it would be helpful to them and helpful to the Congress.

PREPARED STATEMENTS

Chairman HAYDEN. Representatives of the National Park Service, and the Bureau of Sport Fisheries and Wildlife, and the Forest Service are here. The latter two have statements which should be placed in the record.

(The statements follow:)

STATEMENT BY A. V. TUNISON, DEPUTY DIRECTOR, BUREAU OF SPORT FISHERIES AND WILDLIFE, IN SUPPORT OF LAND AND WATER CONSERVATION FUND

The President's budget for fiscal year 1967 recommends that $1,514,000 be appropriated for the endangered species program and for the addition of small acreages to nine national wildlife refuges and national fish hatcheries for recreation areas for the greater enjoyment of these areas by the public.

The question has been asked in the past, How much does it matter that we attempt to preserve threatened species of fish and wildlife from becoming extinct? We believe in part the answer to this is how brightly burns a spark of concern by the public for the future enjoyment of fish and wildlife. We believe that there is a clear responsibility to keep a "place in the sun" for the animal species that share the earth with us, and see this as an issue of right and wrong in which it is wrong to eradicate any species. Another argument is that we are responsible to future generations for what we do to the natural world around us. Further, the complex natural world around us with its flora and fauna relationship is not only an inheritance of generations to come but its condition

is an indicator of the vigor or depression of the whole ecological system which surrounds us. The threatened species program is a peoples program. People enjoy animals, birds, and fish. They find them beautiful and exciting to watch. They derive a measure of spiritual refreshment from being able to observe or study them. People gain a measure of satisfaction and pleasure for example in seeing a front page picture and accompanying report in a major daily newspaper reporting on the successful fall migration of the whooping crane to the Texas coast on our Aransas National Wildlife Refuge.

As the numbers of a wildlife species grow fewer, their true value grows greater, for in a few are concentrated all the worth of one small but vaulable part of our whole world.

A few years ago a Boy Scout led a program to preserve habitat for the miniature Florida Key deer, and the public even now is interested in having additional habitat preserved for this threatened species with legislation introduced in the current Congress for this purpose. The noted conservationist, author, and artist, Mr. Peter Scott of the United Kingdom says "concern for the continued existence of a rich variety of wildlife and wild places is as surely a manifestation of human enlightenment as are art, discovery, exploration, education and tolerance."

ESTIMATE FISCAL YEAR 1967—LAND AND WATER CONSERVATION FUND

The fiscal year 1967 estimate for the Land and Water Conservation Fund includes the following for the Bureau of Sport Fisheries and Wildlife:

	Acres	Cost
1. Threatened species: Florida sandhill crane (Florida)	7,040	$1,335,000
2. Recreation areas:		
(a) Fish hatcheries:		
New London, Minn	2	300
Hebron, Ohio	14	5,800
Total hatcheries	16	6,100
(b) National wildlife refuges:		
Lake Ilo, N. Dak	12	17,500
Washita, Okla	30	6,900
Columbia, Wash	286	46,000
Willapa, Wash	19	6,500
Horicon, Wis	100	35,000
Upper Mississippi, Wis	100	3,500
National Elk, Wyo	80	57,500
Total refuges	627	172,900
Total recreation areas	643	179,000
Total Bureau of Sport Fisheries and Wildlife	7,683	1,514,000

The estimate is further explained as follows:

Threatened Species: Florida sandhill crane, $1,335,000.—Under primitive conditions all of Florida was a wildlife paradise. Almost unlimited marshes and swamps were inhabited by a great variety and a tremendous number of wild creatures. Many species were rarely found elsewhere in our part of North America and some today exist as remnant populations, such as the Florida sandhill crane. Due to the great influx of people to Florida, along with the accompanying developments such as roads, drainage, urban developments, powerlines, rights-of-way, and so forth, many of the former wild acres have now been converted to purposes of our civilization. Many lakes, marshes, and swamps have been drained; and many miles of coastal bays and inlets have been dredged.

One of the hardest hit species has been the Florida sandhill crane. In 1965 best estimates place the population at less than 2,000 birds. Their numbers are gradually declining as their habitat disappears, and unless something definite is accomplished in the preservation of a sizeable acreage of suitable habitat for the cranes, their continued existence will be imperiled.

Suitable habitat for the crane on our Loxahatchee National Wildlife Refuge in South Florida is generally lacking for the reason that the wet marsh and

prairie type of habitat desired cannot be maintained due to uncontrolled water levels.

A sandhill crane sanctuary in Florida is required. Key habitat must be preserved to insure preservation of the crane. A few more years of change in land use and we feel it will be too late. An area of adequate size in known sandhill crane territory where water areas can be maintained through times of drought must be acquired and placed in public ownership as a permanent refuge. Such a refuge will also benefit other important wildlife species characteristic of Florida which are also on the same downward trend as the cranes. Great concern has been expressed in recent years over the caracara (an odd appearing crested hawk with vulture habits), the burrowing owl, and the Florida grasshopper sparrow. There is also reason to believe that the nearly extinct Everglade kite may be helped as will possibly the bald eagle. Substantial benefits to the people of this country will result from a refuge for the Florida sandhill crane. The opportunity to visit it and observe the unusual association of plant and animal life will be increasingly valued as areas like the one we have selected, disappear at their present rapid rate. People of the future should not be denied this opportunity.

A refuge area of 7,040 acres has been selected in southeastern DeSoto County, about 20 miles east-southeast of the town of Arcadia. It is presently occupied by a few sandhill cranes and it has the potential for containing all their habitat requirements including shallow marshes that are the key to maintenance of crane populations. This area can be readily developed into the best possible habitat through such measures as farming for the production of chufa, a favorite food; through controlled burning of grassland areas; and with moderate grazing of some sections by domestic livestock. Additional shallow marshes can be developed to expand the territory used for nesting. The estimated purchase price is $1,335,000.

Recreation areas, $179,000.—This amount consists of the following items:

New London National Fish Hatchery, Minnesota, $300: Two acres of land to be acquired is along the Crow River and adjacent to the hatchery area. An aquarium at this hatchery attracts about 25,000 persons annually. The site to be acquired will be developed into a picnic area as a hatchery visitor support facility. Development of the picnic area will lead to an estimated increase of 8,000 additional visitors annually.

Hebron National Fish Hatchery, Ohio, $5,800: The 14 acres of land to be acquired is adjacent to the hatchery entrance and will provide a picnic area for hatchery visitors. The hatchery is located in a heavily industrialized section where education conservation oriented recreation is insufficient. Acquisition of the lands proposed will permit the development of picnic facilities which will lead to a probable increase of 10,000 additional visitors annually. Other non-Federal recreation areas in the vicinity are heavily used and crowded. Nearly 11 million persons live within a 125-mile radius of the hatchery.

Lake Ilo National Wildlife Refuge, N. Dak., $17,500: Inholdings at this refuge, totaling some 12 acres and 32 individual lots, border on a 1,200-acre lake that provides excellent fishing and is also used for swimming and picnicking purposes. The privately owned lots are scattered among federally owned tracts. Purchase will increase the amount of Federal land fronting on Lake Ilo and will permit the expansion of an existing wildlife oriented recreational program that will greatly benefit the public. The acquisition will provide recreational opportunities that are in critically short supply in this area. No other facilities of this type are available within 40 miles. It is estimated with the addition of this area that an additional 5,000 visitors would use the refuge annually.

Washita National Wildlife Refuge, Okla., $6,900: The Washita Refuge was established in 1951 under the provisions of the Fish and Wildlife Coordination Act. A part of the Bureau of Reclamation Foss Reservoir was made available to the Bureau of Sport Fisheries and Wildlife for administration as a national wildlife refuge. An important part of the program at this refuge, is the management of public use. The 30 acres proposed for acquisition at this location would provide picnicking, parking and access to the recreation area on the refuge. Provision will be made for boating, swimming, fishing, and other recreational uses. Suitable access will also be provided. The Foss Reservoir is presently being filled, and as the reservoir approaches conservation pool level, the recreation area now within the refuge will be mostly inundated. It is therefore

important that the additional area proposed be acquired for the benefit of the public.

Columbia National Wildlife Refuge, Wash., $46,000: Development of the Columbia Basin project has caused a steady increase of recreational uses in this area. Facilities for public hunting, fishing, picnicking, and camping are presently limited, but the demand is high and ever increasing. Two tracts for the Columbia Refuge, totaling 286 acres, are proposed for acquisition; and an access easement to Campbell Lake is also desired. Campbell Lake is no longer open to the public for recreational purposes and road access has been eliminated. Both lakes have received some recreational use in the past, same from the general public and others through leasing through clubs. Acquisition of the two areas plus the road easement will permit greater public use of these two areas. Public ownership is needed in order that we may provide the public with boat-launching ramps, picnic tables, fireplaces, sanitary facilities, and parking areas, which cannot otherwise be provided on the refuge without interfering with the major waterfowl management objectives. Development of the Columbia Basin project has caused a steady increase of interest in recreational uses in this area. Areas for public hunting, fishing, picnicking, and camping, are presently fairly limited but the demand for such areas is high and still increasing. About 1 million people live within a 125-mile radius of the proposed acquisition and over 5 million live within a 250-mile radius. No major city is located nearby.

Willapa National Wildlife Refuge, Wash., $6,500: The proposed tract of 19 acres at this refuge is ideally suited for development of recreational facilities. It is rather unique in that is supports stands of large alder and maple which provide an attractive setting for picnic and camp areas. This tract is desired for use by groups such as Boy Scouts, who wish to use the island for exploratory trips, and nature studies. It is also needed for parties of fishermen and those harvesting oysters and clams. Deer and bear hunters will make extensive use of the site. A sandy inlet provides one of the few places on the east side of Long Island where boats can be beached. Most of the east shoreline of the island is not subject to access because of precipitous cliffs or mudflats. Eventually a bridge will be constructed to span the slough between the island and the mainland so that visitors will have ready access to the recreation area from U.S. Highway 101. It is proposed to provide picnicking, a boat landing, drinking water supply, and other recreational facilities. Nearly 3 million people live within a 125-mile radius and over 4 million, within a 250-mile radius.

Horicon National Wildlife Refuge, Wis., $35,000: The 100 acres proposed for the Horicon Refuge will be in four separate tracts, two of which will be 20 acres each in size, with the others 6 and 54 acres, respectively. Purchase of the 20-acre tracts will permit the enlargement of parking areas which serve hunters participating in the managed public goose hunt on this refuge. Present parking facilites are greatly overtaxed and purchase would offer relief to the public using them. It is also planned to develop small picnic areas on both tracts. Public fishing wold be available from the east 20-acre tract. Each spring and fall, during the migration period of ducks and geese, thousands of people visit the Horicon Refuge to view the feeding and flying waterfowl. On some weekends as many as 30,000 people come to the refuge for this purpose. The 6-acre tract would permit the development of badly needed picnic facilities. The 54-acre tract is badly needed to permit the construction of off-highway parking facilities. Total population within the 125-mile radius of the Horicon Refuge is close to 4 mililon people and within a 250-mile radius over 18 million. Increased public use should be over 12,000 people annually.

Upper Mississippi National Wildlife Refuge, Wis., $3,500: The proposed acquisition of 100 acres consists of three islands in the main channel of the Mississippi River. This river is heavily used for recreational boating and for fishing and hunting. It has been estimated by the Corps of Engineers that the stretch of the river in which the islands are located received over 348,000 visitor-use-days during 1964. One of the more popular recreational activities on the river and the least disturbing to wildlife is boating to an island and using the island as a base for water skiing, fishing, swimming, picnicking, camping, and shorter boat trips. The total population within a 125-mile radius is close to 3½ million people and, within a 250-mile radius, over 16 million.

National Elk Refuge, Wyo., $57,500: The acquisition of this proposed 80-acre tract will provide additional recreational opportunities for the public on this

refuge. The elk exhibition pasture and the marsh portion of the refuge which often contains nests of the rare trumpeter swan can be observed from the segment of U.S. Highway 187, lying adjacent to the acquisition. Highway 187 is the major route from Jackson, Wyo., to the Grand Tetons and the Yellowstone National Park and, as such, carries an estimated 2 million visitors during the tourist season. The tract will provide an excellent opportunity for construction of turnoffs and parking places for wildlife observation and photography. This location will also be ideal for the construction of a much needed visitor center for use by the public. Waterfowl display ponds can be constructed here and the elk exhibition pasture extends into this vicinity. The present annual visitors to the refuge approximate 200,000, but through acquisition of the tract and its development could be increased to an estimated 500,000.

STATEMENT OF M. M. NELSON, DEPUTY CHIEF, FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. Chairman and members of the subcommittee, the Forest Service, as you know, manages the national forest system on the basis of multiple use, in which recreation plays an important role. Recreation use of the national forest system is of many kinds: hunting, fishing, canoeing, skiing, swimming, hiking, enjoyment of natural beauty, the wilderness experience, to name a few. Recreation use of the national forests continues to grow at a phenomenal rate—from 134 million visits in 1964 to 147 million in 1965. During 1965, in order to help meet these increasing demands on recreation facilities, the capacity of camp and picnic areas was increased to handle an additional 30,000 people at one time—to a capacity of 419,000 people. Winter sports area capacity has been increased to a one-time safe capacity of 269,000 people.

The Land and Water Conservation Fund Act provides the means of providing the needed recreation land by which the national forests can continue to meet these growing recreation demands. The national forests in the Eastern United States are uniquely located near the major population centers, but generally the best recreation lands within these forests are not now publicly owned. The Outdoor Recreation Review Commission pointed out the most urgent need for more land for recreation opportunities is in the East.

Twenty-nine units of the national forest system have been established in the Eastern United States. Within these management units are many urgent needs for land acquisition. For example, they include the new Seneca Rocks-Spruce Knob National Recreational Area, the Massanutten Mountain area of Virginia, the proposed Mount Rogers National Recreation Area, the proposed Eleven Point Wild River, along with numerous opportunities for scenic highways, and many reservoir developments with fine recreation potential. All of these and many more require special attention. Particularly urgent are, of course, the needs in the areas where the ratio of public land to population is low.

The long-range objective of the Forest Service under the Land and Water Conservation Fund Act is to make certain sufficient recreation land is acquired in these established units to meet the demonstrated public needs. Action is needed soon. Delay in many instances means a permanent loss or a substantial increase in acquisition costs. It is our sincere hope that we may continue to make progress in acquiring these recreation lands in order that the national forest system may contribute its share to the growing public demand for outdoor recreation.

FOREST SERVICE ACCOMPLISHMENTS

The objective of the Forest Service in use of the funds appropriated by the Congress in 1965 and 1966 was to insure that recreation lands be acquired today for present and future public enjoyment. These critical lands are (1) located in wilderness areas such as the Selway-Bitterroot in Idaho, (2) are required for protection of natural beauty, and (3) are needed for development of recreation facilities in rural America, including Appalachia and other economically depressed areas. Sufficient funds were appropriated to acquire approximately 151,000 acres, including the outstanding Sylvania tract in Michigan.

59-370—66—pt. 1——34

I am pleased to report that the Forest Service has made substantial progress in meeting these objectives. Some of the notable and more significant properties for which negotiations have been completed are—

(1) George Washington National Forest, Va.: 325 acres fronting for 4 miles on the South Fork of the Shenandoah River at Massanutten Mountain. This is the first tract paid for by the Forest Service under the Land and Water Conservation Fund Act. The property is particularly significant in view of the President's proposals for the Upper Potomac River Basin. Its acquisition provides public access and camping areas along a long stretch of the river previously without public access. An access road has already been constructed into the area by the Forest Service.

(2) Upper Priest Lake, Kaniksu National Forest, Idaho: 417 acres of the private lands around this beautiful pristine mountain lake have now been acquired. This area was added to the Kaniksu National Forest by a special act of the Congress sponsored by Senator Church during the last session. The objective of the Congress to prevent subdivision of the lands has been accomplished.

(3) Monongahela National Forest, W. Va.: 2,464 acres of mineral rights on the Highland Scenic Drive needed before construction contracts could be let by the State of West Virginia and 235 acres in fee which the Scenic Drive will cross. This is a 160 mile scenic route on the crests of the highest mountains in West Virginia.

(4) Tonto National Forest, Ariz.: 52 acres in the Superstition Mountains. Acquisition of this property will eliminate one of two remaining isolated alienations in this area. This acquisition will permit closure of a 7-mile corridor (1 mile wide) in the heart of the Superstition Wilderness Area that was established to permit access to this 52-acre private tract.

The chart before you presents the status of our accomplishments as of February 7 with the land and water conservation funds presently available to us. It represents our entire program with the exception of the Sylvania tract which is a special case.

Negotiations are completed for 94 percent of the area (125,000 acres) which accounts for 89 percent of the funds ($11,606,000). We expect to have full accomplishment by June 30.

During the rest of this fiscal year the Forest Service will complete optioning of the remaining tracts, proceed with processing of the contracted properties, and do the necessary property line surveying.

We also expect to initiate and continue negotiations for many of the properties in the fiscal year 1967 program. In fact, options for approximately $3 million of the 1967 proposed program have already been obtained. We expect to have $5 million under option and ready to move by July 1. In addition, planning for fiscal year 1968 and long-range plans must be substantially completed.

We want you to know, also, that the Forest Service has moved ahead in the field of collecting at designated charge recreation areas and is doing its part in adding to the available Land and Water Conservation Fund Act moneys. This past year the Forest Service designated and collected fees at over 2,000 recreation areas.

FOREST SERVICE LAND ACQUISITION AUTHORITY

The Land and Water Conservation Fund Act gave no new land acquisition authorities. Existing or new land acquisition authorities of each agency must be used. The Forest Service has several acquisition authorities which may be used:

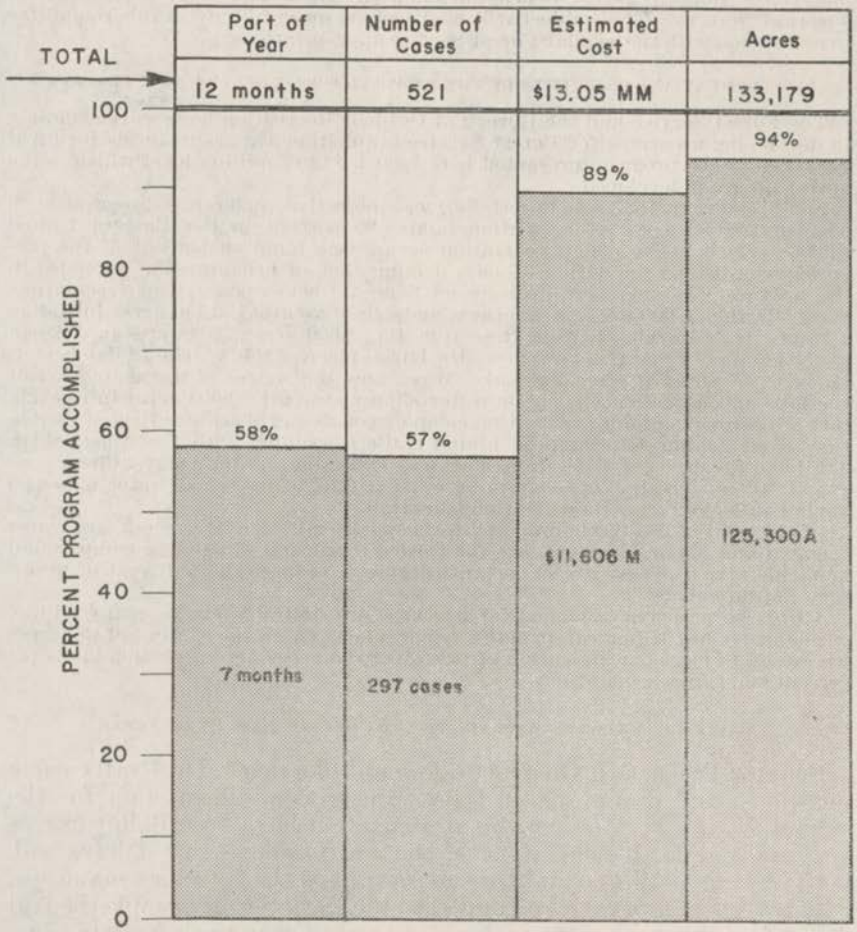
(1) Since most of the purchases, by law, must be in the Eastern United States, the primary authority to be used is the Weeks law of 1911. All cases under this authority must be approved by the National Forest Reservation Commission—a commission made up of the Secretaries of Agriculture, Army, and Interior, two Senators, and two Congressmen.

(2) A second authority that will be used is the USDA Organic Act of August 3, 1956. It will be used to acquire: lands in those States that have not passed an enabling act making the Weeks law applicable (Arizona, Colorado, and Wyoming); lands located in watersheds of nonnavigable streams such as in the Great Salt Lake Basin; lands located in designated wilderness and primitive areas; and interests in lands. This 1956 act provides authority, when implemented by the appropriation process, to acquire interests in lands; whereas the Weeks law does not. We will use the 1956 act

authority in fiscal year 1967 to acquire interests in land by purchase, exchange or otherwise, such as (a) scenic easements, (b) mineral interests needed to protect natural beauty in such projects as the Highland Scenic Drive in West Virginia, and (c) timber cutting rights. Timber cutting rights, for example, may be outstanding on tracts or land we are acquiring for recreation purposes. We would grant timber cutting rights on other National Forest lands for these outstanding rights. Since the 1956 act is not operative without the consent of the Appropriations Committee we shall consider the approval of the acquisition of the 1967 program as consent of this committee to use this act as described above.

FOREST SERVICE ACCOMPLISHMENTS

LAND AND WATER CONSERVATION FUND ACT ACQUISITION FISCAL YEAR 1966 AND 1965 SUPPLEMENTAL AS OF FEBRUARY 7, 1966



NOTE: Does not include $5,000,000 for the Sylvania Tract (18,352 acres) in Michigan which is a special problem. Appraisal and negotiations are, however, substantially completed for this purchase.

(3) Other authorities are contained in special acts such as the Seneca Rocks-Spruce Knob and the Shasta-Trinity-Whiskeytown National Recreation Area Acts.

SPECIAL PROBLEM

Acquisition of the Sylvania tract, Ottawa National Forest, Mich., presents a special problem. As the committee will recall, last year you restored the full amount requested to purchase this outstanding property. Action in the conference made $5 million available.

We have completed the appraisals and our negotiations as far as they can go at this stage, but are unable to complete the negotiations due to a restriction in the fiscal year 1966 appropriation language requiring county consent. We have been unable to obtain county consent due to some special tax problems existing for this county and especially for the township government. The county board has expressed their belief and recognition that the Sylvania property should be in the national forest for long-range public benefit. Because of the problem and the significance of the acquisition to the public, we wanted to acquaint the committee with the status of the project.

The county consent problem also exists in other areas. So far, it has not materially stopped Forest Service acquisition but it has created problems in several instances. This subject will be discussed more fully with this committee in connection with the regular Forest Service appropriations.

DEVELOPMENT AND OBJECTIVES OF THE PROPOSED FOREST SERVICE 1967 PROGRAM

The Forest Service and the Bureau of Outdoor Recreation have worked closely in developing programs for Forest Service acquisition at various levels for fiscal year 1967. The program presented here is at a $13.17 million level which is the lowest program developed.

For fiscal year 1967 the Forest Service's objective under this program is to acquire 141,000 acres of recreation lands—95 percent in the Eastern United States—which is the deficit recreation area. One hundred percent of the proposed acquisitions are within 3 hours driving time of urban areas. Included in the program are such key projects as Seneca Rocks-Spruce Knob recreation, West Virginia, 5,000 acres; wilderness and primitive areas, 2,140 acres including 4 tracts in California; Kinzua Reservoir, Pa., 3,000 acres; 104 acres in Arizona at the mouth of Stronghold Canyon—the burial place of the Apache Indian leader, Cochise; 87 acres at Sheridan Lake, Wyo., now the source of contamination of the lake and adjacent to a public water supply system; 10,000 acres in Georgia that will provide a major recreation complex consisting of water-oriented recreation, trout fishing, hunting, and hiking trails associated with the Appalachian Trail and the proposed Blue Ridge Parkway extension; and 810 acres, Chequamegon National Forest, Wis., containing a beautiful 260-acre clear-water lake and having outstanding public recreation potentials.

Of the total of 566 tracts proposed for acquisition 288, or 51 percent, are water oriented and 33, or 7 percent, are for needed expansion of existing campground or picnic areas. These are important because it reduces the unit cost of necessary improvements.

All of the properties planned for purchase are desirable lands—many will be permanently lost if immediate action is not taken. With the consent of Congress we intend to meet our obligation of providing the necessary recreation lands for present and future generations.

VARIATION BETWEEN APPRAISALS AND COSTS OF NEW PARK AREAS

Senator BIBLE. Mr. Chairman, I would like to ask Dr. Crafts a few questions, and at the outset I do want to compliment him for the splendid work that he and his organization have been doing in this very, very difficult field. One of the real problems that I have had, both serving on this committee and serving on the Interior Committee, is to try to explore with you and with the Park Service people the real need of working out some realistic method of appraisals, and, to illustrate, we simply have to look at Cape Cod where you underestimated

that by about 200 percent I think, and look at Point Reyes where I think we had an estimate of $16 million. You say it will be $48 million now or whatever the figure is, and I don't know whether you have given consideration, or Mr. Hartzog or the Park Service people have given consideration, as to some method of working out a more realistic approach. It is very difficult to ask for a park and attempt to point out its good points and say it will cost $16 million and find out that you are that far wrong or to hold hearings and indicate the cost of Point Reyes, for example.

I am using two examples that immediately come to my mind, and my arithmetic can be a little off or my percentages can be a little off, but the estimates are impossible to live with, and isn't there something that can be done about that, Mr. Crafts?

Mr. CRAFTS. Yes.

Senator BIBLE. I am sure you are going to run into this problem with regard to the Redwood proposal. As much as you believe you are giving me a realistic estimate of $60 million, and I hope you are right, that is a lot of money, No. 1, and, No. 2, I still doubt that that is a correct figure.

POSSIBLE SOLUTIONS TO KEEP PRICES WITHIN ESTIMATES

Mr. CRAFTS. There are ways to get at this, Senator Bible. I think it is one of the most difficult problems that the acquisition agencies face. I could make a few comments on this to you. One way to get at it is to make available enough money in the year or two following the authorization of a new park or recreation area so that the acquisition can be completed in a very short period of time. This would not overcome it entirely, but it would tend to overcome some of the things that are going on in the Delaware Water Gap and some other places at the present time where there is land speculation. The basic problem it seems to me is one of money, and money at a certain time.

Senator BIBLE. I think we find this true in practically everything that comes before us.

ADVANCE APPROPRIATION OF FUNDS

Mr. CRAFTS. I think that is right. Now, what to do about that. Under the Land and Water Conservation Fund Act there becomes available next fiscal year an advance authorization clause which will permit the appropriation of some $480 million, which is to average $60 million over 8 years. We have developed a proposed scheduling of this advance authorization to utilize a very large amount of that in the next 2 or 3 years for the precise purpose of allowing us to get on top of some of these recent authorizations of the Congress. This is in the preliminary stages only among the agencies. It has not received secretarial approval. It has not even been submitted to the Bureau of the Budget, but this is one way to do it. This advance appropriation will be paid back in the later stages of the land and water conservation fund program.

Senator BIBLE. When does that become effective did you say?

Mr. CRAFTS. It becomes effective in fiscal year 1968. And I have scheduled out here a proposed financing under the fund program for

the next 5 years that would take substantial advantage of this opportunity. As I say, there is enough money in the fund, as we see it, over the life of the fund, which is 25 years, to handle these increased authorizations you are talking about, this price escalation problem, the existing and new proposals, and the Forest Service needs. The problem is the shortage of money in the immediate years ahead to get over the hump and make substantial progress on all of these actions which the Congress has activated in the last few years.

This is one way to do it, by accelerating the advance authorization device.

ADDITIONAL SOURCES OF REVENUE

Another way to do it which is being considered is to place other sources of money into the fund. One source that is being considered, and again this has not surfaced to the point of any policy decision, is to utilize the unearmarked receipts to the Department of the Interior. These vary from around $50 to $250 or $260 million a year.

Senator BIBLE. Where do these receipts go?

Mr. CRAFTS. They go into the General Treasury.

Senator BIBLE. It is still money, though.

Mr. CRAFTS. It is still money. You can't get away from money.

Senator BIBLE. I am afraid this is right.

FEDERAL BONDS IN PAYMENT OF LAND ACQUISITIONS

Mr. CRAFTS. Another possible way to do it would be to offer to pay for some of these properties by Federal bonds and to allow the purchasers to take payment in bonds, which, of course, would be a type of deficit financing, and then these bonds would be subject to call at the wish of the Treasury. These are the devices that we are thinking about, but you cannot, as I understand it, and I am not an attorney, taken an individual's property against his will unless you have money to reimburse him for it at that time.

Senator BIBLE. That is correct, that is the law. It is required by the Constitution.

Mr. CRAFTS. I think this is a constitutional provision.

Senator BIBLE. Your understanding is right.

Mr. CRAFTS. So to prevent the escalation matter some way or another there has to be money to do it.

INCREASE IN POINT REYES COST

Senator BIBLE. I thank you for your observations and I do want to go into this again, and maybe I am using the wrong forum, Mr. Chairman, and if so, I apologize, but we will have before us very soon in the Interior Committee, the legislative committee, this bill to increase the authorization of Point Reyes to wherever it increases. What do you increase it to, Mr. Price? Do you know? What is the new price tag on Point Reyes, for the sake of accuracy?

Mr. PRICE. It is about $44 million, I think, or $46 million.

Senator BIBLE. $46 million?

Mr. CRAFTS. It is now $14 million, and it is proposed to raise it by $32 million.

Senator BIBLE. This illustrates my point, Mr. Chairman. We passed the Point Reyes bill. We were told rather positively and unequivocally that the total price tag would be $14 million. We now find that that is wrong and it is going to be $46 million, and that is quite a substantial raise. I realize the difficulties under which you work, and we will be taking a look at that bill in the very near future, and I think that would be probably the correct forum to try to see if we can't devise some procedure to meet this problem. This is what constantly concerns me. It concerns me about the Redwoods proposals. Here we are launching into a $60 to a $100 million project, and we can't even keep our commitments on the projects we have already authorized. I would like to know the answer to that.

ESTIMATED COSTS OF AUTHORIZED PROJECTS AND NEW AUTHORIZATIONS NEEDED

Mr. CRAFTS. I would be happy to make available to you, to your committee, or to this committee a recent letter to Congressman Saylor because the House committee is concerned about the same matter.

Senator BIBLE. I am sure it would be.

Mr. CRAFTS. The letter lists those areas where authorization has expired and those areas where new authorizations may be needed.

Senator BIBLE. I think it might be well, Mr. Chairman, if you have no objection, to have this placed in the record here. I think it should go to the other committee as well, as we both work on the same general problems, and I think it is a real timely question.

Chairman HAYDEN. It will be included in the record.

(The letter follows:)

U.S. DEPARTMENT OF THE INTERIOR,
BUREAU OF OUTDOOR RECREATION,
Washington, D.C., February 23, 1966.

Hon. JOHN P. SAYLOR,
House of Representatives,
Washington, D.C.

DEAR JOHN: This is in response to your recent request for information on areas in the National Park System for which the acquisition authorization limitation had been reached.

Enclosed are three tables:

1. Areas where the fiscal limitation has been appropriated and for which additional ceilings are not contemplated at this time.
2. Areas where fiscal limitation has been appropriated and where additional ceilings are needed.
3. Areas where the limitation has not been reached. The starred items are those where additional ceilings appear likely.

These tables also have the information on the lapsed time in years and months between the date of enactment and the time the authorization limitation was reached, as you requested.

The data on needed additional ceilings are preliminary.

One other point you raised—the original Department of the Interior request on authorization limitation. Generally speaking, the Department does not request authorization limitations. On Padre Island, for example, the Department, in its report of July 5, 1961, on H.R. 5013 and H.R. 5049, specifically requested the deletion of any limitation. S. 476, authorizing the establishment of Point Reyes National Seashore, as originally introduced did not have any limitation, and the Department's report made no comment on this. Its report, dated March 23, 1961, did carry an estimated acquisition cost for the first 5 years of $20 million.

I hope this information will be helpful to you. If there is anything further, please let me know.

Sincerely yours,

EDWARD C. CRAFTS, *Director.*

TABLE 1.—*Areas in the National Park System where fiscal limitation has been appropriated and additional ceilings not contemplated at this time*

Management unit	Ceiling authorized (dollars)	Date of authorization	Date ceiling reached (fiscal year)	Time lapsed	
				Years	Months
Allegheny Portage NHS, Pa. Johnstown Flood NHS, Pa.	445,000	Aug. 31, 1964	1966	1	10
Capulin Mountain NM, N. Mex. (boundary change)	2,500	Sept. 5, 1962	1965	2	10
Fort Davis NHS, Tex.	115,000	Sept. 8, 1961	1963	1	10
Fort Larned NHS, Kansas	454,000	Aug. 31, 1964	1966	1	10
Harpers Ferry NHP, W. Va. and Md.	300,000	July 14, 1960	1962	2	0
John Muir NHS, Calif.	169,000	Aug. 31, 1964	1965	0	10
Kennesaw Mountain NBP, Ga. (boundary change)	155,000	June 26, 1935	1939	4	0
Morristown NPH, N.J. (boundary change)	281,000	Sept. 18, 1964	1965	0	9
Padre Island NS, Texas	5,000,000	Sept. 28, 1962	1965	2	9

TABLE 2.—*Areas in the National Park System where fiscal limitation has been appropriated, and for which additional ceilings are needed*

Area	Ceiling authorized (Dollars)	Date of authorization	Date ceiling reached (fiscal year)	Time lapsed		Additional estimated ceiling required [1] (Dollars)	Total required estimate (Dollars)
				Years	Months		
Big Hole NB, Mont.	$20,000	May 17, 1963	1965	2	1	$60,000	$80,000
Cape Hatteras, NS, N.C.	250,000	Aug. 6, 1956	1965	8	11	2,250,000	2,500,000
Colonial NHP, Va.	2,000,000	Mar. 3, 1931	1966	35	0	1,320,000	3,320,000
Effigy Mounds NM, Iowa.	2,000	May 27, 1961	1966	5	1	8,000	10,000
Fort Bowie NHS, Ariz.	20,250	Aug. 30, 1964	1965	0	10	39,750	60,000
Fort Donelson NMP, Tenn.	226,000	Sept. 8, 1960	1962	1	10	85,000	311,000
Fort Necessity NB, Pa.	115,000	Aug. 10, 1961	1965	3	11	350,600	465,600
Fort Smith NHS, Ark.	319,000	Sept. 13, 1961	1963	1	10	545,000	864,000
Independence NHP, Pa.	[2] 8,221,200	Aug. 21, 1964	1965	0	10	6,440,000	14,661,200
Lincoln Boyhood NM, Ind.	75,000	Feb. 19, 1962	1963	1	4	180,000	255,000
Point Reyes NS, Calif.	14,000,000	Sept. 13, 1962	1965	2	10	32,000,000	46,000,000
Shiloh NMP, Tenn.	[3] 57,100	July 3, 1926	1962	36	2	42,100	99,200

[1] These are tentative, preliminary estimates, and have not been cleared by the Department. It is probable that final decisions will change them.

[2] The Act of June 28, 1948, providing for the establishment of the Independence National Historical Park, authorized $4,435,000 for land acquisition. Subsequent authorizations have brought the total to $8,221,000. The last authorization was contained in Public Law 88-477 of Aug. 21, 1964, was for $200,000, which was appropriated in fiscal year 1965.

[3] When the Shiloh National Military Park was authorized by Act of June 4, 1897, a fiscal limitation of $50,000 for land acquisition was imposed. The Act of July 3, 1926, raised this an additional $7,100. Appropriation of the $7,100 was not completed until fiscal year 1962.

TABLE 3.—*Areas in the National Park System where the fiscal limitation has not yet been appropriated*

Area	Ceiling authorized (dollars)	Date of authorization
Appomattox Court House, Va.	100,000	Aug. 13, 1935
Arkansas Post, Ark.	25,000	July 6, 1960
Cape Cod NS, Mass.*	16,000,000	Aug. 7, 1961
Cumberland Gap, Ky.-Tenn.-Va.	30,000	July 26, 1961
Everglades NP, Fla.*	2,000,000	July 2, 1958
Fire Island NS, N.Y.	16,000,000	Sept. 11, 1964
Fort Frederica NM, Ga.	20,000	May 16, 1958
Lake Mead NRA, Ariz.-Nev.	1,200,000	Oct. 8, 1964
Minute Man NHP, Mass.*	5,000,000	Sept. 21, 1959
Ozark National Scenic Riverways, Mo.	7,000,000	Aug. 27, 1964
Petersburg NB, Va.	90,000	Aug. 24, 1962
Piscataway Park (Mockley Pt.), Md.[3]	937,600	Oct. 4, 1961
Scotts Bluff NM, Nebr.	15,000	June 30, 1961
Wilson's Creek Battlefield NP, Mo.	20,000	Apr. 22, 1960
Agate Fossil Beds NM, Nebr.	301,150	June 5, 1965
Assateague Island NS, Md.-Va.	16,250,000	Sept. 21, 1965
Delaware Water Gap, Pa.	37,412,000	Sept. 1, 1965
Great Falls, Va.	1,000,000	Oct. 10, 1965
Golden Spike NHS, Va.	1,168,000	July 30, 1965
Herbert Hoover NHS, Iowa	[1] 1,650,000	Aug. 12, 1965
Hubbell Trading Post NHS, Ariz.	[1] 952,000	Aug. 28, 1965
Nez Perce NHP, Idaho	630,000	May 15, 1965
Roger Williams NM, R.I.	[1] 700,000	Oct. 22, 1965
Whiskeytown-Shasta-Trinity NRA, Calif.	21,600,000	Nov. 8, 1965
Mesa Verde NP, Colo.	125,000	Dec. 23, 1963
Alibates Flint, Tex.	5,000	Aug. 31, 1965
Virgin Islands NP, V.I.*	1,250,000	Oct. 5, 1962
Vicksburg NMP, Miss.	[2] 2,050,000	June 4, 1963

[1] Land acquisition and development.
[2] Land acquisition and construction and relocation of roads.
[3] Request for the balance of the authorization is in the fiscal year 1967 estimate. Proposal to increase the ceiling is under consideration.
*Additional limitation will probably be needed at a later date.

PRIORITY OF PARK SERVICE ACQUISITIONS

Senator BIBLE. One further question, and this can be supplied for the record, Mr. Crafts. Your justification shows on page 11 that $28,316,000 is being requested by the Park Service for the acquisition of land and water areas in fiscal year 1967, and in the event the Congress does not approve the full amount, what would be your order of priorities as far as the acquisitions are concerned. I would like to have you furnish that for the record. I don't know which ones you do give priority to.

Mr. CRAFTS. Yes. The House committee asked a similar question of Mr. Hartzog. He submitted it. I will be glad to submit it. Our views are similar, but they are not exactly the same, and if you get a list that is somewhat different than the House list, I think that simply illustrates that we have two agencies that are working on this who are cooperating. This doesn't mean we have fundamental policy differences.

Senator BIBLE. I understand that.

Mr. CRAFTS. You must expect differences.

Senator BIBLE. Certainly.

Mr. CRAFTS. But I will be happy to supply such a list to you.

(The list follows:)

Priority No.	Name of park	State	1967 budget request	Balance needed to complete [1]
1	Redwood National Park	California	$10,000,000	$50,000,000
2	Delaware Water Gap National Recreation Area.	Pennsylvania	1,570,000	33,162,000
2a	do	New Jersey	2,430,000	
3	Piscataway Park	Maryland	544,500	[2] 3,162,400
4	Fire Island National Seashore	New York	2,000,000	[3] 12,900,000
5	Whiskeytown National Recreation Area	California	1,425,000	[4] 20,175,000
6	Assateague Island National Seashore	Maryland	3,360,000	12,790,000
7	Cape Cod National Seashore	Massachusetts	1,000,000	[5] 11,000,000
8	Nez Perce National Historical Park	Idaho	440,000	190,000
9	Hubbell Trading Post National Historic Site	Arizona	[6] 312,500	
10	Great Falls (George Washington Memorial Parkway).	Virginia	1,000,000	
11	Herbert Hoover National Historic Site	Iowa	630,000	320,000
12	Agate Fossil Beds National Monument	Nebraska	231,200	69,950
13	Olympic National Park	Washington	994,200	5,000,000
14	Grand Teton National Park	Wyoming	810,000	19,000,000
15	Virgin Islands National Park	Virgin Islands	738,700	[7] 5,600,000
16	Ozark National Scenic Riverways	Missouri	400,000	2,500,000
17	Lake Mead National Recreation Area	Arizona	142,000	[8] 3,500,000
18	Canyonlands National Park	Utah	14,500	
19	Dinosaur National Monument	Colorado	25,900	180,000
20	Sequoia National Park	California	70,500	362,000
21	Kings Canyon National Park	do	59,800	700,000
22	Grand Portage National Monument	Minnesota	23,000	
23	Blue Ridge Parkway	North Carolina	12,000	575,000
23a	do	Virginia	82,200	
	Total Estimate		28,316,000	181,186,350

[1] Based on 1966 prices.
[2] Estimated amount needed above the currently authorized ceiling of $937,600, which will be reached with the appropriation of $544,500 in fiscal year 1967.
[3] Estimated amount includes $5,000,000 above the currently authorized ceiling of $16,000,000. $7,900,000 remains in ceiling after the appropriation of $2,000,000 in fiscal year 1967.
[4] $3,600,000 represents acquisition to be accomplished by the Forest Service.
[5] Estimated amount needed above the currently authorized ceiling of $16,000,000, which will be reached with the appropriation of $1,000,000 in fiscal year 1967.
[6] Includes $143,500 for scientific collection.
[7] Estimated amount includes $5,088,700 above the currently authorized ceiling of $1,250,000. $511,300 remains in ceiling after appropriation of $738,700 in fiscal year 1967.
[8] Estimated amount includes $2,692,000 above the currently authorized ceiling of $1,200,000. $808,000 remains in ceiling after appropriation of $142,000 in fiscal year 1967.

PRIORITIES FOR ACQUISITIONS

Senator BIBLE. I think it might be well to have both lists. Will you make the other available, Mr. Price, showing the Park Service philosophy as to what the priorities are?

Mr. PRICE. Yes.

Senator BIBLE. I think, one, on your premise of the full amount being allowed, and, secondly, with whatever reduction, what are your priorities.

(The list follows:)

Priority No.	Name of park	State	1967 budget request	Balance needed to complete [1]
1	Delaware Water Gap National Recreation Area	New Jersey	$2,430,000	$33,162,000
1a	do	Pennsylvania	1,570,000	
2	Assateague Island National Seashore	Maryland	3,360,000	12,790,000
3	Piscataway Park	do	544,500	[2] 3,162,400
4	Great Falls (George Washington Memorial Parkway).	Virginia	1,000,000	
5	Canyonlands National Park	Utah	14,500	
6	Dinosaur National Monument	Colorado	25,900	180,000
7	Olympic National Park	Washington	994,200	5,000,000
8	Grand Teton National Park	Wyoming	810,000	19,000,000
9	Virgin Islands National Park	Virgin Islands	738,700	5,600,000
10	Whiskeytown National Recreation Area	California	1,425,000	[3] 20,175,000
11	Sequoia National Park	do	70,500	362,000
12	Kings Canyon National Park	do	59,800	700,000
13	Redwood National Park	do	10,000,000	50,000,000
14	Fire Island National Seashore	New York	2,000,000	12,900,000
15	Cape Cod National Seashore	Massachusetts	1,000,000	[4] 11,000,000
16	Agate Fossil Beds National Monument	Nebraska	231,200	69,950
17	Nez Perce National Historical Park	Idaho	440,000	190,000
18	Hubbell Trading Post National Historic Site	Arizona	312,500	
19	Herbert Hoover National Historic Site	Iowa	630,000	320,000
20	Grand Portage National Monument	Minnesota	23,000	
21	Blue Ridge Parkway	North Carolina	12,000	575,000
21a	Blue Ridge Parkway	Virginia	82,200	
22	Lake Mead National Recreation Area	Arizona	142,000	3,500,000
23	Ozark National Scenic Riverways	Missouri	400,000	2,500,000
	Total estimate		28,316,000	181,186,350

[1] Based on 1966 estimated fair market values.
[2] Represents estimated overceiling amount above the original authorization of $937,600.
[3] $3,600,000 represents acquisition to be accomplished by the Forest Service.
[4] Represents estimated overceiling amount above the original authorization of $16,000,000

COST STUDY OF RECREATIONAL POTENTIAL ON MISSOURI RIVER BASIN

Senator BIBLE. One further question, Dr. Crafts. As you know, our Interior Committee on February 17, this year, requested a study be made of the recreational potential on the Missouri River from Yankton to Fort Benton. The request was made pursuant to resolution of Senator McGovern. It was approved by the Senate Interior Committee. I believe you have been furnished a copy of that resolution. My question is: How much will the study cost?

Mr. CRAFTS. I was furnished a copy informally. We have only a preliminary statement on this. This is a large stretch of the Missouri River, the distance is described in that resolution. It involves six major reservoirs, I think, of the Corps of Engineers. It also includes a stretch of river proposed for a wilderness waterway above Fort Peck Reservoir to Fort Benton. This is a major undertaking, Senator Bible, and I could give you an offhand figure. I would like an opportunity to change it——

Senator BIBLE. You can study it and furnish it for the record.

Mr. CRAFTS. Offhand, I don't see how this can be done for less than $50,000.

Senator BIBLE. This is at least a $50,000 study.

Mr. CRAFTS. Yes, sir. I might also say that this is not contemplated in the budget that is before you because this was not in our planning at that time.

Senator BIBLE. If you were given $50,000, would this be sufficient to complete the study? Maybe you want to check it out.

Mr. CRAFTS. I would like to check it out, but I think so.

(The information follows:)

The estimated cost for making a recreation potential study on the Missouri River from Yankton to Fort Benton is $50,000.

DISTANCE ON MISSOURI RIVER UNDER STUDY

Senator BIBLE. This is not a 1-year item and then another $50,000 next fiscal year?

Mr. CRAFTS. Oh, no; this is like any study. It is a nonrecurring thing.

Senator BIBLE. What is the length from Yankton, S. Dak., to Fort Benton? You say this is a long reach of the Missouri. I am willing to take your word for it. How long is it approximately?

Mr. CRAFTS. We both came out independently with 800 miles.

Senator BIBLE. Approximately 800 miles, and you have these reservoirs and that sort of thing?

Mr. CRAFTS. Yes, sir.

Senator BIBLE. Thank you very much. I have no further questions, Mr. Chairman.

Chairman HAYDEN. Senator Byrd.

WEST VIRGINIA PROJECT PROPOSALS SUBMITTED TO BUREAU OF OUTDOOR RECREATION

Senator BYRD. Mr. Chairman, may I ask with regard to West Virginia, has the State submitted any project proposals to the Bureau of Outdoor Recreation?

Mr. CRAFTS. Yes, Senator. It has submitted, I believe, four of them.

Senator BYRD. You indicated thusly earlier. Would you specify those four?

Mr. CRAFTS. May I ask Mr. Underhill to give the details on this, Senator Byrd?

Senator BYRD. Surely. Thank you, Dr. Crafts.

Mr. UNDERHILL. Of the four projects, Senator Byrd, there is a request for $45,000 for developing a State outdoor recreation plan. This has already been granted. There are three requests pending, one for $190,000 for the development of a swimming pool and associated supporting facilities in the city of Wheeling. There is a request for $62,500 for the development of a park department maintenance building in the city of Wheeling, and those are the three. I was wrong. There are not four, but three.

Senator BYRD. One has been approved.

Mr. UNDERHILL. The planning project has been approved. The other two have been held up over some legal difficulties between our solicitor and the State attorney general which I think have been

resolved. They met the day before yesterday, and I think that these will be approved now within the next week.

Senator BYRD. These are awaiting approval at your level?

Mr. UNDERHILL. That is correct.

Senator BYRD. What is the fourth project?

Mr. UNDERHILL. I think I was wrong. I think there are only those three, Senator.

Senator BYRD. Have you addressed yourself to the development projects as well as the acquisition projects?

Mr. UNDERHILL. Those are both development projects, Senator, not acquisition. To date we have no acquisition projects from them. Three of them have at least reached the Washington level.

SPRUCE KNOB-SENECA ROCKS AREA, W. VA.

Senator BYRD. In the Spruce Knob-Seneca Rocks Area, what acreage is proposed to be acquired in fiscal year 1967 and how much money is involved? That question should perhaps be asked of Mr. Nelson.

Mr. NELSON. Yes, sir. There are 20 projects, roughly 5,000 acres, and $519,000 for 1967 in this budget.

Senator BYRD. And you are addressing yourself now to projects which would not be affected by this Redwood National Park?

Mr. NELSON. That is right.

PERMIT CHARGES

Senator BYRD. I have one further question, Mr. Chairman, and it goes to this matter of the permits. What did you say was the annual charge, Dr. Crafts?

Mr. CRAFTS. The annual charge for what we call the golden permit is $7 for that permit. This allows the holder of that permit and a carload of people to enter any Federal recreation area that is designated under the act for Federal charges as many times as he wants to during the year in any part of the country. There will be 6,000 to 7,000 of these designated areas. This year, as distinct from last year, the Corps of Engineers areas will be brought into this program and there are a couple thousand of those. The charge for the 30-day permit is roughly half the charge for the annual permit, and this runs to a specific designated area rather than to any in the whole country. It is good for 30 days into Rocky Mountain National Park or 30 days into some other area. Then there is the 1-day permit which I believe is a dollar for any area in the country. It will usually be just one area, and all three of these relate not only to the individual but to all those who accompany him in the car.

COMPARISON OF RECREATION FEES

Senator BYRD. Are these the same prices which were charged in the past year?

Mr. CRAFTS. The $7 permit is the same. The others are somewhat different, both in price and in the fact that they now run to a carload

of people this year, whereas last year the seasonal permit and the daily permit ran to the individual rather than to a group of people. I have a tabulation here which I would put in the record if you wish, that compares the permit system last year as against the permit system this year, a side-by-side tabulation of the differences.

Senator BYRD. Mr. Chairman, I think it would be helpful to have that.

(The tabulation follows:)

Type of permit	Fee regulations dated Mar. 3, 1965 (as amended) for 1965 season	Fee regulations dated Dec. 23, 1965 for 1966 season
Annual permit	$7; automobile bumper sticker	$7; gold-colored, wallet-sized permit. This allows entry by the purchaser and all who accompany him in a private, noncommercial vehicle. Also valid for walk-in entry by purchaser only. [1]
Daily	$0.25, $0.50, $0.75, and $1.00 per person, depending on the services offered. [2]	Vehicle entry $1. This allows entry by the purchaser and all who accompany him in a private, noncommercial vehicle. Also valid for walk-in entry by purchaser only. Individual entry $0.50—admits individual only.
Seasonal	Not more than 5 times daily rate (expired Dec. 31, 1965).	Replaced by temporary permit.
Temporary	None	Valid for 30 consecutive days at the designated area indicated on permit. Vehicle entry $3–$6 (over ½ the cost of annual permit). This allows entry by the purchaser and all who accompany him in a private, noncommercial vehicle. Also valid for walk-in entry by purchaser only.[2] Individual entry, $1.50–$3.00 admits individual only. [2]
User fees	In a rate in accord with sec. 18.6(d) criteria.	At a rate in accord with sec. 18.4(d) criteria. The same as 1965 except that vehicle and trailer parking have been added.

[1] Walk-in entry is defined as entrance to designated areas not normally entered by vehicle. The Curtis-Lee Mansion is an example of this type of designated area. Each of the 3 permits may be used where appropriate for admission to a designated area not normally entered by motor vehicle. The permits replace the admission fees provided for by 43 CFR 18.5 of the 1965 fee regulations.

[2] Selection of the rate at any designated area made by the administering agency.

ENCOURAGING ANNUAL PERMIT PURCHASES

Senator BYRD. You indicate in your book here that the price for the annual permit was only five times the daily rate and you indicated that this probably caused a large number of visitors to use that type of permit rather than the sticker.

Mr. CRAFTS. I don't recall that precise language, but as I recall, the price for the seasonal permit last year could be anywhere from two to five times the daily rate. You could get a seasonal permit for 9 months and just pay twice as much. Some agencies used the multiple of five. We have gotten away from that this year, Senator Byrd. We have tried to design our program this year to give some impetus to the purchase of the nationwide $7 permit.

LACK OF REVENUE FROM ANNUAL PERMIT SALES

Senator BYRD. You had estimated an income, I believe, of about $25 million.

Mr. CRAFTS. Yes, sir.

Senator BYRD. This year, and your income was actually about three and a half million dollars.

Mr. CRAFTS. It is less than that so far. So far it is actually about $2.2 million, and the new permit goes into effect April 1.

Senator BYRD. And you ascribe this failure to meet the estimate to, I believe, about four reasons—slowness, consumer resistance, the time that it took to train the personnel, and the length of season.

Mr. CRAFTS. The length of the recreation season and another one would be the lack of designation by the agencies of areas which this year will be designated. For example, last year the corps did not participate. This will make a big difference this year. There are about five basic reasons.

Senator BYRD. You will have overcome all of these reasons, I suppose.

Mr. CRAFTS. I don't know whether we will have overcome them all. We will have tried to. I don't know whether we will be able to overcome consumer resistance entirely or not. This is a difficult thing.

Senator BYRD. Certainly your getting personnel would not be a reason next year.

PROHIBITION AGAINST PUBLICITY AND PUBLIC RELATIONS EDUCATION

Mr. CRAFTS. We are going to have more areas designated. We are going to have a longer recreation season. The personnel will be better trained. All of these things will be improved. There is one other thing that has caused us some difficulty in that there is a provision in the Land and Water Conservation Fund Act that precludes the expenditure of any moneys from the fund for publicity purposes. This means that we cannot advertise this permit and use Federal moneys to do so. We can do the basic informational work of these little pamphlets that explain how it works and this sort of thing, but we can't really get into a public relations educational undertaking, and so there were a lot of people who didn't know about this, and this is particularly true in the eastern part of the country while most of the Federal lands are in the West. I think we will be doing a better job of that this year. The agencies are participating more. We hope to get some financing in this respect from some private foundations. The publicity aspects of this are quite important.

USE OF PERMITS AT SPECIFIC SITES

Senator BYRD. Even with your having overcome many of the disadvantages which confronted you at the beginning, you anticipate an income of only about $13 million this year, which represents just half of what your original estimate was the first year.

Mr. CRAFTS. Yes, sir.

CORPS OF ENGINEERS RESERVOIR RECREATION SITES

Senator BYRD. I presume that your recreation sites at reservoirs such as Sutton, and Summersville, and so forth, will not require such permits?

Mr. CRAFTS. I don't know those particular reservoirs, as to whether they will or not, Senator Byrd. These are corps reservoirs?

Senator BYRD. These are Corps of Engineers development projects.

Mr. CRAFTS. I do not know whether we have the list from the corps yet or not. They are in the process of designating areas right now.

Senator BYRD. So you might very well, indeed, require permits?
Mr. CRAFTS. It might, yes, sir.
Senator BYRD. Thank you, Dr. Crafts.
Thank you, Mr. Chairman.

TOTAL COST OF ACQUISITION

Senator BIBLE. Mr. Chairman, might I ask just one further question? Mr. Price handed us this order of priority for land acquisition program which will go in the record and it conforms obviously with your budget statement of $28,316,000. You show the estimate for 1967. It would be very helpful, I think, if you would include another column showing what the total cost of acquisition is. I don't know whether that is the authorized amount or whatever figure you have. It is that 5-year figure.

DELAWARE WATER GAP NATIONAL AREA

In other words, you say Delaware Water Gap National Recreation Area, $2,430,000. What is the total cost of acquiring everything you need there? I think that might be another column that would be helpful if that can be furnshed and another column showing at whatever points you are at variance on it.

Mr. CRAFTS. We can agree on the total cost. The place where we might be at variance is in priority.

Senator BIBLE. I think it would be helpful.

Mr. CRAFTS. I think that will be helpful. Some of this is in the letter to Mr. Saylor, but we can add it right to this.

Senator BIBLE. In other words, what you are saying is you are appropriating next year $2,430,000 to acquire land in the Delaware Water Gap National Recreation Area. How much will the total cost be is all I am asking.

Mr. PRICE. This is the statement that Director Crafts referred to as having been requested and introduced in the record in the House hearing.

Senator BIBLE. I appreciate that. Thank you.
Thank you, Mr. Chairman.

RESISTANCE TO ENTRANCE FEES AT CERTAIN PROJECTS IN WEST VIRGINIA

Senator BYRD. Dr. Crafts, I just wanted to express some concern—perhaps you can alleviate it—with regard to the possibility of your requiring these permits of visitors to those Corps of Engineer's recreation projects. You are going to meet some real resistance there, and with respect to those projects in West Virginia at Summersville, Sutton Reservoir, Ohio River projects, and others, we are anticipating a good bit of traffic from tourists and we would, I think, look askance at any suggestion that these permits be used there, but maybe you would like to comment on that.

Mr. CRAFTS. As I said, I don't know those particular areas. I think what you have expressed is the problem that the agencies are running

into all over the country, where these areas have been free. Income from recreation fees is an essential component of the land and water conservation fund, and the question is will the recreationists pay for a reasonable portion of the benefits enjoyed. In most cases the individuals don't like to.

I can name the States. There were a half dozen States last year where this thing really blew up on us. I suspect this will happen again this year, particularly when the corps projects come in. I don't want to speak for the corps, but I know they are approaching it very carefully, and deliberately, and cautiously, and this is one reason they were not in last year. I think their approach is going to be similar to the approach of the Forest Service in that they will designate particular campgrounds or picnic grounds within developed Federal facilities administered by the corps and the permits would be valid for use at all developed facilities within the prescribed area. There are provisions in the act where, if the lands are under lease and are administered by the State or local governments or private concessionnaires, then the fees are not eligible. I am quite sure the corps does not contemplate charging admission to the area as such, but more to specific designated recreation sites, within these projects.

National Park Service Entrance Fees

This is different from the National Park Service. They have charged for entrance over the years in certain of the national parks and monuments and have the entrance gates and so forth.

The corps doesn't have this. The Forest Service doesn't have it. They will spotcheck this. They can't station somebody at each one of these areas. This is obvious. The Forest Service has gone exhaustively into the question of the vending machines and the honor system where people put in their money and get out tickets. The corps may get into this sort of thing, but I would be less than candid, Senator Byrd, if I didn't tell you that there may well be resistance, and I would expect there will be resistance when the corps gets into this.

Senator Byrd. I realize you are not in a position to comment on the corps projects perhaps, and I do appreciate your statement, Dr. Crafts, and I want to associate myself with Senator Bible in his compliments to you and your people, and I also want to compliment Red Nelson and the Forest Service, too, on the good work that is being done.

Mr. Nelson. Senator, in relation to that last subject, I might say that we experienced less difficulty than we anticipated. We had over 2,000 areas designated. It was spotty. In some areas we had more resistance than others, but as a whole, it went over much better than we anticipated.

Senator Byrd. Thank you, Mr. Chairman.

Question Submitted by Senator McGee

State of Wyoming Program

Chairman Hayden. Senator McGee has asked that a question be answered. I will place it in the record and request that you provide a reply.

(The question and answer follow:)

Question. Senator McGee: Considerable concern has been expressed by the State Land and Water Conservation Commission in Wyoming in reference to budget requests of the Bureau of Outloor Recreation for fiscal year 1967. This budget request has been reduced from $125 million down to $110 million. I have been advised that this proposed reduction would result in approximately $100,000 less money available to the State of Wyoming.

This is, as you know, a program which has been widely received in Wyoming and has attracted considerable support from many sources throughout the State. From a recent report which I received, I learned that a total of 87 projects had been submitted to the Commission for review and approval. With this widespread support and participation in the program, the indicated $100,000 cut would have a most devastating effect.

Do you feel that the Bureau of Outdoor Recreation could effectively utilize the full $125 million if this committee and Congress should see fit to make this sum available for fiscal year 1967?

Answer. Mr. Crafts: Senator, as you know, appropriations by Congress for this program must come from revenues from sales of surplus property, motorboat fuel taxes, and admission and user fees. Commencing with fiscal year 1968, the Land and Water Conservation Fund Act authorizes an advance appropriation from general fund revenues of an average of $60 million annually for 8 years—to be repaid from revenues in subsequent years. This authority does not help us in considering the 1967 fiscal year budget.

As I explained earlier, the sales from the annual permit which we had expected would bring in substantial revenues have been disappointing. While we expect greater revenue from this source in the coming year I think we must be realistic.

In our judgment, we believe that $110 million is a realistic estimate. If we are fortunate in collecting more than that amount, we do not lose it, and we could effectively use it. It remains in the fund for 2 fiscal years after the fiscal year in which collected. It would be our intention to either seek a supplemental appropriation covering the excess or request that it be appropriated the following year as part of our 1968 fiscal year budget.

SUBCOMMITTEE RECESS

Chairman Hayden. If there is no further business, the subcommittee will stand recessed until 10 a.m., Monday, February 28, when we will hear from the Office of Oil and Gas and the Geological Survey.

(Whereupon, at 11:40 a.m., Friday, February 25, 1966, the hearing was recessed, to reconvene at 10 a.m., Monday, February 28, 1966.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

MONDAY, FEBRUARY 28, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden, and Senators Byrd, Bartlett, and Mundt.

DEPARTMENT OF THE INTERIOR

OFFICE OF OIL AND GAS

SALARIES AND EXPENSES

STATEMENTS OF ONNIE P. LATTU, DIRECTOR, OFFICE OF OIL AND GAS; THOMAS SNEDEKER, ASSISTANT ADMINISTRATOR, OIL IMPORT ADMINISTRATION; AND HENRY RUBIN, CHAIRMAN, OIL IMPORT APPEALS BOARD

JUSTIFICATION

Chairman HAYDEN. The subcommittee will be in order.

There will be placed in the record the statements prepared in justification of the 1967 budget estimate for the Office of Oil and Gas in the amount of $722,000. This covers funds required for coordination of oil and gas activities, administration of oil import program, and the Oil Import Appeals Board.

(The statements follow:)

COORDINATION OF OIL AND GAS ACTIVITIES

The Office of Oil and Gas was established on May 6, 1946, pursuant to Presidential letter of Harry S. Truman. The Office consists of a small staff organization responsible for leadership, information, and coordination of Federal oil and gas policies and activities. The estimate of funds required for fiscal year 1967 is $548,800, and the level of staff is the same as fiscal year 1966 at 39 employees. There are no major program changes; however, as one of the more important consequences of President Johnson's reaffirmed delegation to the Secretary of the Interior for oil policy in the executive branch, greater emphasis will be devoted to studies and assessments dealing with the adequacy and well-being of the domestic petroleum industry, especially in the light of the Vietnam situation.

ADMINISTRATION OF OIL IMPORT PROGRAM

This program was established March 13, 1959, pursuant to Presidential Proclamation No. 3279, as amended. The administration establishes maximum

quotas for importers of crude oil and petroleum products into the United States and Puerto Rico. Funds and personnel required will be $158,000 and 11 employees. Programs will continue without major change.

Oil Import Appeals Board

The Board was established to conduct hearings on appeals from importers who request a change in their quota or who do not qualify for a quota. Funds provide for one employee, and transcripts of hearings.

Salaries and expenses

Appropriation, 1965	$660,000
Second supplemental, 1965	44,000
Total appropriation, 1965	704,000
Appropriation, 1966	704,000
Pay cost supplemental, 1966	16,000
Total appropriation, 1966	720,000

SUMMARY OF INCREASES AND DECREASES, 1967

To provide for increased pay costs for fiscal year 1966 positions	+7,000
Program savings resulting from reallocations downward	−5,000
Net increase	+2,000
Budget estimate, 1967	722,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers	Amount available
Coordination of oil and gas activities	$517,329	$535,000	$12,600		$547,600
Administration of oil import program	153,226	154,000	3,200		157,200
Oil Import Appeals Board	13,285	15,000	200		15,200
Unobligated balance lapsing	20,160				
Total	704,000	704,000	16,000		720,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
Coordination of oil and gas activities	$517,329	$547,600	$548,800	+$1,200	+$6,200	−$5,000
Administration of oil import program	153,226	157,200	158,000	+800	+800	
Oil Import Appeals Board	13,285	15,200	15,200			
Unobligated balance lapsing	20,160					
Total	704,000	720,000	722,000	+2,000	+7,000	−5,000

Office of Oil and Gas

JUSTIFICATION

The estimate of $722,000 is a net increase of $2,000 over the appropriation for the current year adjusted to meet increased pay costs. This net amount is the result of an increase of $7,000 on current positions and a decrease of $5,000 in the program due to savings in position reallocations. This $722,000 will be distributed to the following three offices:

1. Office of Oil and Gas	$548,800
2. Oil Import Administration	158,000
3. Oil Import Appeals Board	15,200
Total	722,000

1. Authority

The Office of Oil and Gas was established on May 6, 1946, by the Secretary of the Interior, pursuant to Presidential letter of May 3, 1946, as the agency in the Federal Government having primary responsibility for leadership and information on petroleum and gas, and to serve as the principal channel of communication with the petroleum and gas industries. Additional defense planning responsibilities were subsequently assigned to the Office of Oil and Gas.

2. Mission

As the Nation's principal natural resource conservation agency, the Department of the Interior bears a special obligation to assure that our expendable resources contribute their full measure to the progress, prosperity, and security of America, now and in the future.

The Office develops, evaluates, and coordinates oil and gas information to provide sound bases for establishment and implementation of Government policies and programs for oil and gas; provides information and services to Government agencies with respect to strategic and economic factors affecting the petroleum and gas industries both in the United States and abroad; recommends programs and policies to improve the position and capabilities of these domestic industries, and provides expert advice with respect to international policies affecting petroleum and gas.

The Office prepares national emergency plans and develops preparedness programs to provide a state of readiness in petroleum and gas for all conditions of national emergency in collaboration with other Federal agencies, State and local governments, and industry; provides for a standby Emergency Petroleum and Gas Administration; selects and trains executive reservists to staff the EPGA. The Office of Oil and Gas would serve as the nucleus of EPGA in an emergency. The Office also participates with other Federal agencies in petroleum activities of international organizations and U.S. alliances in planning and testing programs designed to meet U.S. and allied emergency oil and gas requirements.

3. Programs and activities

The Office receives advice and cooperation from the petroleum and gas industries through industry advisory committees such as the National Petroleum Council, Foreign Petroleum Supply Committee, and Petroleum Security Subcommittee of the Foreign Petroleum Supply Committee, and the Emergency Advisory Committee for Natural Gas. The Office participates in the activities of international committees, State organizations, and Federal Government interagency organizations concerned with petroleum and gas matters. These include the Petroleum Planning Committee of the North Atlantic Treaty Organization, Special Committee for Oil of the Organization for Economic Cooperation and Development and its U.S. Petroleum Advisory Committee, Committee on Gas of the Economic Commission for Europe (United Nations), Interstate Oil Compact Commission, and numerous Federal Government interagency groups.

a. Evaluation and forecasting.—The Office of Oil and Gas is the only Federal Government Office that consolidates military, industrial, and civilian petroleum requirements, correlates these requirements with probable availability of petroleum and gas, makes comprehensive petroleum and gas supply-demand surveys, and prepares forecasts of the probable availability of petroleum and gas to meet the peacetime requirements of the United States and the friendly foreign nations

from all sources at home and abroad. In collaboration with the Defense Department and Office of Emergency Planning conducts petroleum and gas supply-demand surveys to coordinate probable military demands with essential civilian and industrial requirements of the United States and the friendly foreign nations to meet emergency or wartime requirements.

Data includes information on capacity and facilities to produce, refine, store, and transport petroleum and gas in the free world under peacetime, emergency, or wartime conditions; also, supply-demand information for the free world under the same conditions.

Information on petroleum and gas supply and demand is available from many sources. Federal sources include the Geological Survey, the Bureau of Mines, the Department of Commerce, the Federal Power Commission, the Interstate Commerce Commission, or any agency developing, maintaining, and publishing data which has a bearing on petroleum and gas supply. State sources include the Interstate Oil Compact Commission, Texas Railroad Commission, and other State conservation agencies of oil producing States. Industry sources include information regularly published by oil and gas trade associations and by direct contact with the executive and technical personnel in the oil and gas industry.

Additional information is obtained by utilizing the services of industry advisory councils, boards, and committees established by the Secretary of the Interior. These include the National Petroleum Council, which provides the services of the best qualified men in the oil and gas industries on broad technical matters concerning petroleum and gas; the Foreign Petroleum Supply Committee which provides an advisory service pertaining to sources and methods for obtaining petroleum supply and demand information for all countries of the free world, and develops plans of action to prevent, eliminate, or alleviate shortages of petroleum supplies which threaten to affect adversely the security of the United States; the Petroleum Security Subcommittee of the Foreign Petroleum Supply Committee composed of special groups of technical advisers to the Department of the Interior, Department of Defense, and Office of Emergency Planning on highly confidential petroleum and gas questions involving national security and free world defense; and, the Emergency Advisory Committee for Natural Gas which provides an advisory service pertaining to plans of action to assure adequate supplies of natural gas under emergency or wartime conditions. These correlations of the probable petroleum and gas supplies available with probable peacetime, emergency, or wartime requirements disclose areas of potential deficiencies. The Office then devises ways to alleviate or prevent such deficiencies.

The foregoing information also provides a basis for special studies, reports, and papers, pertaining to:

(1) Planning by the military and interested civilian agencies for threatened or actual crisis in situations such as Quemoy, Matsu, Lebanon, Jordan, Korea, Suez, Berlin, Cuba, southeast Asia and Vietnam.

(2) Advice and assistance on a wide range of oil and gas matters to the Congress, its committees, the Departments of State, Commerce, and Defense, Office of Emergency Planning, and to other Federal agencies concerned with petroleum and gas or the supply thereof;

(3) Cooperation between the Federal Government and the oil-producing States and the State conservation bodies thereof, and the Interstate Oil Compact Commission;

(4) Cooperation between the Federal Government and the petroleum and gas industries and industry councils, boards, and committees;

(5) Activities of U.S. representatives at meetings of the Petroleum Planning Committee of NATO;

(6) Activities of the U.S. representatives at meetings of the Energy and Oil Committees of the Organization for Economic Cooperation and Development;

(7) Activities of the U.S. representatives at meetings of special petroleum industry advisory groups appointed by the Organization for Economic Cooperation and Development composed of the friendly European nations;

(8) Activities of the U.S. representatives at meetings of other international organizations dealing with the economic development of areas of the free world other than the NATO countries;

(9) Petroleum planning by the Department of State in connection with its programs with the NATO countries and the friendly foreign nations elsewhere in the free world.

b. Committee activities.—The Office of Oil and Gas chairs or furnishes representatives to a variety of Federal, State, and industrial committees interested in or affected by petroleum and gas operations or supplies. Some of these are:

(1) Cochairman of committees or subcommittees of the National Petroleum Council (industry);

(2) Cochairman and the executive secretary of the Emergency Advisory Committee for Natural Gas and its subcommittees (industry);

(3) Chairman of the Foreign Petroleum Supply Committee (industry) and its subcommittees;

(4) Executive secretary of the Organization for Economic Cooperation and Development's Petroleum Advisory Committee (industry);

(5) Petroleum advisers to working groups of petroleum committees of international organizations;

(6) Department of the Interior's alternate representative to the Interstate Oil Compact Commission (State government);

(7) Department of the Interior's representative and alternate on the Petroleum Subcommittee of the Economic Intelligence Committee of Central Intelligence Agency (Federal Government);

(8) Department of the Interior's alternate representative on the Operating Committee of the Advisory Committee on Export Policy of the Department of Commerce (Federal Government);

(9) Department of the Interior's representative on the Interdepartmental NATO Petroleum Backstopping Committee.

c. Workload.—Requests for advice and assistance from Federal, State, local, industrial, and international organizations continued at a high rate during the past fiscal year. This high level workload is expected to continue so long as the economic development and military assistance programs continue. The number, type, and scope of worldwide petroleum supply-demand studies have been increased in order to handle properly these urgent requests for advice and assistance. The supply-demand data must be maintained on a current basis so as to forecast promptly petroleum requirements under peacetime, emergency, or wartime conditions. Also, military-type studies essential to military defense needs anywhere in the free world have been expanded significantly and must be revised promptly to meet actual or potential emergencies as the world situation changes.

In addition, the Office must furnish chairmen, cochairmen and/or petroleum advisers to industry advisory committees at national and regional levels, full-time Government employees for staff assistance, stenographic reporting service for committee meetings, staff assistance for the preparation of reports, and the executive secretary for the Emergency Advisory Committee for Natural Gas.

A comprehensive study is now well underway of the current position of the domestic petroleum industry including the entire range of factors bearing on prices and costs as well as the position of the domestic petroleum industry in the energy economy of the United States and the world. The Office of Oil and Gas has been directed to take the lead and coordinate this study. This has resulted in an additional workload which we absorbed without an increase in personnel.

d. Manpower and fund utilization.—Considerable progress has been made in the current fiscal year in better utilization of funds to meet the increased cost in other objects that have been occurring for several years due to changes in operating expenses. We have eliminated one grade 15 job and lowered the average grade and salary rate slightly in the current year and again in the budget year. The money savings will be available to meet the increased cost in other expenses. The savings were affected through the retirement of several older employees with salaries at the top of the grade and the inhiring of replacements at lower grades and salaries.

e. Program changes.—As one of the more important consequences of President Johnson's reaffirmed delegation to the Secretary of the Interior the responsibility for oil policy in the executive branch, the Comprehensive Oil and Gas Study was undertaken by the Office of Oil and Gas to assess the current petroleum situation and provide a foundation on which to compile and build meaningful and pertinent statistics, assessments, and energy policy formulation for the future. Greater emphasis will be devoted in the future to studies and assessments dealing with the adequacy and well-being of the domestic petroleum and gas industries. Of special, current significance is the continuing southeast Asia (Vietnam) fuel support study which is being updated on a monthly basis. All other past programs are expected to continue.

Oil Import Administration

JUSTIFICATION

Administration of oil import program

Authority.—Pursuant to section 2 of the Act of July 1, 1954, as amended (72 Stat. 678, 19 U.S.C. 1352a) and section 232 of the Trade Expansion Act of 1962 (Public Law 87–794) the Director, Office of Civil and Defense Mobilization, made an appropriate investigation and determined that crude oil and crude oil derivatives and products were being imported in such quantities and under such circumstances as to threaten to impair the national security.

The President concurred in the recommendation of the Director, Office of Civil and Defense Mobilization and issued Presidential Proclamation No. 3279, dated March 10, 1959, "Adjusting Imports of Petroleum and Petroleum Products into the United States" (24 F.R. 1781) as amended by Proclamation No. 3290 (24 F.R. 3527); Proclamation No. 3328 (24 F.R. 10133); Proclamation No. 3386 (25 F.R. 13945); Proclamation No. 3389 (26 F.R. 507, 811); Proclamation No. 3509 (27 F.R. 11985); Proclamation No. 3531 (28 F.R. 4077); Proclamation No. 3541 (28 F.R. 5931); and Proclamation No. 3693 (30 F.R. 15459). The Presidential proclamation authorized the Secretary of the Interior to issue regulations for the purpose of implementing the provisions thereof.

The Secretary of the Interior, pursuant to the Presidential proclamation, established on March 13, 1959, an Oil Import Administration within the Department of the Interior, issued regulations for the operation of the oil import program, and delegated, except for appeals, the authority conferred upon him by the proclamation to the Administrator, Oil Import Administration (24 F.R. 1907 as amended by 24 F.R. 2622; 24 F.R. 4654; 24 F.R. 6759; 24 F.R. 10075; 25 F.R. 4957; 25 F.R. 6051; 25 F.R. 12999; 25 F.R. 13768; 26 F.R. 782; 26 F.R. 1248; 26 F.R. 2121; 26 F.R. 5396; 26 F.R. 11973; 27 F.R. 2603; 27 F.R. 5954; 27 F.R. 12442; 28 F.R. 2677; 28 F.R. 4953; 28 F.R. 6353; 28 F.R. 14318; 29 F.R. 8170; 29 F.R. 16986; 30 F.R. 2212; 30 F.R 4415; 30 FR. 8494; 30 F.R. 16080).

Objectives.—The program is designed to insure a stable and healthy industry in the United States capable of exploring for and developing new petroleum reserves to replace those being depleted. The basis of the program is the certified requirements of our national security which make it necessary that we preserve to the greatest extent possible a vigorous and healthy petroleum industry in the United States.

Program.—Prior to the beginning of each allocation period the Administrator shall determine in accordance with the limitations imposed by section 2 of Proclamation No. 3279, as amended, the quantities of imports of crude oil and unfinished oils which are available for allocation in districts I–IV and in district V, respectively, and the quantities of imports of residual fuel oil to be used as fuel and of imports of finished products other than residual fuel oil to be used as fuel which are available for allocation in such districts.

Pursuant to paragraph (d) of section 2 of Proclamation No. 3279, as amended the Secretary will make a determination as to the level of imports into district I, districts II–IV, and district V, of residual fuel oil to be used as fuel in sufficient time to permit the making of allocations in advance of each allocation period.

Pursuant to section 2 of Proclamation No. 3279, as amended, it is determined (1) that the average barrels per day of imports of crude oil and unfinished oils into Puerto Rico during any particular allocation period shall be a quantity which in the judgment of the Secretary of the Interior is consonant with the objectives of the proclamation; (2) that the average barrels per day, as determined by the Administrator, of imports of residual fuel oil to be used as fuel and of imports of finished products other than residual fuel oil to be used as fuel into Puerto Rico during any particular allocation period shall not exceed the average barrels per day of imports of such products, respectively, into Puerto Rico during the last half of the calendar year 1958; and (3) such lower or higher levels as the Secretary may subsequently determine are required to meet increases or decreases in local demand in Puerto Rico and demand for export to foreign areas.

After each such determination, the Administrator shall as provided by these regulations make allocations and issue import licenses to eligible applicants for the appropriate allocation period.

Allocation periods.—Allocations of imports of crude oil, unfinished oils, and finished products will be made for periods of 1 year—that is, January 1 through December 31; except that allocations of imports into districts I–IV of residual fuel oil to be used as fuel will be made on an annual basis beginning April 1.

Applications.—An application for allocations of imports of crude oil, unfinished oils, or finished products, and for a license or licenses, must be filed with the Administrator, in such form as he may prescribe, not later than 60 calendar days prior to the beginning of the allocation period for which the allocation is required. However, if the 60th day is a Saturday, Sunday or holiday, the application may be filed on the next succeeding business day.

Operations.—Involves (1) analysis of data published by the Bureau of Mines for crude oil, unfinished oils, and finished products by petroleum industry coordinating districts and Puerto Rico, and types of petroleum and petroleum products. Also, analyze data furnished in reports by over 200 importers as well as past allowances for imports. Summarize data by districts and type of products and set overall amounts to be imported during each allocation period.

(2) Analyze applications from over 200 importers to determine eligibility for annual import allocations for crude oil, unfinished oils, finished products, and residual fuel oil used as fuel.

(3) Establish annual allocations for imports of crude oil, unfinished oils, finished products, and residual fuel oil. Also establish the amounts to be allotted to each eligible applicant by type of products.

(4) Issue annual licenses to eligible importers authorizing the amounts of crude oil, unfinished oils, and finished products to be imported during each annual period, and licenses for eligible importers of residual fuel oil twice each year.

(5) Analyze reports from each importer showing the amount of crude oil, unfinished oils, or finished products entering the United States under the license issued, the port of entry, and date of entry. Each report must be filed with the Oil Import Administration within 15 days after the end of a particular month. Maintain adequate records of imports for the preparation of regular and special reports to the Director, Office of Emergency Planning, the President, and the Congress. Also, to answer telephone or written inquiries as well as inquiries by personal visits regarding the regulations, import allocations, or problems resulting therefrom or affected thereby from officials of interested importing companies, trade associations, and oil companies as well as State regulatory bodies, and the general public.

(6) Persons concealing material facts or making false statements in or in connection with any applications or reports filed, or in connection with any license presented to or statements made to a collector of customs, with respect to imports of crude oil, unfinished oils, or finished products, are guilty of a crime and upon conviction may be punished by fine or imprisonment or both. Analyze applications, licenses, and reports to prevent possible or actual violations of the oil import regulations. Initiate, when appropriate, action to start the necessary investigations to determine whether a crime has been committed. Initiate necessary reports to the Solicitor, Department of the Interior, for appropriate action.

(7) Analyze monthly reports of stocks of residual fuel oil on the east and gulf coast areas as a major factor in determining necessary adjustments to import levels for residual fuel oil.

(8) Analyze monthly reports furnished by collector of customs and by importers showing the amount of crude oil, unfinished oils, and finished products imported by overland transportation from the country in which produced and exempt from the overall import program to determine whether these imports tend to threaten the accomplishment of the purpose of Proclamation 3279, as amended.

(9) Review and take appropriate action upon exemption requests for the importation of small quantities of crude oil, unfinished oils, and finished products, including samples for testing or analysis, baggage entries and informal entries.

(10) Prepare affidavits and furnish other technical exhibits, information, and advice to the Department of Justice in the continual attacks upon the program in suits brought in the Federal courts. Review all exchange agreements. Any exchange of foreign for domestic crude oil that is made on less than a barrel-for-barrel basis must have the prior approval of the Administrator.

(11) Analyze all petitions filed with the Oil Import Appeals Board and, in cases deemed necessary, prepare and file with the Board a formal statement

setting forth the position of the administration. Attend hearings before the Board and file posthearing statements commenting on testimony and evidence presented at the hearing.

(12) Make inspections of records and facilities of importers to verify their compliance with the program and the accuracy of materials submitted by them.

There have been eight amendatory Presidential proclamations and 26 amendments to the original oil import regulations. Each of these changes has resulted in additional work and the current staff of 11 is the absolute minimum for effective operations. A major change in the program is anticipated during the budget year when petrochemical companies receive allocations. The workload is expected to continue at present levels. It is anticipated that the increased workload resulting from awarding allocations and licenses to petrochemical companies will be roughly offset by issuing crude oil, unfinished oil and finished product licenses on an annual rather than a semiannual basis. No additional funds, except for pay act costs, are contained in the estimate for the oil import administration.

The program for the oil import administration is highly important, controversial, and vital to the development of mobilization programs of the United States and the nations of the free world. Import policies affect diplomatic relations with our friends in the free world, the economic development and defense mobilization programs for the North American Hemisphere, the operation and construction programs of the petroleum, gas, and allied industries, and the utilization of petroleum, gas, and petrochemicals by consumers. Not one phase of the oil import program can be accomplished inadequately without the possibility of embarrassment.

Oil Import Appeals

Mandatory restrictions on the importation of oil became effective March 11, 1959, and involve allocations and licenses for the importation of crude oils, unfinished oils, and finished products. The initial allocation period was March 11 through June 30, 1959. Allocations of crude oil and finished products other than residual fuel oil are now made and licensed on a 6-month basis. Effective April 1, 1961, residual fuel oil to be used as fuel is allocated on an annual basis and licensed on a quarterly basis.

Experience obtained since the inception of the program in March 1959, indicates that, if extensive revisions are not made in the oil import program or in the Board's authority, the administrative functions of the Board can continue to be met by the continued employment of one clerk-stenographer, paid from funds requested in this budget. In addition, the position of Chairman of the Board (formerly Counsel to the Board), a full-time position, continues to be paid from funds appropriated to the Office of the Solicitor.

In addition to the one salary, the major expenditure is for transcripts of Appeals Board hearings; however, it is not possible to determine an exact amount since the number of petitions to be received varies widely from one allocation period to another (because of program changes or changes in the Board's authority) as shown in the following table:

Allocation period:	*Number of petitions*
March–June 1959	81
July–December 1959	24
January–June 1960	55
July–December 1960	26
January–June 1961	26
July–December 1961	31
January–June 1962	48
July–December 1962	34
January–June 1963	30
July–December 1963	17
January–June 1964	27
July–December 1964	19
January–June 1965	34
July–December 1965	21
Total	473

Petitions under three separate allocation periods will be considered with the funds requested.

Salary and expenses

	Actual 1965	Estimate 1966	Estimate 1967	Increase (+) decrease (−)
Program and financing: Total obligations	$815,388	$885,000	$919,000	+$34,000
Financing:				
Receipts and reimbursements from administrative budget accounts	−131,548	−165,000	−197,000	−32,000
Unobligated balance lapsing	20,160			
New obligational authority	704,000	720,000	722,000	+2,000
New obligational authority:				
Appropriation	704,000	704,000	722,000	+18,000
Proposed supplemental for civilian pay increases		16,000		−16,000
Object classification:				
11 Personnel compensation	677,210	740,000	766,000	+26,000
12 Personnel benefits	45,970	55,000	58,000	3,000
21 Travel and transportation of persons	22,702	27,000	28,000	+1,000
22 Transportation of things	1,638	2,000	2,000	
23 Rent, communications, and utilities	11,603	10,000	10,000	
24 Printing and reproduction	16,378	9,000	10,000	+1,000
25.1 Other services	3,748	5,000	7,000	+2,000
25.2 Services of other agencies	21,139	28,000	29,000	+1,000
26 Supplies and materials	5,717	6,000	6,000	
31 Equipment	9,283	3,000	3,000	
Total obligations	815,388	885,000	919,000	+34,000

COMBINING OF BUDGETS TO REDUCE ADMINISTRATIVE COSTS

Chairman HAYDEN. I believe that it would be best if we consider the three parts of this justification in the order in which I named them. Probably the most satisfactory way would be for the prepared statements to be filed in the record and the activities of the past year and the expected activities of the future year to be reviewed orally, after which any questions which the committee members may have may be answered.

Mr. LATTU. Mr. Chairman, my name is Onnie P. Lattu. I am Director of the Office of Oil and Gas. The budget request before you covers three small agencies, the Office of Oil and Gas, the Oil Import Administration, and the Oil Import Appeals Board.

To save manpower and to reduce administrative costs the three activity budgets are combined when submitted. The records are kept in one place and one administrative section serves all three.

I will speak only for the Office of Oil and Gas, and Mr. Thomas Snedeker will speak for the Oil Import Administration and Mr. Henry Rubin here for the Oil Import Appeals Board.

PREPARED STATEMENT

With your permission I will file my brief statement in the record and briefly comment on the budget.

Chairman HAYDEN. That may be done.

(The statement follows:)

The 1967 estimate of $722,000 is a net increase of $2,000 over the appropriation for the current year adjusted to meet increased pay costs. This net amount is the result of an increase of $7,000 on current positions for pay costs and a decrease of $5,000 in the program due to savings in positions reallocations. The estimate is distributed as follows: "Coordination of oil and gas activities,"

$548,800; "Administration of the oil import program," $158,000; and "Administration of the Oil Import Appeals Board," $15,200.

The estimate of $548,800 for the Office of Oil and Gas is essential for the effective coordination of oil and gas matters. Although there has been a constant increase in workload of regular activities, we expect to handle it without an increase in the number of positions.

The Office develops, evaluates, and coordinates oil and gas information to provide sound bases for establishment and implementation of Government policies and programs for oil and gas; provides information and service to Government agencies with respect to strategic and economic factors affecting the petroleum and gas industries both in the United States and abroad; recommends programs and policies to improve the position and capabilities of these domestic industries; and, provides expert advice with respect to international policies and activities affecting petroleum and gas.

The Office receives detailed factual studies and outstanding cooperation from the petroleum and gas industries through industry advisory committees such as: The National Petroleum Council, Emergency Advisory Committee for Natural Gas, Foreign Petroleum Supply Committee, and Petroleum Security Subcommittee of the FPSC. The studies made by such groups contributed considerably toward keeping the office small and effective. The Office participates in international committees, State organizations and interagency organizations concerned with petroleum and gas matters. These include the Petroleum Planning Committee of NATO, Special Committee for Oil of the OECD, Committee on Gas of the Economic Commission for Europe (United Nations), Interstate Oil Compact Commission, and numerous Federal interagency groups.

The Office prepares national emergency plans and develops preparedness programs to provide a state of readiness in petroleum and gas for all conditions of national emergency in collaboration with other Federal agencies, State and local governments and industry; provides for a standby Emergency Petroleum and Gas Administration; and selects and trains executive reservists to staff the EPGA. The Office of Oil and Gas would serve as the nucleus of EPGA in an emergency. The Office also participates with other Federal agencies in petroleum activities of international organizations and U.S. alliances in planning and testing programs designed to meet U.S. and allied emergency oil and gas requirements. Several members of the staff hold key emergency assignments in the EPGA and the NATO Wartime Oil Organization.

Favorable action on this request for an appropriation of $548,800 for coordination of oil and gas activities is respectfully requested.

1967 BUDGET REQUEST

Mr. LATTU. We anticipate no major program changes and the increase in workload will be absorbed with the present level of manpower. Our request for $548,800 for fiscal 1967 is a net increase of $1,200 over the appropriation for the current year adjusted to meet increased pay costs.

This net amount is the result of an estimated pay increase of $6,200 on current positions and a decrease of $5,000 in the program due to savings in position allocations.

We have reduced four high-grade positions by reallocation of duties and we have maintained the average grade at the same level as the current year. Our staffing level has also been held at the same level of 39 employees.

We have "Travel" and "Other object" classes at the same level or slightly below last year.

Mr. Chairman, we hope your committee approves our request and I will be pleased to answer any questions after the other two make their presentations.

OIL IMPORT ADMINISTRATION

PREPARED STATEMENT

Mr. SNEDEKER. Mr. Chairman, my name is Thomas E. Snedeker. I am the Assistant Administrator of the Oil Import Administration.

With your permission I will also file a prepared statement for insertion in the record and will briefly comment upon the budget request.

Chairman HAYDEN. Please do that.

(The statement follows:)

The 1967 estimate of $158,000 is the same amount appropriated for fiscal year 1966, plus $4,800 for Salary Act of 1965 implementation.

The Oil Import Administration was established by the Secretary of the Interior March 13, 1959 (24 F.R. 1907, as amended) pursuant to Presidential Proclamation No. 3279, dated March 10, 1959 (24 F.R. 1781, as amended). Substantial changes have been made in the program since it was inaugurated. There have been 8 amendatory Presidential proclamations and 26 amendments to the original oil import regulations.

The program is designed to insure a stable, healthy industry in the United States capable of exploring for and developing reserves to replace those being depleted. This program is vital to the defense mobilization activities of the United States and the nations of the free world. Oil import policies affect diplomatic relations with our friends in the free world, economic development and defense mobilization plans of the Western Hemisphere and other free world areas, and, last but not least, the petroleum, gas, and allied industries, and the consumers of petroleum and gas.

The basis of the program is the certified requirements of our national security which make it necessary that we preserve to the greatest extent possible a vigorous and healthy petroleum industry in the United States. In serving our own direct security interests, the program will also help prevent severe dislocations in our own oil industry and in oil industries elsewhere which also have an important bearing on our own security. The program also plays a major role in keeping the Nation's balance of payments in a reasonably acceptable condition.

The Administration establishes import quotas by petroleum districts and types of products; establishes semiannual allocations to individual importers for imports of crude oil, unfinished oils, and finished products and yearly allocations for imports of residual fuel oil; issues semiannual and quarterly licenses to eligible importers; analyzes monthly reports of imports and prepares consolidated regular and special reports by types of products and individual importers; analyzes applications, licenses, and reports to prevent possible or actual violations of the oil import regulations and initiates necessary action incident thereto; evaluates monthly imports to determine whether these imports tend to threaten the accomplishment of the purposes of Proclamation 3279, as amended; analyzes and takes appropriate action upon exemption requests and exchange agreements; prepares affidavits and other technical exhibits required by the Department of Justice in suits brought into Federal courts involving the program; prepares formal statements on petitions filed with the Oil Import Appeals Board setting forth and justifying the positions of the Administration; makes inspections of records and facilities of importers to verify compliance to the program and the accuracy of the material submitted to the Administration, etc.

The current staff of 11 is the absolute minimum required for effective handling of present programs and workload. No additional funds are involved.

Considerable travel will be necessary to handle import problems with groups of producers, refiners, importers, State regulatory bodies, and trade associations. Long-distance telephone calls and telegrams will be required to expedite and adjust oil import information urgently needed. Considerable funds will be needed for the reproduction of forms, regulations, press releases, and reports.

Favorable action on this request for an appropriation of $158,000 is respectfully requested.

1967 BUDGET REQUEST

Mr. SNEDEKER. We anticipate no major program changes, and increases in workload will be absorbed with the present level of manpower.

Our request for $158,000 is a net increase of $4,000 over the appropriation for the current year adjusted to meet increased pay costs.

We have maintained the same grade structure and the same staffing level of 11 employees as in the previous 2 budget years.

Mr. Chairman, we hope your committee approves our request and I will be pleased to answer any questions after Mr. Rubin.

Chairman HAYDEN. All right.

OIL IMPORT APPEALS BOARD

NO BUDGET CHANGES

Mr. RUBIN. Mr. Chairman, we do not have a prepared statement because the nature of the Board's activity does not change; the operation of the Board has remained constant since its inauguration in 1959, and the extent of the budget has not changed. I would estimate, on an average basis, that petitions are disposed of within approximately 5 months.

We would be pleased to answer any questions which you might have.

Chairman HAYDEN. I have no questions. We thank you for your appearance.

Mr. LATTU. Thank you very much.

MONDAY, FEBRUARY 28, 1966.

GEOLOGICAL SURVEY

SURVEYS, INVESTIGATIONS, AND RESEARCH

STATEMENTS OF WILLIAM T. PECORA, DIRECTOR; ARTHUR A. BAKER, ASSOCIATE DIRECTOR; ROBERT H. LYDDAN, ASSISTANT DIRECTOR; GEORGE D. WHITMORE, CHIEF TOPOGRAPHIC ENGINEER; HAROLD L. JAMES, CHIEF GEOLOGIST; ERNEST L. HENDRICKS, ACTING CHIEF HYDROLOGIST; HAROLD J. DUNCAN, CHIEF, CONSERVATION DIVISION; ROBERT L. MORAVETZ, CHIEF, PUBLICATIONS DIVISION; FENTON G. USHER, ACTING EXECUTIVE OFFICER; FREDERICK E. STEARNS, BUDGET OFFICER; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

WELCOME TO NEW DIRECTOR

Chairman HAYDEN. This morning Dr. William Thomas Pecora appears before this subcommittee for the first time in his new position as Director of the Geological Survey. Dr. Pecora has been an employee of the Geological Survey for 27 years, and immediately before his appointment as Director was the Chief Geologist. The subcommittee welcomes you, Dr. Pecora.

Mr. PECORA. Thank you, Mr. Chairman.

1967 BUDGET REQUEST

Chairman HAYDEN. The Geological Survey estimate for fiscal year 1967 is $73,920,000. Excluding $1,510,000 which will be requested in a suppemental appropriation bill, this is $2,239,130 greater than the amount of the appropriation in fiscal year 1966.

Considering the proposed pay increase supplemental, there is a net increase of $729,130 in the budget for fiscal year 1967.

There will be placed in the record a highlight statement furnished with the justifications and a program summary of all the proposed activities of the Geological Survey for the coming year.

(The statement and summary follow:)

A résumé of items of public interest and concern, as shown by newspaper headlines over the past year, would include droughts, moon exploration, the silver shortage, earthquakes, water pollution, foundation problems, offshore oil production, defense planning, floods, wilderness areas, and Appalachia. These same items could serve to illustrate the scope of the Geological Survey's current program. In order to fulfill its mission as the Federal agency charged with the evaluation of the Nation's mineral, fuel, and water resources, the Survey has become a constant provider of basic data and maps for those activities requiring land and resources information and knowledge. As the agency responsible for

59-370—66—pt. 1——36

the preparation of the topographic map of the United States, the Survey has prepared detailed topographic maps covering 71 percent of the country, which are of incalculable value to all facets of our life from the fisherman looking for a favored fishing hole to a multimillion-dollar industry seeking a new plant site. As an agency directly involved in the conservation of the mineral wealth of the public domain the Survey has supervised the operations under leases and collected nearly $2 billion in royalties over the past 41 years.

Many of the benefits derived from Geological Survey activities are direct and easily evaluated. Flood frequency maps, mineral deposit targets for discovery, topographic and special-purpose maps, public land mineral evaluations—these are visible evidences of the Bureau's activities. Not so apparent and not so easily evaluated are the veritable beehives of activity essential to the accomplishment of the Survey's mission of science and technology for the public interest. The collection of tens of thousands of water measurements, both surface and ground water; the flying of thousands of miles of aeromagnetic traverses; the laborious study and determination in the laboratory of thousands of rock and mineral specimens and the identification of fossils; the tracing, literally, of miles of contours on base maps and the field checking of innumerable control points; such a listing of Bureau activities could be continued almost indefinitely; and these are only a small part of the activities. The spectacular results of the program arising from the research and special study activities lead to the development of an airborne control (ABC) system, or a mercury snifter, or a silver snooper, or to a better insight into the nature of water and the long-range effect of man's activities on the hydrologic cycle. Survey research activities range from the determination of the distribution of pollutants in tidal estuaries and their possible effects on the marine life to the use of electronics in topographic mapping; from studies of the nature of heat flow within the earth to the study and prediction of volcanic activity and earthquakes.

The Survey's role as a basic science organization serving as an important fact-finder has resulted in a work atmosphere in which scientific studies thrive, which in turn has attracted and retained in the Survey its most effective resource—a world-recognized collection of experts in the various fields of activities with more than 400 Ph. D.'s included in the professional staff.

All of this results in an organization in which a scientific life cycle is present; basic and applied research, special projects, the routine collection of basic data and facts, the interpretation and application of the facts and the release of the material to user groups in the form of timely reports and maps. The Geological Survey thus envisions itself as one of the Federal Government's specialistic agencies in our present-day economy, upon which action groups can call for information and look to for guidance in fields of geology, mineral and water resources, topographic mapping, and associated areas of scientific endeavor.

Five of six categories of available funds involve programs which either contain commitments to other Federal, State, or local agencies to accomplish specified results; which, in the case of mineral lease supervision, is an assigned task; or which are support programs for all Bureau activities. Funds in these categories are, in a sense, committed. Only in the sixth category, Federal program, does the Geological Survey have wide latitude in programing funds for projects not a part of the cooperative program or carried out on behalf of another agency. Only one-third of the total funds are available for this purpose.

In an effort to improve the Survey budget presentation the program has been described in more detail than in previous years, resulting in a more detailed justification. As an aid in reviewing the justification, an abstracted version also has been prepared and is included in the highlight statement.

Program Summary

1. TOPOGRAPHIC SURVEYS AND MAPPING

The estimate for 1967 is $23,086,000, a decrease of $154,000 from 1966. The decrease consists of:

(1) A decrease of $684,000 due to program savings resulting from improved methods.

(2) A decrease of $69,000 representing priority adjustments in the regular program.

(3) A net increase of $99,000 for increased pay costs, including $151,000 gross increased cost for fiscal year 1966 positions, less $52,000 nonrecurring financing in 1966 of the States' share of such costs.

(4) An increase of $500,000 to accelerate mapping in Appalachia.

One of the basic responsibilities of the Geological Survey is the preparation and maintenance of the National Topographic Map Series covering the United States and outlying areas. In response to increasing needs for topographic maps, the Geological Survey's long-range planning seeks to accomplish the following objectives:

The completion of the topographic mapping of the United States and its outlying areas in either the 7½- or 15-minute series by fiscal year 1976.

The completion of full coverage, except for Alaska, in the 7½-minute series by 1981.

The production of the other components of the National Topographic Map Series.

The improvement of products, operational techniques, and instrumental equipment, mainly through research and development.

As of June 30, 1965, only about 71 percent of the country had been covered with general-purpose topographic quadrangle maps in the 7½- and 15-minute series. Eighteen major countries in the world have a larger percentage topographic map coverage, at mile-per-inch scale or larger, than the United States. The plan of the Geological Survey, if adequately funded, would provide the modern topographic maps fundamental to national progress and economic development.

The cost benefits derived as a direct result of the use of topographic mapping in several broad categories of national programs, as shown below, is based on information received from principal map users and expanded on a national basis. The benefits to the Nation from one or two of these programs are easily sufficient to pay for the mapping.

SOME BENEFITS OF TOPOGRAPHIC MAPPING

Uses:	*Estimated annual benefits*
Water resources and development	$100,000,000
Gas pipeline—location and construction	2,500,000
Highways	29,500,000
Mineral resources—research and development	1,200,000
Recreation	5,000,000
Engineering—construction	49,000,000
Housing construction (nonfarm)	25,000,000
Petroleum exploration and development	2,300,000
Urban renewal	500,000
Private power construction	900,000

Other major beneficiaries from topographic mapping are users in the fields of national defense, agriculture, communications, and others. For example, at a 1964 Federal map users' conference, the Department of Defense stated: "We should have available to us today complete mapping of the United States at large, medium, and small scale."

(a) *Standard quadrangle mapping.*—The estimate for 1967 is $19,005,000, a decrease of $297,323 from 1966. The decrease consists of:

(1) A decrease of $559,000 due to program savings resulting from improved methods.

(2) A decrease of $69,000 representing priority adjustments.

(3) An increase of $90,000 for increased pay costs.

(4) An increase of $240,677 for accelerated mapping in Appalachia.

This subactivity includes operations to prepare and print the first quadrangle maps in either 7½- or 15-minute series, and resurveys of older 15-minute maps to 1:24,000-scale standards.

(b) *Map revision and maintenance.*—The estimate for 1967 is $2,659,000, an increase of $22,000 over 1966. The increase consists of:

(1) A decrease of $85,000 due to program savings resulting from improved methods.

(2) An increase of $7,000 for increased pay costs.

(3) An increase of $100,000 to accelerate revision mapping in Appalachia.

This subactivity includes all surveys and other operations to update, improve, and reprint maps published in the 7½-minute, 15-minute, and 1:63,360 series.

(c) *Small-scale and special mapping.*—The estimate for 1967 is $1,422,000, an increase of $22,000 over 1966. The increase consists of:

(1) A decrease of $40,000 due to program savings resulting from improved methods.

(2) An increase of $2,000 for increased pay costs.

(3) An increase of $60,000 to accelerate mapping of Appalachia.

This subactivity includes cartographic and printing operations to prepare various series of small-scale maps, special-purpose maps, and related products.

The current standard quadrangle mapping and map revision program includes 499,000 square miles in various stages and variety of small scale and special maps. Important mapping projects which will be components of the foregoing subactivities and which will be started in fiscal year 1967 includes:

Unmapped and inadequately mapped areas and revision of out-of-date 7½-minute and 1:250,000-scale maps throughout Appalachia.

Urban-suburban mapping and revision for planning of freeways and rapid transit systems, urban renewal, census enumeration, and comprehensive land-use development.

Mapping and map revision to support the Department of Defense in military maneuvers, training, missile testing, and to provide complete basic tactical and strategic coverage.

Mapping for investigation and development of national water resources including comprehensive river basin studies, and for recreational areas, such as national parks and monuments.

Continuation of work on the National Atlas with planned publication during calendar year 1967.

2. GEOLOGIC AND MINERAL RESOURCES SURVEYS AND MAPPING

The estimate for 1967 is $18,793,000, a decrease of $77,780 from 1966. The decrease consists of:

(1) A decrease of $88,000 due to savings through automation for airborne magnetometer data processing.

(2) A decrease of $199,780 representing a priority adjustment in the minerals and fuels program.

(3) A net increase of $110,000 for increased pay costs, including $129,000 gross increased cost for fiscal year 1966 positions, less $19,000 nonrecurring financing in 1966 of the States' share of such costs.

(4) An increase of $100,000 for mineral resource surveys in Appalachia.

This activity is designed to meet critical national needs, such as to (*a*) assure availability of ample mineral raw materials to support a burgeoning economy; (*b*) assure wise use of land with minimum risk from geologic hazards such as earthquakes; and (*c*) develop and extend fundamental geologic principles of major importance, ranging from deposition of ore to occurrence of earthquakes.

(1) *Mineral and fuel resources.*—The estimate for 1967 is $11,348,000, a decrease of $129,780 from 1966. The decrease consists of:

(*a*) A decrease of $199,780 representing priority adjustments in the programs for paleotectonic maps ($74,780), organic fuels ($50,000), resources research ($25,000), ferrous metals ($25,000), and theoretical geophysics ($25,000).

(*b*) An increase of $70,000 for increased pay costs.

Because mineral wealth provides the physical basis for economic growth of the Nation, more than half of the total for "Geologic and mineral resource surveys and mapping" activity relates directly to search for and evaluation of mineral and fuel resources. Studies planned for fiscal year 1967 will concentrate on the search for new kinds of ore and for geologic environments favorable for the occurrence of exploitable deposits of any kind, detailed investigation of promising areas, and experimental studies to further the understanding of ore-forming processes and the geochemistry of ore deposits.

(2) *Geochemical and geophysical exploration.*—The estimate for 1967 is $2,414,000, a decrease of $73,000 from 1966. The decrease consists of:

(*a*) A decrease of $88,000 due to program savings through automation for airborne magnetometer data processing.

(*b*) An increase of $15,000 for increased pay costs.

Direct studies of mineral and fuel resources are supported by research on exploration techniques and instruments essential to the search for concealed mineral deposits, using geochemical, geophysical, geobotanical, and nuclear

physics approaches. Techniques and instruments developed and used by the Geological Survey materially reduce the time and expense needed for preliminary investigation of potential mineral deposits. The large number of important and diverse research studies in his field will receive continued emphasis in fiscal year 1967.

(3) *Upper mantle.*—The estimate for 1967 is $1,986,000, an increase of $9,000 over 1966. This increase is for increased pay costs.

The upper mantle project is a directed international cooperative effort to increase our knowledge of structure and composition of the outer 600 miles of the earth, including the earth's crust and upper part of the mantle. Emphasis of upper mantle studies in fiscal year 1967 will be in making detailed analyses of the crust and upper mantle in the vicinity of major crustal faults, which is of fundamental importance to earthquake studies. Detailed information will be obtained on variations in crustal thickness, strength, and composition on each side of the San Andreas fault and the relation of crustal faults to continent-ocean basin interfaces.

(4) *Earthquake and volcano studies.*—The estimate for 1967 is $1,246,000, an increase of $6,000 over 1966. This increase is for increased pay costs.

A detailed geological and geophysical investigation of the San Andreas fault zone in and southeast of San Francisco was initiated in fiscal year 1966 to increase our capability to predict occurrence of earthquakes and to increase man's ability to live safely in earthquake zones. This investigation will be continued with major emphasis on measuring those physical properties of the ground important in designing earthquake-resistant buildings, and on analysis of the tectonic framework of the San Andreas fault system. Also to be continued are studies of earthquake zones along the seismic belt that follows the west coast of the continent to Alaska and the Aleutian Islands.

Geological and geophysical studies at the Hawaiian Volcano Observatory, and topical studies of ancient volcanoes and volcanic rocks, will be expanded in order to improve our understanding of volcanic processes and enhance our ability to predict volcanic eruptions.

(5) *Appalachia.*—The estimate for 1967 is $690,000, an increase of $103,000 over 1966. The increase consists of:

(*a*) An increase of $3,000 for increased pay costs in the regular program.

(*b*) An increase of $100,000 to continue an accelerated program which was initiated late in fiscal year 1965 and continued through fiscal year 1966 with a supplemental appropriation of $400,000.

The Geological Survey began late in fiscal year 1965 an accelerated program of geologic study consisting of (*a*) compilation of data on mineral and fuel resources, and (*b*) regional geologic mapping to implement the purposes of the Appalachia Act (Public Law 89–4). The compilation, on a commodity basis, will cover all minerals of potential economic value, and is planned for completion during the first year (fiscal year 1966) of an originally proposed 5-year program. On completion of the mineral-resource compilation, field studies will be directed toward those mineral resources that are liable to contribute most quickly to industrial development.

(6) *Land-area planning.*—The estimate for 1967 is $801,000, an increase of $5,000 over 1966. This increase is for increased pay costs.

In land-area planning (engineering geology), geologic and geophysical data used in solving problems of land utilization, rock behavior, and urban development problems are acquired through detailed geologic mapping and geophysical surveys supported by laboratory research. Emphasis in fiscal year 1967 will be on geologic studies for use in urban planning and in the development of new techniques for measuring and predicting the behavior of rocks under natural and manmade stress.

(7) *Wilderness area mineral surveys.*—The estimate for 1967 is $308,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

The Wilderness Act and accompanying conference report charges the Geological Survey and the Bureau of Mines with the responsibility for undertaking "planned recurring mineral surveys" to determine the mineral values of lands in the wilderness system, and to appraise the mineral potential of primitive areas and selected roadless areas and islands in the national wildlife refuges system and certain of the national parks. To discharge this responsibility, the Survey has undertaken mineral surveys in 8 of the 34 primitive areas. In fiscal year 1967 work will be started in at least five or six more of the primitive areas.

3. MINERALS EXPLORATION

The estimate for 1967 is $421,000, a decrease of $343,090 from 1966. The decrease consists of:

(1) A decrease of $356,258 due to availability of prior year unobligated balance.

(2) An increase of $2,000 for increased pay costs.

(3) A program increase of $11,168 resulting from doubling of number of applications for financial assistance.

Because many of our essential minerals are in short supply, the Federal Government has been providing financial assistance to private industry for exploration projects (formerly administered by the Office of Minerals Exploration, which was merged with the Geological Survey in fiscal year 1966). Assistance is possible for the exploration of new or unexplored sources of 35 mineral commodities. Recently, greatly increased interest in gold and silver has more than doubled the number of applications being received and processed. It is anticipated that all of the funds available for exploration assistance contracts in fiscal year 1967 will be needed to meet the contract obligations that year; no carryover of funds into fiscal year 1968 is anticipated.

4. MARINE GEOLOGY AND HYDROLOGY

The estimate for 1967 is $862,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

Studies of marine geology and hydrology will provide information that is urgently needed to develop the vast mineral, energy and other resources of the ocean floor. The program emphasizes systematic investigations of bays and the continental shelves and slopes of the United States, especially those that are most accessible for development by U.S. industry. Systematic reconnaissance investigations off the Atlantic coast, which are being carried on jointly with the Woods Hole Oceanographic Institution, Bureau of Commercial Fisheries and other organizations, are providing many new scientific facts and much knowledge that has potential economic importance. Comparable reconnaissance investigations are being started on the west coast with informal cooperation of several universities and other Government agencies. Here the program includes coordinated detailed studies to determine potential hazards due to the instability of sediments or to other marine geologic conditions that may be caused by earthquakes, particularly along coasts and within bays of California and southeastern Alaska.

5. WATER RESOURCES INVESTIGATION

The estimate for 1967 is $23,816,000, an increase of $1,197,000 over 1966. The increase consists of:

(1) A decrease of $200,000 for the nonrecurring costs of the Gila River.

(2) A decrease of $113,000 representing priority adjustments.

(3) A net decrease of $9,000 for pay costs, including $179,000 gross increased costs for fiscal year 1966 positions, less $188,000 nonrecurring financing in 1966 of the States share of such costs.

(4) A decrease of $696 for payment to Bureau of Employees' Compensation.

(5) An increase of $519,696 in the Federal program, including $225,000 for flood plain mapping in Appalachia, and $200,000 for coordination of Federal collection of water data.

(6) An increase of $1 million in the Federal-State program to match State offerings.

One of the Geological Survey's basic objectives is the provision of reliable, adequate, and timely water facts as a basis for national water use, water development, and water planning. For that purpose, the water resources program is problem oriented and concerns problems of the quantity and quality of water supplies, their geographic and time variability and availability, the patterns and magnitude of water use, and the repercussions of water use and management.

Heightening national concern for many aspects of water resources—adequate supplies, river basin development, pollution, floods, saline water conversion, weather modifications, to mention a few—requires that several components of the Survey's program be strengthened to meet the growing need for water facts.

(a) *Federal program*

The estimate for 1967 is $10,911,157, an increase of $271,696 over 1966. The increase consists of:

(1) A decrease of $200,000 for nonrecurring costs of the Gila River.
(2) A decrease of $113,000 representing priority adjustments.
(3) An increase of $65,000 for increased pay costs.
(4) An increase of $225,000 for accelerated flood plain mapping in Appalachia.
(5) An increase of $200,000 for coordination of Federal collection of water data.
(6) An increase of $56,696 for studies of drought-related problems.
(7) An increase of $38,000 for U.S. participation in the international hydrological decade.

(1) *Coordination of Federal collection of water data.*—The estimate for 1967 is $420,000, an increase of $206,000 over 1966. The increase consists of:

(a) An increase of $6,000 for increased pay costs.
(b) An increase of $200,000 for program expansion.

Preliminary planning in the implementation of the Survey's responsibilities under Bureau of the Budget Circular A–67 was carried out during fiscal year 1966. Meetings were held both with Federal and non-Federal users of basic water data, and a preliminary plan developed for the establishment of a basic data network and of data storage and retrieval centers. This increase is needed in order that this plan can be put into effect during fiscal year 1967 with the designation of national network stations, the establishment of a central data storage and retrieval unit at Washington, and the establishment of one or more regional centers. In addition, a canvass and a cataloging will be made of the water data collection activities of other Federal agencies.

(2) *Basic data collection and analysis.*—The estimate for 1967 is $2,516,000, a decrease of $45,000 from 1966. The decrease consists of:

(a) A decrease of $57,000 representing priority adjustments in the program of automatizing streamgaging stations.
(b) An increase of $12,000 for increased pay costs.

This program component consists of the Survey's Federal program segment of the hydrological and water accounting network of stations for measuring streamflow, ground water, water quality, and sediment movement; it includes also some special analyses and compilations of data and procurement of additional digital recorders.

(3) *Regional water-resource studies.*—The estimate for 1967 is $270,000, an increase of $1,000 over 1966. This increase is for increased pay costs.

Projects in this program component consist chiefly of studies on a regional basis of the water-bearing and water-yielding properties of rock types that are widespread and have unique or distinctive characteristics.

(4) *Analysis of water resources of basins.*—The estimate for 1967 is $586,400, an increase of $3,000 over 1966. This increase is for increased pay costs.

These projects, although concerned with specific water problems, seek to devise new and more comprehensive approaches to the study of water, in all its aspects (surface, ground, quality), as a single resource. The principal basins under investigation are the Brazos River subunit of the Permian Basin, the Mississippi Embayment, Potomac River Basin, Delaware River Basin, and Lower Colorado River Basin. This activity is not connected with coordinated river basin studies, which are carried out on a repay basis.

(5) *Analysis of lake resources and problems.*—The estimate for 1967 is $147,000, an increase of $1,000 over 1966. This increase is for increased pay costs.

This program component includes research on evaporation and evaporation suppression, chemical and thermal stratification, lake dynamics (circulation patterns), thermal loading, and relations between the lakes and adjacent ground waters. Principal work will be on Lake Erie and one or two similar studies where water problems exist.

(6) *Flood and drought problems.*—The estimate for 1967 is $432,696, an increase of $289,696 over 1966. The increase consists of:

(a) An increase of $8,000 for increased pay costs.
(b) An increase of $225,000 for flood plain mapping in Appalachia.
(c) An increase of $56,696 for studies of drought-related problems.

Flood and drought studies are a continuing part of the Survey's program. When a flood occurs basic field data on peak stages and discharges necessary for future planning for river control and management are obtained as quickly as possible.

Accelerated flood plain mapping in Appalachia will be started in fiscal year 1967.

Low-flow and drought studies are included in this component of the Federal program, because floods and droughts may be grouped as hydrological extremes. The funds requested are not sufficient to cover expenditures following a major flood; such a study would necessitate a request for supplemental funds.

(7) *Development and application of modern scientific methods.*—The estimate for 1967 is $671,500, an increase of $3,000 over 1966. This increase is for increased pay costs.

New scientific methods to obtain more information about water, to improve the accuracy of data, and to make more complete analyses of data, currently include the use of analog and digital computers, ultrasonic waves, radiochemistry, airborne measurement of evapotranspiration from large areas, airborne infrared imagery, borehole geophysics, and remote-sensing devices aboard aircraft and satellites.

(8) *Research on data use and automatic data processing.*—The estimate for 1967 is $463,100, an increase of $2,000 over 1966. This increase is for increased pay costs.

Automatic data processing, chiefly by electronic methods, includes data storage and retrieval as well as computations for many kinds of analytical, interpretive, and research projects. Actual data processing is charged to the project which receives the data-processing service.

(9) *Research on basic hydrological principles.*—The estimate for 1967 is $2,542,461, a decrease of $43,000 from 1966. The decrease consists of:

(*a*). A decrease of $56,000 representing priority adjustments of research projects.

(*b*) An increase of $13,000 for increased pay costs.

The basic aim of the research program is to improve the Nation's ability to deal with water-resources problems. The research is highly diversified and includes such topics as mechanics of surface water and ground water movement; mechanics of aquifers; steam-channel morphology; studies in estuaries; chemistry of surface water and ground water; hydrological environmental studies; ecological studies; glaciology; isotopic hydrology; and pesticide and detergent studies.

(10) *International Hydrological decade.*—The estimate for 1967 is $205,000, an increase of $40,000 over 1966. The increase consists of:

(*a*) An increase of $2,000 for increased pay costs.

(*b*) An increase of $38,000 for program expansion.

The Geological Survey's program for the International Hydrological Decade includes activities to which UNESCO's international coordinating council for the IHD and the U.S. National Committee for the IHD have assigned high priority. An increase is requested to establish this program on a scale more nearly commensurate with the Nation's leading position in scientific hydrology, and sufficient to provide the information needed to help gain an understanding of water resources on a large geographic scale.

(11) *Education and training.*—The estimate for 1967 is $608,000, an increase of $4,000 over 1966. This increase is for increased pay costs.

The education and training program provides specialized training in the purposes and methods of water-resources investigations. It also is aimed at improving hydrological education in general and increasing the supply of trained hydrologists.

(12) *Publication and support.*—The estimate for 1967 is $2,049,000, an increase of $10,000 over 1966. This increase is for increased pay costs.

Timely publication of water data and research results is necessary for optimum use of this information by those concerned with the development and use of water resources. This component covers publication costs of all reports of water-resources investigations published by the Geological Survey.

(13) *Nonrecurring items.*—The estimate for 1967 is zero, a decrease of $200,000. The decrease is for nonrecurring channel clearance on the Gila River in connection with the phreatophyte study project.

(*b*) *Federal-State program*

The estimate for 1967 is $12,850,000, an increase of $926,000 over 1966. The increase consists of:

(1) A net decrease of $74,000 for increased pay costs, including $114,000 gross increased cost for fiscal year 1966 positions, less $188,000 nonrecurring financing in 1966 of the States' share of such costs.

(2) An increase of $1 million to match anticipated increases in State offerings.

The Federal-State program consists largely of inventorying and describing the water resources of selected problem areas and in studying technical aspects of specific water problems. Plans originate at State level with Survey and cooperating officials working together to develop programs, usually in direct response to urgent needs, which also contribute to the national appraisal of water resources.

6. SOIL AND MOISTURE CONSERVATION

The estimate for 1967 is $201,000, the same as for 1966.

The Survey's program provides basic hydrological data and research needed for the improvement and maintenance of the productive value of the public lands under the stewardship of the Department of the Interior. It consists of evaluation of specific sites as possible locations for water supply as well as research in arid-land hydrology.

7. CONSERVATION OF LANDS AND MINERALS

The estimate for 1967 is $4,793,000, an increase of $109,000 over 1966. The increase consists of:

(1) A decrease of $309,000 due to program savings resulting from (*a*) conversion of royalty accounting to automatic data processing ($68,000); (*b*) deferment of publication, for public use, of many of the maps and reports prepared for mineral and water resource classification purposes ($43,000); and (*c*) completion of phaseout of Connally Act enforcement ($198,000).

(2) A decrease of $68,000 representing priority adjustments in the programs of mineral and water resource classification.

(3) An increase of $36,000 for increased pay costs.

(4) An increase of $450,000 for the expanded engineering and inspectional workload created by increased prospecting and production activity on Federal and Indian land oil and gas and mineral leases.

The Geological Survey has two functions which are concerned with practical applications of geologic and engineering principles to the conservation of the Nation's mineral and water resources occurring on Federal lands:

The supervision of oil and gas and mining operations on Federal land leases held by private individuals or corporations.

The determination of the potential of Federal lands for leasable minerals and development of water resources.

The objectives of supervision are to insure orderly development and maximum recovery of the Nation's mineral resources and protect the public interest by assuring that an equitable payment is returned to the United States for development of its lands.

Mineral and water resources classification is the evaluation of the mineral and water development value of the remaining public domain. It sets in motion laws which provide for reserving rights to minerals and sites for water projects to the United States in the event of surface disposal. It thus holds these for future leasing or development.

Classification is a determination by the Director of the Geological Survey, based on complete supporting analytical data, that Federal lands meet, or do not meet, prescribed standards of value for leasable minerals or sites for water development projects.

(*a*) *Supervision of operations on Federal mineral leases*

The estimate for 1967 is $3,543,000, an increase of $411,000 over 1966. The increase consists of:

(1) A decrease of $68,000 due to program savings resulting from conversion of royalty accounting to automatic data processing.

(2) An increase of $29,000 for increased pay costs.

(3) An increase of $450,000 for the expanded engineering and inspectional workload created by increased prospecting and production activity.

The Geological Survey has been delegated the authority of the Secretary of the Interior to supervise all operations for prospecting and development on Federal and Indian land mineral leases. The program to accomplish this consists of:

(1) *Enforcement of operating regulations and inspection of mining and oil and gas operations on Federal and Indian lands.*—The estimate for 1967 is $1,529,000, an increase of $231,000 over 1966. The increase consists of:

(*a*) An increase of $11,000 for increased pay costs.

(*b*) An increase of $90,000 for continuing inspectional program of mining and oil and gas operations.

(*c*) An increase of $80,000 for supervision of core hole drilling offshore southern California within what is commonly known as "disputed area."

(*d*) An increase of $50,000 for core drilling on the Continental Slope within the Gulf of Mexico.

Inspection is a basic element of supervision. It provides firsthand knowledge of the extent to which regulations are being observed.

(2) *Engineering appraisal and approval of plans of development, unit area proposals, secondary recovery programs, and plans for reclamation of strip-mined areas.*—The estimate for 1967 is $1,020,000, an increase of $89,000 over 1966. The increase consists of:

(*a*) An increase of $9,000 for increased pay costs.

(*b*) An increase of $80,000 for increased workload.

Plans for development on Federal leases must by regulation provide for maximum recovery of the total resources. The Survey reviews plans submitted by industry to insure that this requirement is met.

(3) *Investigations to determine disposition of Federal lands under application for leases or permits.*—The estimate for 1967 is $122,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

Examinations must be made of lands included in lease applications to determine if they should be leased competitively or noncompetitively.

(4) *Accounting and collection of royalties and rentals, and auditing production records.*—The estimate for 1967 is $872,000, an increase of $89,000 over 1966. The increase consists of:

(*a*) A decrease of $68,000 for program savings resulting from conversion to automatic data processing.

(*b*) An increase of $7,000 for increased pay costs.

(*c*) An increase of $150,000 for expanded workload.

Records of sale of all mineral production must be checked to insure correct royalties; accounts must be kept current and audited; statements must be prepared and submitted to lessees; and all royalties must be collected.

(*b*) *Mineral and water resource classification of Federal lands*

The estimate for 1967 is $1,250,000, a decrease of $104,000 from 1966. The decrease consists of:

(1) A decrease of $43,000 program savings by deferment of publication of maps and reports.

(2) A decrease of $68,000 representing priority adjustments.

(3) An increase of $7,000 for increased pay costs.

Land classification is a prerequisite to land disposal and is essential to proper land management. It supplements the Mineral Leasing and Federal Power Acts by identifying and reserving public lands having value for leasable minerals and waterpower sites. It supports conservation by preventing uses of lands which are incompatible with mineral and water resource development.

The classification program consists of:

(1) *Geologic and engineering investigations leading to classification of withdrawn Federal mineral lands and lands valuable for water resource development.*—The estimate for 1967 is $476,000, a decrease of $66,000 from 1966. The decrease consists of:

(*a*) A decrease of $68,000 representing priority adjustments.

(*b*) An increase of $2,000 for increased pay costs.

The basic data for evaluation of mineral and water development values of the public lands is gathered and analyzed in these investigations. They are a prerequisite to land classification.

(2) *Classification programs in support of the Mineral Leasing Act and the Federal Power Act.*—The estimate for 1967 is $545,000, an increase of $3,000 over 1966. This increase is for increased pay costs.

Many direct land classification determinations of a geologic or engineering nature are required in the administration of the Mineral Leasing and Federal Power Acts. Two of these are: Known geologic structure determinations to determine appropriate type of lease; and appraisal of damage to power values by selection or use of powersite lands.

(3) *Classification programs in support of other agency programs.*—The estimate for 1967 is $206,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

All applications to select, exchange, lease or use land of the United States are referred to the Survey for report on mineral and water values by the Government agency having jurisdiction over the land.

(4) *Publications.*—The estimate for 1967 is $23,000, a decrease of $43,000 from 1966.

Maps and reports prepared for land classification with public funds are public information and where they contribute substantially to knowledge of the Nation's resources they should be published.

(c) *Administration of the Connally Act*

The estimate for 1967 is zero, a decrease of $198,000 from 1966. The decrease results from the completion of phaseout of Connally Act enforcement.

8. GENERAL ADMINISTRATION

The estimate for 1967 is $1,948,000, a decrease of $4,000 from 1966. The decrease consists of:

(1) A decrease of $20,000 due to program savings.
(2) An increase of $16,000 for increased pay costs.

SUMMARY OF COST REDUCTION PROGRAM ACCOMPLISHMENTS

The cost reduction effort of the Geological Survey will result in program savings and priority adjustments totaling approximately $5.9 million through fiscal year 1967. This constitutes a savings slightly in excess of 3 percent of the total Survey budget during this 2½-year period.

Fiscal year 1965–66

The cost avoidance and cost reduction program accomplishments have resulted in an annual budget for the Geological Survey that is currently about $2.5 million less than would otherwise have been projected. Acquisition of surplus property rather than the purchase of new equipment has resulted in savings of an additional $0.5 million. Through the efforts of the Geological Survey, another $1.4 million in savings has been produced for other governmental organizations. The Geological Survey, therefore, has been responsible for the generation of approximately $4.4 million in savings during the 2 year period, according to the goals we have projected through fiscal year 1966.

Automated instrumentation and data processing (instrumentation in collecting and processing basic water data, compiling lists of Federal leases and quality of water stations, tabulation of statistics and graphics in topographic mapping, geodetic computations, leveling for vertical control and electronics distance measuring in mapping, elevation meters, airborne control survey system, airborne magnetometer, royalty accounting for oil and gas, quality of water measurement, streamflow data)	$1,159,300
Improved work methods and procedures (use of existing maps and photographs, combined field mapping phases, drilling test holes, preprinted engineering forms, plastic lamination for current meter tables, sampling for map user requirements, procurement changes, optometric studies, field precheck methods and helicopter use on multiphase mapping operations, changes in diapositive plates, changes in map distribution, new photographic method)	524,100

Improvements in publications methods and equipment (improve registration of photolithographic plates and film, revision of requirements on topographic map reprints, transfer of basic tables and summaries to open files, computer-operated typesetting system, establishing field photographic laboratory, new inventory procedures, decentralizing base map compilation, shipping and handling methods, new index system, peak workload adjustments, new presses and film processing machinery)	$233,000
Reorganizations, office closures, and consolidations (closing of geologic offices in New Philadelphia, Ohio, and Mount Carmel, Pa.; curtailment of Connally Act enforcement, transfer of Office of Minerals Exploration, consolidation of administrative support activities in reorganized field offices of Water Resources Division)	604,500
Current annual rate of savings to the Geological Survey	2,520,900
Acquisition of surplus property rather than purchase of new equipment (electronics, radio, marine, optical, X-ray and radiographic equipment, fork lift truck, tractor-trailer, cargo winches, generators, locomotives, diesel engines, oscilloscopes, mapping instruments, chemical laboratory glassware and other equipment)	477,900
Total savings to the geological survey	2,998,800
Savings for other organizations (addition of military grid information on topographic maps, extended use of airborne control survey system, reduction in State funds resulting from use of automated instrumentation in gathering and processing basic water data)	1,356,800
Total savings generated, fiscal year 1965–66	4,355,600

Fiscal year 1967

The Geological Survey's cost reduction program for fiscal year 1967 will produce program savings and priority adjustments, as reflected in the budget estimates and justifications, that amount to a total of $1.5 million.

Cost reduction:	
Connally Act program termination	$198,000
Airborne magnetometer	88,000
Savings from ADP, map publications, and reports	111,000
Topographic mapping—savings resulting from improved efficiency to be used to provide for needs of higher priority programs	684,000
Total cost reduction	1,081,000
Lower priority adjustments: Adjustments in other programs to provide for increased oil and gas leasing workloads, supervision of offshore core hole drilling in southern California and the continental slope in the Gulf of Mexico, and for oil and gas royalty accounting	450,000
Total savings to be generated, fiscal year 1967	1,531,000
Total cost reductions effected or scheduled since inception of cost reduction program, December 1964	5,886,600

FINANCING OF GEOLOGICAL SURVEY PROGRAMS

An appropriation of $73,920,000 is requested for 1967, an increase of $729,000 over the current year. The total program of the Geological Survey, estimated at $117,158,000 in 1967, is financed approximately 64 percent by direct appropriation, 16 percent by contributions from State and municipal agencies, and 20 percent by reimbursement from Federal agencies and sundry non-Federal entities.

The financing of obligations by activity for 1965, 1966, and 1967 are shown below:

	Actual 1965	Estimate, 1966	Estimate, 1967
Topographic surveys and mapping:			
Direct appropriation	$22,491,456	$23,339,323	$23,086,000
States, counties, and municipalities	2,780,987	3,267,000	3,450,000
Kingdom of Saudi Arabia			303,000
Miscellaneous non-Federal sources	?15,367	219,000	220,000
Bureau of Reclamation	1,051,053	1,080,000	1,086,000
National Aeronautics and Space Administration			125,000
National Science Foundation	403,099	425,000	425,000
Miscellaneous Federal agencies	646,962	610,000	662,000
Total	27,588,924	28,940,323	29,357,000
Geologic and mineral resource surveys and mapping:			
Direct appropriation	17,321,944	19,245,318	18,793,000
States, counties, and municipalities	917,759	996,000	1,030,000
Kingdom of Saudi Arabia	692,582	788,000	876,000
Miscellaneous non-Federal sources	113,078	98,000	6,000
Department of Defense	2,405,743	1,131,000	704,000
Air Force	347,393	361,000	223,000
Agency for International Development	1,174,667	1,191,000	1,175,000
Atomic Energy Commission	1,291,847	1,462,000	1,392,000
Government Printing Office	201,051	230,000	230,000
Navy		147,000	
National Aeronautics and Space Administration	2,744,800	6,081,000	6,408,000
National Science Foundation	132,243	213,000	115,000
Miscellaneous Federal agencies	317,815	105,000	113,000
Total	27,660,922	32,048,318	31,065,000
Minerals exploration:			
Direct appropriation		991,832	1,005,000
Comparative transfer from "Salaries and expenses," Office of Minerals Exploration	457,038		
Total	457,038	991,832	1,005,000
Marine geology and hydrology: Direct appropriation	751,553	860,000	862,000
Water resources investigations:			
Direct appropriation	20,897,459	22,987,289	23,816,000
States, counties, and municipalities:			
Matched Federal funds	10,708,555	11,550,000	12,850,000
Unmatched	991,806	1,050,000	1,100,000
Permittees and licensees of the Federal Power Commission	445,193	490,000	505,000
Miscellaneous non-Federal sources	71,734	80,000	60,000
Bureau of Mines	88,733	237,000	241,000
Bureau of Reclamation	1,353,193	1,433,000	1,444,000
National Park Service	171,746	233,000	245,000
Agriculture	233,343	294,000	312,000
Air Force	131,905	192,000	192,000
Army	2,649,679	3,066,000	3,080,000
Department of Health, Education, and Welfare	143,130	144,000	145,000
Department of State	148,129	148,000	174,000
Agency for International Development	772,854	695,000	770,000
Atomic Energy Commission	966,099	888,000	914,000
National Aeronautics and Space Administration	77,890	124,000	260,000
Office of Emergency Planning		322,000	
Tennessee Valley Authority	126,155	147,000	141,000
Miscellaneous Federal agencies	361,574	325,000	598,000
Total	40,339,177	44,405,289	46,847,000
Soil and moisture conservation:			
Direct appropriation	197,467	201,000	201,000
Bureau of Land Management	79,130	85,000	85,000
Total	276,597	286,000	286,000
Conservation of lands and minerals:			
Direct appropriation	4,716,696	4,684,000	4,793,000
Miscellaneous non-Federal sources	2,060	5,000	5,000
Miscellaneous Federal agencies	38,047	65,000	58,000
Total	4,756,803	4,754,000	4,856,000

	Actual 1965	Estimate, 1966	Estimate, 1967
General administration:			
Direct appropriation	$1,904,972	$1,952,000	$1,948,000
Comparative transfer from "Salaries and expenses," Office of Minerals Exploration	9,000		
Miscellaneous non-Federal sources	57,745	58,000	72,000
Department of Defense	103,300	44,000	27,000
Army	105,828	121,000	120,000
National Aeronautics and Space Administration	119,675	234,000	265,000
Miscellaneous Federal agencies	405,992	395,000	448,000
Total	2,706,512	2,804,000	2,880,000
Special-purpose buildings: Direct appropriation	863,002		
Summary:			
Direct appropriation (obligations):			
From new obligational authority	69,144,549	73,190,870	73,920,000
From prior year unobligated balance		1,069,892	584,000
Comparative transfer from "Salaries and expenses," Office of Minerals Exploration	466,038		
States, counties, and municipalities	15,399,107	16,863,000	18,430,000
Miscellaneous non-Federal sources	1,597,759	1,738,000	2,047,000
Other Federal agencies	18,793,075	22,228,000	22,177,000
Total	105,400,528	115,089,762	117,158,000

EXPLANATION OF APPROPRIATION LANGUAGE CHANGES

The only substantive change proposed is deletion of the nonrecurring provision for transfer of the unexpended balance of the appropriation for the Office of Minerals Exploration.

AUTHORIZATION FOR PURCHASE OF 46 PASSENGER MOTOR VEHICLES, FOR REPLACEMENT ONLY

The vehicles requested are used to transport men and equipment over all kinds of roads and terrain and in all kinds of weather, in the conduct of the fieldwork of the Geological Survey. These cars must give dependable service at all times, since a great deal of the transportation required is in areas where repair services are not available. Field use tends to shorten the efficient life of a vehicle.

The 46 vehicles to be replaced, as shown below, will meet or exceed the age or mileage replacement standards prescribed by General Services Administration, and can no longer give dependable and economical service. The vehicles will be used in areas not serviced by vehicle pools maintained by the General Services Administration.

	Sedans	Station wagons	Total
Replacements requested based on:			
Mileage:			
60,000 to 80,000	13	21	34
80,000 or over	1		1
Age	6	5	11
Total	20	26	46
Total passenger vehicles owned by Geological Survey	93	103	196

JUSTIFICATION

Chairman HAYDEN. In addition, I will insert in the record the complete justification statement for the funds requested.

(The justification follows:)

Surveys, investigations, and research

Appropriation, 1965	$67,165,000	
Supplemental appropriation, 1965	90,000	
Second supplemental appropriation, 1965	3,129,000	
Total appropriation, 1965		$70,384,000
Comparative transfer from "Salaries and expenses," Office of Minerals Exploration		+466,038
Total available, 1965		70,850,038
Appropriation, 1966	$71,680,870	
Pay cost supplemental	1,510,000	
Total appropriation, 1966		73,190,870

SUMMARY OF INCREASES AND DECREASES, 1967

Topographic surveys and mapping:		
Nonrecurring item due to program savings resulting from improved methods	−$684,000	
Nonrecurring item representing priority adjustments in the program	−69,000	
To provide for increased pay costs for fiscal year 1966 positions ($151,000)		
Nonrecurring financing in 1966 of the States share of increased pay costs (−$52,000)	+99,000	
Accelerated program of mapping in Appalachia	+500,000	
		−154,000
Geologic and mineral resource surveys and mapping:		
Nonrecurring item due to program savings through automation for airborne magnetometer data processing	−88,000	
Nonrecurring item representing priority adjustments in the minerals and fuels program	−199,780	
To provide for increased pay costs for fiscal year 1966 positions ($129,000)		
Nonrecurring financing in 1966 of the States' share of increased pay costs (−$19,000)	+110,000	
To provide for mineral resources surveys in Appalachia	+100,000	
		−77,780

Surveys, investigations, and research—Continued

Minerals exploration:		
Nonrecurring item due to availability of prior year unobligated balance	−$356,258	
To provide for increased pay costs for fiscal year 1965 positions	+2,000	
To provide for inspections and financial assistance for which the number of applications has doubled	+11,168	
		−$343,090
Marine geology and hydrology: To provide for increased pay costs for fiscal year 1966 positions		+2,000
Water resources investigations:		
Nonrecurring item for channel clearance on the Gila River, in connection with the phreatophyte study project	−$200,000	
Nonrecurring item representing priority adjustments in the Federal program	−113,000	
To provide for increased pay costs for fiscal year 1966 positions ($179,000)	----------	
Nonrecurring financing in 1966 of the States' share of increased pay costs (−$188,000)	−9,000	
Decrease in required payment to Bureau of Employees' Compensation	−696	
To match increased State offerings for cooperative investigations	+1,000,000	
To provide for flood-plain mapping in Appalachia	+225,000	
To provide for coordination of Federal collection of water data	+200,000	
To provide for studies of drought-related problems	+56,696	
To provide an increase for U.S. participation in the International Hydrological Decade	+38,000	
		+1,197,000
Conservation of lands and minerals:		
Nonrecurring items due to program savings resulting from—		
Conversion of royalty accounting to automatic data processing (−$68,000)	----------	
Deferment of publication of classification maps and reports (−$43,000)	----------	
Completion of phaseout of Connally Act enforcement (−$198,000)	−309,000	
Nonrecurring item representing priority adjustments in the classification programs	−68,000	
To provide for increased pay costs for fiscal year 1966 positions	+36,000	
To provide for expanded workload created by increased prospecting and production activity on Federal and Indian land oil and gas and mineral leases	+450,000	
		+109,000
General administration:		
Program reduction	−20,000	
To provide for increased pay costs for fiscal year 1966 positions	+16,000	
		−4,000
Net increase, 1967		+729,130
Budget estimate, 1967		73,920,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers	Amount available
1. Topographic surveys and mapping	$22,590,779	$22,803,000	$437,000		$23,240,000
2. Geologic and mineral resource surveys and mapping	17,696,482	18,512,780	358,000		18,870,780
3. Minerals exploration	457,038	761,090	3,000		764,090
4. Marine geology and hydrology	751,553	853,000	7,000		860,000
5. Water resources investigations	21,265,748	22,063,000	556,000		22,619,000
6. Soil and moisture conservation	197,467	198,000	3,000		201,000
7. Conservation of lands and minerals	4,716,696	4,579,000	105,000		4,684,000
8. General administration	1,913,972	1,911,000	41,000		1,952,000
9. Special-purpose buildings	863,002				
Unobligated balance lapsing	397,301				
Total	70,850,038	71,680,870	1,510,000		73,190,870

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Topographic surveys and mapping	$22,590,779	$23,240,000	$23,086,000	−$154,000	+$99,000	−$253,000
2. Geologic and mineral resource surveys and mapping	17,696,482	18,870,780	18,793,000	−77,780	+110,000	−187,780
3. Minerals exploration	457,038	764,090	421,000	−343,090	+2,000	−345,090
4. Marine geology and hydrology	751,553	860,000	862,000	+2,000	+2,000	
5. Water resources investigations	21,265,748	22,619,000	23,816,000	+1,197,000	−9,000	+1,206,000
6. Soil and moisture conservation	197,467	201,000	201,000			
7. Conservation of lands and minerals	4,716,696	4,684,000	4,793,000	+109,000	+36,000	+73,000
8. General administration	1,913,972	1,952,000	1,948,000	−4,000	+16,000	−20,000
9. Special-purpose buildings	863,002					
Unobligated balance lapsing	397,301					
Total	70,850,038	73,190,870	73,920,000	+729,130	+256,000	+473,130

[1] To provide for increased pay cost for fiscal year 1966 positions.

Recapitulation of programs in Appalachia

Activity	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
			Total	Pay cost	Program
Regular programs:					
Topographic surveys and mapping	$1,580,000	$1,530,000	−$50,000	+$8,000	−$58,000
Geologic and mineral resource surveys and mapping	587,000	590,000	+3,000	+3,000	
Water resources investigations	1,495,000	1,648,000	+153,000	+2,000	+151,000
Total	3,662,000	3,768,000	+106,000	+13,000	+93,000
Accelerated programs:					
Topographic surveys and mapping	99,323	511,000	+411,677	+11,000	+400,677
Geologic and mineral resource surveys and mapping	374,538	100,000	−274,538		−274,538
Water resources investigations		225,000	+225,000		+225,000
Total	+473,861	836,000	+362,139	+11,000	+351,139
Unobligated balance available, start of year	−473,861		+473,861		+473,861
New obligational authority		836,000	+836,000	+11,000	+825,000

1. TOPOGRAPHIC SURVEYS AND MAPPING

The estimate for 1967 is $23,086,000, a decrease of $154,000 from 1966. The decrease consists of:

(1) A decrease of $684,000 due to program savings resulting from improved methods.

(2) A decrease of $69,000 representing priority adjustments in the regular program.

(3) A net increase of $99,000 for increased pay costs, including $151,000 gross increased cost for fiscal year 1966 positions, less $52,000 nonrecurring financing in 1966 of the State's share of such costs.

(4) An increase of $500,000 to accelerate mapping in Appalachia.

Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Standard quadrangle mapping	$18,839,732	$19,302,323	$19,005,000	−$297,323	+$90,000	−$387,323
(b) Map revision and maintenance	2,504,761	2,637,000	2,659,000	+22,000	+7,000	+15,000
(c) Small scale and special mapping	1,146,963	1,400,000	1,422,000	+22,000	+2,000	+20,000
Total obligations	22,491,456	23,339,323	23,086,000	−253,323	+99,000	−352,323
Unobligated balance available, start of year		−99,323		+99,323		+99,323
Unobligated balance available, end of year	+99,323					
New obligational authority	22,590,779	23,240,000	23,086,000	−154,000	+99,000	−253,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

Analysis of program components

Program component and subactivity	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
			Total	Pay cost	Program
APPALACHIA					
Regular program:					
Standard quadrangle mapping	$1,439,000	$1,439,000		+$88,000	−$88,000
Map revision and maintenance	101,000	71,000	−$30,000		−30,000
Small scale and special mapping	40,000	20,000	−20,000		−20,000
Total, regular program	1,580,000	1,530,000	−50,000	+8,000	−58,000
Accelerated program:					
Standard quadrangle mapping	99,323	348,000	+248,677	+8,000	+240,677
Map revision and maintenance		102,000	+102,000	+2,000	+100,000
Small scale and special mapping		61,000	+61,000	+1,000	+60,000
Subtotal	99,323	511,000	+411,677	+11,000	+400,677
Unobligated balance available, start of year	−99,323		+99,323		+99,323
Total, accelerated program (NOA)		511,000	+511,000	+11,000	+500,000

Program objectives.—A topographic map is an accurate and detailed graphic representation of the shape and elevation of the terrain, the position and size of man-made features, and the location and extent of the surface water features. Topographic map coverage of the United States at scales adequate for modern needs is a necessity for the efficient execution of most programs involving knowledge of the earth's surface and its resources. The lack of these maps requires many governmental and private agencies to improvise special maps and surveys, often at great cost and generally of limited usefulness to others, for planning and executing each specific task. Benefits from this one mapping effort are derived again and again and are not directed toward a specific beneficiary.

Topographic maps are used to support a multitude of programs and activities—mineral resources development, highway planning, urban expansion, utilization of water resources, and recreation.

In addition, the Department of Defense has a continuing requirement for adequate and up-to-date maps of the entire country. The annual benefits to the Nation from just one or two of these programs are sufficient to pay for the mapping. With time, there are more uses, more users, and more benefits.

The Geological Survey's long-range planning seeks to accomplish the following objectives:

To complete the topographic mapping of the United States and its outlying areas in either the 7½- or 15-minute series by fiscal year 1976;

To complete full coverage in the 7½-minute series by 1981, except for Alaska;

To produce the other components of the national topographic map series;

To revise and maintain all these maps; and

To improve products, operational techniques, and instrumental equipment, mainly through research and development.

Provided funds are available, an earlier planning objective is to increase the quadrangle coverage from 71 to 86 percent by 1970. This amounts to an average of 3 percent or about 100,000 square miles annually. The consensus of map users is that the mapping and map revision is needed now—it is essential to their programs and, in turn, to the welfare of the Nation.

Current program needs.—Although the long-range plan is calculated to fulfill the first objective of complete coverage by the mid-1970's, the program is under constant review to assure adherence to a logical priority system strongly in-

fluenced by immediate needs to map users. Among current requirements and those expressed for the next few years are:

Mapping in the Appalachia area to support development of its highways, its resources and economy, mineral evaluation programs, water conservation, and pollution control;

New mapping and revision of older maps in urban-suburban areas for planning of freeways and rapid transit systems, urban renewal, and comprehensive land-use development;

Mapping needed in primitive and wilderness areas;

Mapping to support the Department of Defense in military maneuvers, training, missile testing, and to provide complete basic tactical and strategic coverage;

Mapping to support the investigation and development of national water resources, including comprehensive river basin studies, and for recreational areas, such as national parks and monuments;

Mapping for enumerators of the Bureau of the Census in advance of the 1970 census; and

Continuation of work on the National Atlas with planned publication during calendar year 1967.

Program benefits.—Topographic mapping is an excellent investment for the Nation. In 1958, when the mapping coverage of the country was only 51 percent, the direct annual benefits were determined to be 8 to 1 for every dollar spent on mapping. The ratio is now 10 to 1 and it is judged that annual benefits will increase to about 18 to 1 along with increased map coverage and expanded user knowledge. Figure 3 shows the annual benefits to the U.S. economy derived from the national topographic program, as compared to the cost of that program.

Program support.—One of the important conclusions of a 1964 Federal map users conference attended by representatives of 24 Federal agencies was that adequate funds need to be made available to meet the many requirements for topographic quadrangle mapping, map revision, and the small-scale series.

Other public and private map users have noted the value of topographic mapping. An example is the December 1964 report entitled "An Accelerated Mapping Program for Minnesota," forwarded to the Governor and legislature by the Minnesota Outdoor Recreation Resources Commission. The report was prepared in consultation with the State mapping advisory board, among others, and included the statement "Topographic quadrangle map coverage of the State should be given the highest priority of any portion of the resource program."

The national topographic program is being expedited by contributions through current cooperative agreements with 34 States and Puerto Rico. The individual contributions range from several thousand to over a half million dollars per year. Those projects are financed on a 50–50 fund-matching basis with the States current contribution totaling approximately $3,250,000. The Federal matching funds come from the regularly appropriated Topographic Division funds. Cooperative projects are jointly selected to best serve Federal, State, and local needs for topographic quadrangle mapping or revision.

Mapping research and development.—The Geological Survey's mapping research and development is aimed primarily at developing new methods for making better maps faster and at lower cost, through improved procedures and instrumentation. The Topographic Division has been the country's principal agency for research related to the domestic mapping program and is well known internationally for its record in this respect. Using this research in the Survey's continuous efforts toward cost reduction and effective manpower utilization, a significant increase in efficiency in the production of topographic maps has been achieved. One man-year of work in 1947 produced 17 square miles of mapping; it now produces about 55 square miles—and the maps are now better and contain more information.

The goals, objectives, and urgency of the topographic mapping program are not new, but the urgency grows in intensity and magnitude with each passing year. It is an accepted fact that the surface of the earth, with all its resources of water, minerals, forests, and land is known only insofar as it is adequately mapped. Eighteen major countries in the world have a large percentage of topographic map coverage, at mile-per-inch scale or larger than the United States. Table 7 shows this.

World topographic map coverage

[Mile-per-inch scale or larger]

	Percent
U.S.S.R.	100
United Kingdom	100
France	100
Japan	100
Italy	100
Greece	100
Switzerland	100
Norway	100
Denmark	100
West Germany	100
Benelux	100
Portugal	100
Nationalist China	100
Cuba	100
Thailand	100
India	85
Spain	85
Pakistan	75
United States	71
Finland	60
Sweden	50
Central America	50
Canada	20
Africa	20
Mexico	10
South America	10
Australia	5

Topographic data will ultimately be available in all areas where man lives, works, and plays. There is a choice as to whether the data will be provided in advance, on a systematic and uniform basis nationally in the form of standard multipurpose quadrangle maps, or will be achieved in a piecemeal, last-resort fashion to provide nonstandard specific-purpose products, most of which may neither be available nor suitable for any other purposes. The plan of the Geological Survey, if adequately funded, would provide for the former, more desirable course.

(*a*) *Standard quadrangle mapping*

The estimate for 1967 is $19,005,000, a decrease of $297,323 from 1966. The decrease consists of—

(1) A decrease of $559,000 due to program savings resulting from improved methods.

(2) A decrease of $69,000 representing priority adjustments.

(3) An increase of $90,000 for increased pay costs.

(4) An increase of $240,677 for accelerated mapping in Appalachia.

This subactivity included operations necessary to prepare and print the first quadrangle maps in either the 7½- or 15-minute series, and resurveys of older 15-minute maps to 1:24,000 scale standards.

Need for increase—The Appalachia regional development program calls for a vigorous increase in water and mineral resources surveys and evaluations, and for extensive development including new highways throughout the area. Appalachia encompasses some 185,000 square miles from southern New York to central Alabama. This area is covered by topographic maps in the 7½- or 15-minute series for all but about 10,600 square miles. In addition to completing map coverage in these unmapped areas, about 20,000 square miles of prewar 15-minute maps should be resurveyed to 7½-minute standards to provide the up-to-date topographic maps needed to plan the transportation routes and resources development projects, and to support the planned mineral evaluation program.

Importance of program.—Preparation of topographic maps in the 7½- and 15-minute series to provide uniform standard quadrangle coverage of the United States is a Geological Survey function, long established and accepted.

When standard topographic maps are available, they provide essential data required by every agency and individual concerned with the land and its use. When these maps are not available, each potential user must utilize whatever may be at hand, usually fragmentary data, largely inadequate, or make costly special surveys often for one specific purpose.

In the 48 conterminous States the topographic mapping of nearly 1 million square miles of unmapped area is imperative. These "have not" areas must be eliminated so that their resource potential may be examined and developed. Also, for about 900,000 square miles the only available topographic quadrangle maps were surveyed 10 to 60 years ago for maps at the mile-per-inch scale, a scale that is not sufficiently detailed or accurate for present-day needs for most of these areas.

The Nation cannot move forward and fully develop its resources and industrial potential with such an inadequate or out-of-date record of our land. The lack of modern, adequate topographic maps means that some development will be carried out with less than maximum efficiency, other development will be delayed, and some opportunities for development will be overlooked entirely.

Program of work.—The current program includes 460,000 square miles of standard quadrangle mapping in various stages from aerial photography through map finishing. The continuation of these activities in several hundred projects located in all parts of the country is necessary to complete these maps. Funds will also be required to initiate the new projects which have been selected to provide the mapping most urgently needed by the map users.

With the supplemental funds made available for Appalachia in fiscal year 1965–66, 1,045 square miles of new mapping was started and will be continued in fiscal year 1967. With the additional funds requested for Appalachia in fiscal year 1967, most of the remaining unmapped areas and some resurveys will be started, and the mapping already in the program will be expedited. Under the Federal-State cooperative programs in Pennsylvania, West Virginia, and Virginia, an additional 4,700 square miles will be started.

There are significant requirements for topographic mapping in the expanding urban-suburban areas. These needs stem from such programs as the forthcoming 1970 enumeration of the Bureau of the Census, the urban transportation planning of the Bureau of Public Roads, and the 701 planning assistance program of the Housing and Home Finance Agency. Requests indicate a requirement for new mapping and resurveys covering over 20,000 square miles. Mapping plans for fiscal year 1967 include over 3,000 square miles in these areas.

Water resources development and conservation are included within the area of responsibility of many agencies. Such agencies have submitted requests for up-to-date topographic maps which would more than absorb the entire operating capacity of the Topographic Division for several years. Adequate topographic maps are a primary tool in the planning, design, and management of projects to assure a future water supply. River basin studies, geologic investigations of potential storage areas, design of irrigation projects, and watershed pollution studies are dependent on these basic maps. About one-fourth of the projects planned for mapping in fiscal year 1967 are for agencies concerned with water investigations and development.

The Wilderness Act of 1964 reemphasized the important conservation responsibilities of the Department of the Interior. Approximately 9 million acres of national forest lands are presently included under the Wilderness Act. Large-scale published maps or advance copy materials are presently available for about 62 percent of these areas while an additional 22 percent are in early stages of the current program. About one-fourth of the remaining unmapped areas, located principally in Montana, Wyoming, Idaho, and Washington, are being added to the fiscal year 1967 program.

The Department of Defense has repeatedly emphasized the need for up-to-date maps for military and civil defense. At present, large areas covering maneuver zones are either unmapped or covered by older maps in need of revision. Particularly urgent needs continue to be expressed for mapping in the Fort Rucker area in Alabama, the southwest Arizona test area, and in the Kitty Hawk maneuver area in North and South Carolina; military representatives have asked the Geological Survey to complete these mapping projects as quickly as possible. Plans for new mapping in fiscal year 1967 include the unmapped areas of Fort Rucker and the continuation of all work in the program totaling some 20,000 square miles initiated to meet military requirements.

Source of funds.—The program for standard quadrangle mapping is financed from several sources, as listed below:

Source	Amount available, 1965	Amount available, 1966	Estimate, 1967
Direct appropriation	$18,839,732	$19,302,323	$19,005,000
States and municipalities	2,115,017	2,574,000	2,793,000
Bureau of Reclamation	1,051,053	1,080,000	1,086,000
Other Federal agencies	152,000	105,000	80,000
Total	22,157,802	23,061,323	22,964,000

(b) Map revision and maintenance

The estimate for 1967 is $2,659,000, an increase of $22,000 over 1966. The increase consists of:

(1) A decrease of $85,000 due to program savings resuting from improved methods.

(2) An increase of $7,000 for increased pay costs.

(3) An increase of $100,000 to accelerate revision mapping in Appalachia.

Outdated standard topographic quadrangle maps require periodic revision to provide: (1) useful and reliable map data for current plans and studies in important national and local programs, and (2) optimum benefits from uses, again and again, by many Federal and private map users. Map use continues to increase annually and demand continues for more up-to-date map coverage, requiring not only revision but increased distribution and reprinting of maps. The funds for this subactivity provide capacity to update, improve, and reprint maps published in the 7½-minutes, 15-minute, and 1:63,360 series.

Need for increase.—Many of the 1:24,000 standard quadrangle maps of Appalachia were made 10 to 20 years ago and have never been updated. Federal, State, and local programs, active and planned, require current maps for use in the analysis and inventory of the resources available. The Appalachia increase will provide for about half of the revision work on 29 quadrangles needing updating in the areas of transportation route studies, mineral investigations, and population changes.

Importance of program.—In 1947 an accelerated standard quadrangle mapping program began. The many maps prepared since this date have been used again and again and will continue to furnish map users with basic map coverage of the Nation. Distribution continues to increase for most of these maps, even 10 to 20 years after publication. Periodic revision of the outdated maps is required to obtain optimal potential benefits from these maps.

Most of the present 1:24,000 larger scale topographic map coverage was accomplished in areas considered to have high potential for expanded land utilization and other development. Subsequent development has occurred, and most of these changes are not shown on the maps now being used. Today, many of the problems associated with the continuing expanding economy and population growth occur in these same areas.

The 1964 National Survey of Metropolitan Planning prepared by Housing and Home Finance Agency for the Subcommittee on Inter-Governmental Relations states, "Seventy percent of our population now lives in urban areas. This statistic is clear evidence of the pressures of urban life on our traditional Federal-State-local relations. We must plan for the physical problems—water shortages, transportation snarls, urban blight, and wasteful land use." Current standard quadrangle map data are required by Federal, State, and local agencies as basic information in preparing studies, reports, and plans to inventory resources in these rapidly changing areas of the Nation. With the limited amount of attention which has been given to map revision during past years and the corresponding drop in map usefulness to many users, it is apparent that plans must be made for sharp expansions in future revision programs.

At the June 1965 urban mapping panel, agencies interested in coordinating mapping requirements in the Nation's rapidly changing urban areas emphasized the need for more revision of the topographic quadrangle maps.

Many of the older maps along the Nation's coastline need revision. An example of work recently completed in this area is the revision of the maps of Assateague

Island, completed just prior to the congressional hearings on the proposed establishment of a national seashore there.

Program of work.—Map revision plans and priorities are based on the amount of physical change in a mapped area, known development planned for an area, the age of the map, and requests for map revision. All areas of current national interest are analyzed for map use and map revision needs. Maps in urban-suburban areas ordinarily need revision about every 5 years. In other areas, changes occur less frequently and maps are revised at greater intervals.

In fiscal year 1965, over 33 percent of the total funds for this subactivity were used for map reprinting. About 1,500 topographic quadrangle maps will need reprinting in fiscal year 1967 to replenish stocks. Over the past 5 years the volume of map reprints has increased about 100 percent. All maps listed for reprinting are analyzed as to revision plans and work underway to prevent any unnecessary reprintings. Newer methods for more accurate prediction of map sales are being considered to help reduce the frequency of reprints.

It is expected that cooperative offerings for map revisions will be at about the same level in fiscal year 1967 as in fiscal year 1966. These funds are matched from the Survey's direct appropriation on a 50–50 basis in a program which now constitutes over 40 percent of the total funds for the map revision and maintenance subactivity.

The revision work already in progress and the work programed to begin in fiscal year 1967 will be concentrated on outdated maps in Appalachia, urban-suburban areas, areas of highway development, national parks, proposed recreation areas, missile and manufacturing test sites, and the Nation's coastline. The use of these updated maps will especially benefit the Bureau of the Census, Bureau of Public Roads, Housing and Home Finance Agency, Department of Defense, and other Federal and non-Federal map users active in these areas of high-priority national programs.

Source of funds.—Funds made available in 1965 and 1966 for map revision and maintenance, and funds expected for 1967 are as follows:

Source	Amount available, 1965	Amount available, 1966	Estimate, 1967
Direct appropriation	$2,504,761	$2,637,000	$2,659,000
States and municipalities	656,785	677,000	642,000
Total	3,161,546	3,314,000	3,301,000

(c) *Small-scale and special mapping*

The estimate for 1967 is $1,422,000, a net increase of $22,000 over 1966. The net increase consists of:

(1) A decrease of $40,000 due to program savings resulting from improved methods.

(2) An increase of $2,000 for increased pay costs.

(3) An increase of $60,000 to accelerate mapping in Appalachia.

This subactivity includes the cartographic and printing operations necessary to compile various series of small-scale maps, special-purpose maps, and related products.

Need for increase.—The increase will provide for 11 revisions and 1 recompilation of 1:250,000-scale maps in Appalachia.

Importance of program.—The small-scale and special mapping program is based on the topographic mapping requirements of Federal, State, and local agencies, as well as other indications of need which reflect the national interest. These maps of particular sizes and scales enable the users to more efficiently carry out their responsibilities in general planning and management of highway development, resources investigations, urban and suburban affairs, recreation programs, water and power projects, etc. Preparation of the maps within this program is generally dependent on the availability of recent 7½-minute standard quadrangle coverage.

Program of work.—The program will emphasize the following components: 1:250,000-scale series of topographic maps. This is the only series giving complete topographic coverage of the United States at one uniform scale and format. The Department of Defense considers this series a key part of the military need; the Coast and Geodetic Survey finds them especially beneficial in providing relief

information for its aeronautical charts; the Tennessee Valley Authority states that for studies and investigations of a regional nature these maps serve purposes for which the large-scale maps are not adaptable.

Components	*Uses*
National Park series at various scales	Park management and development, fire protection, sale to tourists.
Metropolitan area series at 1:24,000-scale	Urban and suburban planning in the fields of zoning, mass transportation, land use, sanitation.
State map series at 1:500,000-scale	Area development studies, general administrative planning, geologic base maps, index maps.
International map of the world (IMW) at 1:1 million-scale	Broad regional studies, military applications, bases for other small-scale maps.
Geodetic control diagrams at 1:250,000-scale	Information on available horizontal and vertical control data.

Source of funds.—Funds available for this subactivity are as follows:

Source	Amount available, 1965	Amount available, 1966	Estimate, 1967
Direct appropriation	$1,146,963	$1,400,000	$1,422,000
States and municipalities	9,185	16,000	15,000
National Science Foundation	403,099	425,000	425,000
Other Federal agencies	8,948		
Total	1,568,195	1,841,000	1,862,000

Other Operations

In addition to work carried out under its regular subactivities, the Topographic Division also performs some work within its field of competence on a reimbursable basis. One of these activities is technical assistance to other nations through cooperation with such organizations as the Agency for International Development and the United Nations. This cooperation occasionally requires the services of Division personnel in foreign countries in support of technical or scientific projects and the technical training of foreign nationals. The following table illustrates the scope of these reimbursable operations as carried on by the Topographic Division.

Reimbursable work	Amount available, 1965	Amount available, 1966	Estimate, 1967
Cartographic operations for other Federal agencies	$112,525	$185,000	$262,000
Sale of photo copies of aerial photos, map manuscripts, and other data:			
Other Federal agencies	323,821	300,000	300,000
Non-Federal agencies	154,928	152,000	155,000
International activities	51,133	20,000	323,000
National Aeronautics and Space Administration			125,000
Sale of personal property: Non-Federal agencies	58,974	67,000	65,000
Total	701,381	724,000	1,230,000

2. GEOLOGIC AND MINERAL RESOURCE SURVEYS AND MAPPING

The estimate for 1967 is $18,793,000, a decrease of $77,780 from 1966. The decrease consists of:

(1) A decrease of $88,000 due to savings through automation for airborne magnetometer data processing.

(2) A decrease of $199,780 representing a priority adjustment in the minerals and fuels program.

(3) A net increase of $110,000 for increased pay costs, including $129,000 gross increased cost for fiscal year 1966 positions, less $19,000 nonrecurring financing in 1966 of the States share of such costs.

(4) An increase of $100,000 for mineral resource surveys in Appalachia.

Program components.—For ease of presentation and to provide a better understanding of the programs that comprise "Geologic and mineral resource surveys and mapping," the activity is described and justified on the basis of seven major program components. These program components are shown in tables 9 and 10 which follow, with cross reference to appropriate subactivities. The two tables show, respectively, the distribution of all funds for geologic and mineral resource surveys and mapping in fiscal year 1966, and an analysis of program components for fiscal year 1966 and fiscal year 1967.

The direct appropriation constitutes only 60 percent of the funds available in fiscal year 1965, whereas in fiscal year 1960 nearly 70 percent of the funds available were from the direct appropriation. Figure 14 also shows that although total funds for this activity have doubled in the last decade the work is being done with less staff—albeit a better trained staff.

Analysis by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Economic geology	$3,672,960	$4,272,733	$4,060,000	−$212,733	+$24,000	−$236,733
(b) Regional geology	7,743,092	8,294,585	8,112,000	−182,585	+53,000	−235,585
(c) Experimental geology	5,238,086	5,614,000	5,616,000	+2,000	+27,000	−25,000
(d) Engineering geology	667,806	1,064,000	1,005,000	−59,000	+6,000	−65,000
Total obligations	17,321,944	19,245,318	18,793,000	−452,318	+110,000	−562,318
Unobligated balance available, start of year		−374,538		+374,538		+374,538
Unobligated balance available, end of year	+374,538					
New obligational authority	17,696,482	18,870,780	18,793,000	−77,780	+110,000	−187,780

[1] To provide for increased pay cost for fiscal year 1966 positions.

Geologic and Mineral Resource Surveys and Mapping

FY 1966 PROGRAM
(In Thousands of Dollars)

Direct Appropriation 19,246

Total, all sources: 32,049

Federal Repay 11,807

PROGRAM COMPONENT	Subactivity: Economic Geology	Regional Geology	Experimental Geology	Engineering Geology	Total
Mineral and Fuel Resources	2,874	6,208	2,396	---	11,478
Geochemical and Geophysical Exploration	641	1,271	575	---	2,487
Upper Mantle	---	204	1,773	---	1,977
Earthquake and Volcano studies	---	167	870	203	1,240
Appalachia	452	445	---	65	962
Land - Area Planning	---	---	---	796	796
Wilderness Area Mineral Surveys	306	---	---	---	306
Subactivity total obligations	4,273	8,295	5,614	1,064	19,246
Unobligated balance available, start of yr.					- 375
New obligational authority					18,871

State Funds for Cooperative Programs 996

Interagency Programs	10,943
NASA Lunar Exploration	3,914
Earth Orbiter	2,167
ARPA Nuclear Test Detection	937
AID International Assistance	1,191
NSF Antarctic Research	206
AEC Nuclear Weapons Development	1,280
Plowshare	55
Reactor Development	137
DOD National Intelligence (A/F,DIA)	596
Other Federal Programs	460

International Programs	864
Saudi Arabia	788
United Nations (Thailand)	76

Analysis of program components

Program component and subactivity	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−) 1967 compared with 1966		
			Total	Pay cost	Program
(1) Mineral and fuel resources:					
Economic geology	$2,873,780	$2,791,000	−$82,780	+$17,000	−$99,780
Regional geology	6,208,000	6,174,000	−34,000	+41,000	−75,000
Experimental geology	2,396,000	2,383,000	−13,000	+12,000	−25,000
Subtotal	11,477,780	11,348,000	−129,780	+70,000	−199,780
(2) Geochemical and geophysical exploration:					
Economic geology	641,000	645,000	+4,000	+4,000	
Regional geology	1,271,000	1,191,000	−80,000	+8,000	−88,000
Experimental geology	575,000	578,000	+3,000	+3,000	
Subtotal	2,487,000	2,414,000	−73,000	+15,000	−88,000
(3) Upper Mantle:					
Regional geology	204,000	205,000	+1,000	+1,000	
Experimental geology	1,773,000	1,781,000	+8,000	+8,000	
Subtotal	1,977,000	1,986,000	+9,000	+9,000	
(4) Earthquake and volcano studies:					
Regional geology	167,000	168,000	+1,000	+1,000	
Experimental geology	870,000	874,000	+4,000	+4,000	
Engineering geology	203,000	204,000	+1,000	+1,000	
Subtotal	1,240,000	1,246,000	+6,000	+6,000	
(5) Appalachia:					
Regular program:					
Economic geology	265,000	266,000	+1,000	+1,000	
Regional geology	322,000	324,000	+2,000	+2,000	
Total regular program	587,000	590,000	+3,000	+3,000	
Accelerated program:					
Economic geology	186,953	50,000	−136,953		−136,953
Regional geology	122,585	50,000	−72,585		−72,585
Engineering geology	65,000		−65,000		−65,000
Total accelerated program	374,538	100,000	−274,538		−274,538
Total Appalachia program	961,538	690,000	−271,538	+3,000	−274,538
Unobligated balance available, start of year	−374,538		+374,538		+374,538
New obligational authority	587,000	690,000	+103,000	+3,000	+100,000
(6) Land-area planning: Engineering geology	796,000	801,000	+5,000	+5,000	
Subtotal	796,000	801,000	+5,000	+5,000	
(7) Wilderness area mineral surveys: Economic geology	306,000	308,000	+2,000	+2,000	
Subtotal	306,000	308,000	+2,000	+2,000	
Total	18,870,780	18,793,000	−77,780	+110,000	−187,780

Program objectives.—Geologic and mineral resource surveys and mapping is a continuing activity comprising both short-term and long-term components, each designed specifically to meet critical national needs; for example, to assure availability of ample mineral raw materials to support a burgeoning economy; to assure wise use of land with minimum risk from geologic hazards such as earthquakes; and to develop and extend fundamental geologic principles of major importance, ranging from deposition of ore to occurrence of earthquakes. Principal program objectives are:

To map the geology and make three-dimensional geometric analysis of the subsurface, in detail adequate for modern needs, of all parts of the United States, its territories, and possessions;

To undertake detailed geologic, geophysical, and geochemical studies and develop new and refined techniques essential to the increasingly difficult and crucial task of finding new mineral and mineral fuel deposits to maintain supplies necessary for our economy, national welfare, and defense;

To provide the Federal Goverment with background data and resource appraisals needed in making policy decisions regarding mineral raw materials;

To provide basic geologic data and evaluations necessary for wise development of ground water resources, for modern soil studies, and for guidance in land utilization programs;

To conduct long-range research into basic geologic principles and processes to extend the frontier of scientific knowledge and provide a sound theoretical and experimental basis for future applied research programs; and

To provide a better understanding of man's geologic environment and increase his capability to predict and accommodate to potential geologic hazards such as earthquakes, volcanic eruptions, landslides, and rock falls.

(*1*) *Mineral and fuel resources*

The estimate for 1967 is $11,348,000, a decrease of $129,780 from 1966. The decrease consists of:

(*a*) A decrease of $199,780 representing priority adjustments in the programs for paleotectonic maps ($74,780), organic fuels ($50,000), resources research ($25,000), ferrous metals ($25,000), and theoretical geophysics ($25,000).

(*b*) An increase of $70,000 for increased pay costs.

Program of work.—Principal emphasis in 1967 will be on (a) continuing the studies already underway on deposits or potential deposits of about 30 different mineral and fuel commodities in about 80 different areas distributed among 45 of the States, and new starts on about 10 areas or districts based on new needs resulting from changes on the long-term outlook for individual commodities; (b) continuing and new topical studies on 32 different mineral commodities or commodity groups, with emphasis on those anticipated to become critical in the future; (c) 15 to 18 specialized studies relating to genesis, controls, or environments of mineral and fuel commodities; (d) 8 to 10 mineral resource studies of States, river basins, or other large areas; (e) preparing geologic evaluations and maps in cooperation with 17 State agencies and Puerto Rico; and (f) experimental studies to further the understanding of environment of ore deposition and the geochemistry of mineral deposits.

The studies planned in fiscal year 1967 consist of search for new kinds of ores, reconnaissance search for ground favorable for the occurrence of minable ore, enough exploration to test promising leads and to attract private prospectors, and further development of prospecting methods and instruments. The potential return from these studies is enormous. The cost of the Survey's work that led to the discovery of the $100 million ore body at Carlin, Nev. was of the order of $200,000, a benefit cost ratio of 500 to 1. It is not unreasonable to expect that continued work of the type proposed will lead to discoveries that may satisfy half of our domestic requirements over a 20-year period. The target for gold and silver alone is thus of the order of $2.5 billion. In the case of mercury, world shortages have skyrocketed its price from about $189 a flask in 1963 to the current price of about $700 to $750. Discovery of just enough mercury ore to prevent tight competition for supplies on the world market should bring the price back to normal and yield a saving in U.S. consumer cost of about $40 million a year.

Minerals and fuels are the key resources in a machine economy and their extensive use in the United States has provided the physical basis for our growth. Increased use is essential for continued economic growth, and new discoveries of most commodities are required even to support the economy at its present level for more than 10 to 20 years. Substantial savings accrue to the economy as a whole by discovery and development of lower cost sources even for minerals for which known supplies are adequate to meet current needs. Work on minerals and fuels includes—

Field and laboratory research on mineral habits and origin to establish principles that will guide prospecting.

Development of new or refined prospecting tools and methods.

Field geologic, geochemical, and geophysical studies of known districts to define favorable ground and appraise potential resources.

Geologic mapping and related study of geologically unknown terrain (still about 80 percent of the conterminous United States) as the first step in defining potential mineral provinces and districts.

Synthesis and analysis of all data available on mineral and fuel resources and on regional geology to define favorable provinces and districts and to estimate known reserves and potential resources.

Minerals and fuels investigations are designed to complement work underway by industry in the discovery and development of deposits. For example, little direct work is done on oil and gas because industry is extremely active in exploring for these fuels.

The relative emphasis given to commodities, areas of study, laboratory research, etc., is based on administrative judgment that takes account of—

Adequacy of supplies on the world market for both long term and short term. For example, gold, silver, mercury, and several minor elements are in short supply now on world market; imports plus domestic production are not enough to meet current domestic demands and prices are soaring or may be expected to skyrocket.

Adequacy of domestic supply over both short and long term. Domestic production of many minerals is not sufficient to meet domestic consumption; an increase in domestic production would add to the economic base and perhaps relieve the balance-of-payments deficit.

Regional economic needs. Mineral production forms an important part of the economy of certain depressed areas (e.g., upper Michigan) and would provide the base for manufacturing in others (e.g., eastern Montana).

Cost reduction opportunities. Availability of low-cost supplies is a substantial element in production, hence consumer costs can be lowered and substantial savings to the economy can result from finding deposits competitive on the domestic and world market.

(2) *Geochemical and geophysical exploration*

The estimate for 1967 is $2,414,000, a decrease of $73,000 from 1966. The decrease consists of—

(a) A decrease of $88,000 due to program savings through automation for airborne magnetometer data processing.

(b) An increase of $15,000 for increased pay costs.

Program of work.—Principal emphasis in 1967 will be on the continuation of about 40 different projects devoted to minerals and fuels finding techniques based on geochemical, geophysical, nuclear physics, and geobotanical methods and 2 to 5 new projects motivated either by new methods or ideas, or by critical changes in supply-demand relations of mineral and fuel commodities. Ground geologic and geophysical studies will be aided by about 30,000 line-miles of airborne surveys to help pinpoint targets and to aid three-dimensional projection of potential ore-bearing structures.

A large number of diverse field and laboratory research studies constitute the Geological Survey's work on geochemical and geophysical exploration. Geochemical and geophysical techniques developed and used by the Survey materially reduce the time and expense needed for preliminary investigation of potential mineral deposits.

Geochemical studies are aimed at developing new methods, instruments, and techniques to help find concealed mineral resources, with considerable emphasis on development of analytical methods that can be taken to the field to directly guide geochemical sampling and make results immediately available. Geochemical surveys delimit areas of anomalous concentrations of indicator elements, thereby pinpointing target areas for exploration by more costly methods.

Geophysical studies are designed to measure physical properties of the earth (magnetic, gravity, electromagnetic, radioactivity, seismicity, heat flow, etc.) derived primarily from beneath the surface, and to interpret these measurements in terms of geology. Wherever possible, pertinent geophysical surveys are made to obtain a better understanding of subsurface rocks and geologic relationships that will in turn help narrow target areas for potential mineral deposits.

(3) Upper mantle

The estimate for 1967 is $1,986,000, an increase of $9,000 over 1966. This increase is for increased pay costs.

Program of work.—Principal emphasis of upper mantle studies will be on—

The completion of the initial reconnaissance and compilation phase of the transcontinental geophysical survey. Plotting of geologic, gravity, aeromagnetic, seismologic, heat flow data, and the ages of the basement rocks will be completed on 1:1,000,000 scale base maps, and cross sections will be published by the Geological Survey in fiscal year 1967.

Detailed geologic and geophysical studies on crustal and upper mantle processes in tectonically active areas and on the nature of the continent-ocean basin interfaces.

Laboratory studies of the physical and chemical nature of the materials of the crust and upper mantle and their response to geologic processes operating on them.

The Geological Survey's upper mantle studies contribute to the international upper mantle project, a program of intensive research on the outer 600 miles of the earth which includes the earth's crust and upper part of the mantle. The program is a directed international cooperative effort to increase our knowledge of structure and composition of this outer part of the earth (upon which we depend for our mineral, fuel, and water resources) and of the geologic processes operating within it. Advancements in concepts of processes of rock and ore formation provide the fundamental understanding on which other Geological Survey programs such as mineral and fuel resources and earthquake and volcano studies are based.

The upper mantle project is an outgrowth of recommendations of the XII General Assembly of the International Union of Geodesy and Geophysics held in Helsinki in 1960. A total of 37 countries are actively participating in the program. In the United States a panel on solid earth geophysics of the National Academy of Sciences-National Research Council developed a coordinated 10-year Government-university program. The activities of the Geological Survey's upper mantle program are principally in the transcontinental geophysical survey (TGS) in direct response to their recommendations. The TGS is a transcontinental strip between the 35th and 39th parallels.

The Geological Survey has taken a leading role during the first 2 years of the U.S. program in the upper mantle project, working closely with the Upper Mantle Committee in compiling the principal geological and geophysical facts on a scale of 1:1,000,000 along the TGS. In addition to providing knowledge of the major geological features of this cross section of the United States, the compilation serves to highlight specific areas and problems where detailed Geological Survey studies will be most effective in furthering our concepts and understanding of geologic processes.

(4) Earthquake and volcano studies

The estimate for 1967 is $1,246,000, an increase of $6,000 over 1966. This increase is for increased pay costs.

Program of work.—A major geologic-geophysical investigation of the San Andreas fault zone in and southeast of San Francisco was initiated in fiscal 1966 for the purpose of increasing our capability to predict occurrence of earthquakes and to increase man's ability to live safely in earthquake zones. Closely linked to this effort is intensive research on volcanoes and related geologic phenomena, not only to provide a better understanding of geologic processes and principles vital to rock and ore formation, but also to enable warning and prediction of volcanic eruptions that threaten human life and property.

In fiscal 1967 major emphasis will be to (*a*) measure the physical properties of the ground that are important in designing earthquake-resistant buildings in the metropolitan areas along the San Andreas fault; (*b*) continue analysis of tectonic framework of the San Andreas fault system in conjunction with determining the amount of displacement that has occurred in historic time along these faults; (*c*) obtain the fundamental geophysical laboratory and field measurements needed to obtain a clearer insight into the properties and behavior of the earthquake zones of California, Nevada, and Alaska; and (*d*) expand the geophysical and geologic studies at the Hawaiian Volcano Observatory for the purpose of increasing our ability to predict eruptions and thereby reduce loss of life and property damage to these islands. Data from the Observatory

studies will aid in our western earthquake program and in other countries such as Costa Rica to reduce the catastrophic effects of volcanic activity.

Studies of the geologic record to interpret past crustal movements, and geophysical invesigations that measure current strain, heat flow, graviational and magnetic change, and deep crustal structure, are being integrated to detail the tectonic framework of the western part of the country, and the mechanics of faulting. Investigations underway of the engineering properties of surficial units and their relationships during earthquakes may enable an evaluation of the potential hazards related to various geologic environments.

Research on earthquakes is being concentrated on the San Andreas fault zone in and southeast of the San Francisco Bay area and extends north and west along the Seismic Belt, following the coast of the continent to Alaska and the Aleutian Islands.

(5) *Appalachia*

The estimate for 1967 is $690,000, an increase of $103,000 over 1966. The increase consists of—

(*a*) An increase of $3,000 for increased pay costs in the regular program.

(*b*) An increase of $100,000 to continue an accelerated program which was initiated late in fiscal year 1965 and continued through fiscal year 1966 with a supplemental appropriation of $400,000.

Need for increase.—The Geological Survey began late in fiscal year 1965 an accelerated program of geologic study consisting of (*a*) compilation of data on mineral and fuel resources; (*b*) regional geologic mapping to implement the purposes of the Appalachia Act (Public Law 89–4). The compilation, on a commodity basis, will cover all minerals of potential economic value, and is planned for completion during the first year (fiscal year 1966) of an originally proposed 5-year program. On completion of the mineral resource compilation, field studies will be directed toward those mineral resources that are liable to contribute most quickly to industrial development.

Current geologic map coverage of Appalachia is totally inadequate for a sustained planned program of economic growth, because only about 15 percent is covered by reliable modern geologic maps. To meet the real and growing need for basic geologic information a program of 1:250,000 (about 4 miles to the inch) geologic mapping is being undertaken as a first step in southern Appalachia. To enhance their value in economic planning and development, some of the geologic maps will be accompanied by overlays showing the location of construction materials geologic features bearing on construction problems, and areas favorable for the occurance of minerals and fuels.

The work planned must be accelerated substantially after fiscal year 1967 if it is to be completed within the originally conceived 5-year period and provide prompt economic stimulus concurrently with other parts of the President's program.

Program of work—Regular program.—The Geological Survey has long had a regular program of geologic study in many parts of Appalachia. This program currently includes (*a*) regional geologic mapping and related geophysical, stratigraphic, and structural studies in several areas, (*b*) special-purpose geologic studies of coal or oil-and gas-bearing regions of Pennsylvania, Virginia, Kentucky, and Tennessee, and (*c*) detailed geologic studies of mineral-producing districts in eastern Tennessee, western North Carolina, and northern Georgia and Alabama. These long-range studies have contributed, and will continue to add substantial new mineral and fuel discoveries to boost the Nation's economy.

Accelerated program.—The mineral resource surveys included in the accelerated Appalachia program are designed to provide the base for industrial development in Appalachia. Most of our national income comes from manufacturing and related activities, which in turn have their root in the utilization of minerals, fuels, and other basic raw materials. If Appalachia is to have a similarly high income, it is inevitable that it come from these same roots through industrialization. Appalachia is underindustrialized now, but fortunately it has the resource potential to support substantial industrial growth.

Regional geologic and geophysical studies are required to provide comprehensive up-to-date knowledge of the geologic and tectonic framework within which the Appalachian resource potential lies. A modern geologic map is the fundamental tool in the search for minerals, and we are preparing, as part of the accelerated program, 4 mile to the inch geologic maps for areas where no such

maps currently exist. Geophysical studies are in progress to help define geologic conditions in areas where soil and gravel cover the bedrock as well as to define broad zones that may contain hidden ore. Engineering geology studies are in progress also, which when applied together with the geologic mapping, will much reduce the cost of highway construction and other public works, and will guide wise land utilization. Because of budgetary restrictions, these engineering studies will have to be recessed in fiscal year 1967 and other vital studies will be curtailed.

(6) *Land-area planning*

The estimate for 1967 is $801,000, an increase of $5,000 over 1966. This increase is for increased pay costs.

Program of work.—In land-area planning (engineering geology), the geologic and geophysical data used in solving land utilization, rock behavior and urban development problems are acquired through detailed geologic mapping and geophysical surveys supported by laboratory research

For fiscal year 1967, these investigations will continue but with expanding emphasis on the use of geology in urban planning and in the development of new techniques for measuring and predicting the behavior of rocks under natural and manmade stress.

The distribution of rocks and their properties are vital to the judicious planning of land use in present and planned metropolitan areas. In fiscal year 1967 research on the application of geology and related earth science to such planning will be in progress in 12 metropolitan areas, including the Nation's Capital, and in 5 areas being developed for highway or flood control systems of direct concern to major cities.

Accomplishments to date in determining the behavior of rocks under stress have aided in reducing the cost of Government funded tunnel construction and in saving of lives in coal-mining operations. In fiscal year 1967 major support will be given to developing new instruments and means of analysis of geologic data in order to further reduce cost of excavating underground openings and to increase the safety of mining operations throughout the Nation. Additionally, these methods and techniques can be applied to study of mass ground movements such as landslides.

(7) *Wilderness area mineral surveys*

The estimate for 1967 is $308,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

Program of work.—The Wilderness Act (Public Law 88–577, Sept. 3, 1964) and accompanying conference report charges the Geological Survey and the Bureau of Mines with the responsibility for undertaking "planned, recurring mineral surveys" to determine the mineral values of lands in the wilderness system, and to appraise the mineral potential of primitive areas and the roadless areas and islands in the national wildlife refuges system and certain of the national parks. The wilderness system embraces some 9 million acres, and survey work must be completed enough in advance of the 20 year limit on prospecting to allow it to be used by the public and the responsible authorities. Studies of the primitive and the interior lands, about 5.5 million and 20 million acres respectively, are to be completed in 7 years. Not only is the acreage large and the time short, but many of the areas are complex and little known, increasing the task of making responsible, objective surveys. The modest start made in fiscal year 1966 must be substantially accelerated in subsequent years to complete the required appraisals within the time limit specified.

Because of the shorter time available for completion of mineral surveys of primitive areas, work has been undertaken first in 8 of the 34 primitive areas, including: San Rafael area, California; Flattop and Uncompahgre areas, Colorado; High Uintas area, Utah; Spanish Peaks area, Montana; Mount Jefferson area, Oregon; stratified area, Wyoming; and Northern Cascades area, Washington. In fiscal year 1967 work will be started in at least five or six more primitive areas.

These economic studies include geochemical sampling of rocks, fault structures, plants, soils, and water, for rapid spectrographic and wet chemical analyses. Where feasible and appropriate, mercury, beryllium, and silver detectors are being used, along with remote sensor and standard geophysical surveying techniques. Limited geologic mapping and related stratigraphic and structural studies are being done where necessary to provide a sound basis for mineral appraisal.

3. MINERALS EXPLORATION

The estimate for 1967 is $421,000, a decrease of $343,090 from 1966. The decrease consists of:

(1) A decrease of $356,258 due to availability of prior year unobligated balance.

(2) An increase of $2,000 for increased pay costs.

(3) A program increase of $11,168 resulting from doubling of number of applications for financial assistance.

Analysis of program

	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Financial assistance	$262,711	$843,742	$800,000	−$43,742		−$43,742
(b) Technical and administrative expenses	194,327	148,090	205,000	+56,910	+$2,000	+54,910
Total obligations	457,038	991,832	1,005,000	+13,168	+2,000	+11,168
Financing from prior year balance		−227,742	−584,000	−356,258		−356,258
New obligational authority	457,038	764,090	421,000	−343,090	+2,000	−345,090

[1] To provide for increased pay cost for fiscal year 1966 positions.

Need for increase.—Greatly increased interest in gold and silver has recently more than doubled the number of applications being received and processel. An increase of $54,910 is requested for "Technical and administrative expenses," to finance the inspections required by this increased demand.

It is contemplated that the financial assistance contracts will be held to $800,000, a reduction of $43,742 below the 1966 estimate.

Many of our essential minerals are in short supply. In recognition of this fact, the Federal Government has been providing financial assistance to private industry for exploration projects. This encouragement and assistance has been and will continue to be a vital factor in the discovery of important new sources of critical minerals.

Program of work.—Under Public Law 85–701 the Federal Government stimulates exploration by private industry for domestic sources of selected critical minerals by contracting to pay a specified part of the cost of the authorized exploration work. Federal funds provided under a contract are repaid with interest by a royalty on production from the property.

Under Government regulations, contracts are executed with firms and individuals for the exploration of new or unexplored sources of any of 35 mineral commodities. The Government underwrites 50 percent (75 percent for silver) of the cost allowed as reasonable and necessary for performing the work authorized by the exploration contract. The time limit for completion of contracts usually is less than 1 year and rarely exceeds 2 years.

Funds contributed by the Government are repaid with interest by a royalty on production from the property. If nothing is produced, there is no obligation to repay. A 5-percent royalty is paid on any production during the period the contract is in effect, and if the Government certifies that production may be possible from the property, the royalty obligation continues until the Government's contribution is repaid with interest, or for a specified period, usually 10 years.

Simple interest is calculated at a rate not less than the rate which the Department would be required to pay if it borrowed from the Treasury, plus a 2-percent charge in lieu of the actual cost of the Government of administering the contract. The rate has ranged from 5¾ to 6½ percent.

In addition to making loans, the Office of Minerals Exploration administers contracts remaining in force from the predecessor DMEA exploration program, including necessary periodic investigations to protect the Government's interest, and collection of royalties. Under the current OME program, it makes field

examination in connection with most applications, makes periodic inspections of work performed under its contracts, makes a thoroughgoing mine appraisal upon completion of contracts to determine whether certification of discovery should be made, and collects royalties and maintains surveillance of certified properties.

4. MARINE GEOLOGY AND HYDROLOGY

The estimate for 1967 is $862,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

Program of work.—The objectives of the marine program are to study systematically the geologic resources on and beneath the ocean floor, to extend seaward our three-dimensional knowledge of the Nation's land area, and to develop better insights for use in the search for and conservation of resources on land, many of which were formed beneath ancient seas.

The program emphasizes studies of the Continental Shelves and slopes bordering the United States. The shelves and slopes are divided into five major regions: the Atlantic, the gulf, the Pacific from California to Washington, Alaska, and Hawaii. For each region, we plan the program in four phases: (1) The assessment of existing knowledge, (2) collection of new samples and data, (3) laboratory and office study of the new material, and (4) synthesis of the new knowledge and publication of conclusions.

Emphasis of the marine program is on continuation of current joint investigations of the Atlantic Continental Shelf and slope with the Woods Hole Oceanographic Institution, Bureau of Commercial Fisheries, and other organizations. This program is in its fourth year and is scheduled for completion during fiscal year 1968. During fiscal year 1967, emphasis of this program will be placed on completion of field and laboratory investigations and on the preparation of final maps and reports.

The successful procedures established within the Atlantic program are applicable, with minor modifications, to studies of other regions. During fiscal years 1965 and 1966, efforts have been initiated at modest levels to undertake comparable investigations along the California to Washington coast and along the southeast coast of Alaska. Several universities along the west coast have expressed interest in joint operations related to their specific geographic areas of interest. The survey's fiscal year 1967 marine program for the west coast will incorporate these interests.

Studies of marine geologic processes that relate to potential earthquake hazards within the sounds of southeastern Alaska and along the coasts and within bays of California are in progress and will be coordinated with geologic studies on the Continental Shelf and slope. Coordination will permit many economies in the field operations, as, for example, shifting of operations from the shelf to the protected waters of the bays during periods of inclement weather. Detailed studies of San Francisco Bay, the most critical area, will be accelerated through joint arrangements with local universities.

Recent accomplishments.—The first phase of the Atlantic Continental Shelf and slope investigations has been essentially completed. Base maps, compiled from data obtained, from the Coast and Geodetic Survey and private institutions and the first reports on sediment distribution and mineral potential of the entire area, based on existing knowledge, were prepared and have been published. The maps will not only serve as a base for plotting results of subsequent geologic, biologic, and water investigations, but will be of basic interest to industry and to other organizations in planning programs and utilizing the shelf. A collateral synthesis and interpretation of data collected by the oil industry in coastal areas, which also has just been published, will have direct application to the search by industry for petroleum reserves off the Atlantic coast.

The second phase, to collect new samples and data is nearing completion. Published preliminary results of these investigations have focused attention on reserves of offshore sand and gravel and on possible extension of the large phosphate reserves of Florida beneath the Continental Shelf.

The third phase, laboratory and office studies of samples and data, and the fourth phase, the preparation of final reports, are underway. Descriptions of significant advances in analytic techniques and of computer programs to handle increased amounts of data produced by the more efficient techniques form the basis of several papers that have been published or are now in press. Published final results of the investigations have added to our knowledge of sea level changes during recent geologic time and their effects on the mineral and biologic resources of the Continental Shelf.

The Atlantic program, the first comprehensive survey of the geologic and biologic resources on and beneath an extensive region of the ocean floor, has gained wide recognition within technical circles and has been cited as an exemplary program of study that merits application to other shelf areas of the United States. The program is providing the geologic framework needed by industry to explore and exploit the mineral and food wealth of a large area that has recently been annexed to the United States through international adoption of the 1958 Geneva Convention on the Continental Shelves. The final results will apply in many other ways to man's utilization of the region, and to the development of water supplies and other resources of the adjacent coast.

The collection and assessment of existing knowledge for the gulf and west coast (phase 1) were begun during the spring of 1965 in anticipation of establishing a program comparable to that along the Atlantic coast. Initiation of field operations (phase 2) for the west coast, in cooperation with the University of California and Oregon State University, is scheduled for the spring of 1966.

Following the Alaskan Good Friday earthquake of 1964, the Survey began studies of earthquake-triggered submarine slides which, by generating high local waves, caused much damage and loss of life along nearby coasts. Field studies completed during the past summer provided information that explains the cause and effects of the slides. This new knowledge is now being applied directly to evaluation of potential hazards resulting from earthquake-triggered geologic processes along the southeast Alaskan coast and in the San Francisco Bay area of California.

5. WATER RESOURCES INVESTIGATIONS

The estimate for 1967 is $23,816,000, an increase of $1,197,000 over 1966. The increase consists of:

(1) A decrease of $200,000 for the nonrecurring costs of channel clearance on the Gila River.

(2) A decrease of $113,000 representing priority adjustments.

(3) A decrease of $696 for payments to the Bureau of Employees' Compensation.

(4) A net decrease of $9,000 for pay costs, including $179,000 gross increased costs for fiscal year 1966 positions, less $188,000 nonrecurring financing in 1966 of the States' share of such costs.

(5) An increase of $1 million in the Federal-State program to match State offerings.

(6) An increase of $519,696 in the Federal program.

Analysis by subactivities

	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Federal program (obligations)	$9,662,997	$11,007,750	$10,911,157	−$96,593	+$65,000	−$161,593
Unobligated balance available, start of year	----------	−368,289	----------	+368,289	----------	+368,289
Unobligated balance available, end of year	+368,289	----------	----------	----------	----------	----------
Total Federal program (NOA)	10,031,286	10,639,461	10,911,157	+271,696	+65,000	206,696
(b) Federal-State program	11,164,053	11,924,000	12,850,000	926,000	−74,000	+1,000,000
(c) Employee compensation payments	70,409	55,539	54,843	−696	----------	−696
New obligational authority	21,265,748	22,619,000	23,816,000	+1,197,000	−9,000	+1,206,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

Program objectives.—The overall objectives of the Geological Survey's program of water resources investigations is to provide reliable, adequate, and timely water facts as a basis for rational water use, water development, and water planning. The activities necessary for that purpose are widely varied but, in essence, they concern several basic questions:

How much water does the Nation have in its rivers, lakes, estuaries, ground-water reservoirs, and glaciers?

What is the geographic distribution of these resources?

What is the time-variability of the resources, both short term and long term?

How much of the water is actually available for use at given times and places?

What is the physical and chemical quality of the water resources in terms of dissolved minerals, contaminants, and suspended sediments?

What is the pattern and magnitude of actual water use in the Nation?

What effects will alternative uses and management of water have on the quality, utility, and availability of water resources?

What are the impacts on the national water economy of extreme hydrologic events, namely, floods and droughts?

In order to answer these questions the Survey collects basic data in accord with rigorous standards of accuracy; analysis and interpretation of the data transforms them into information that is useful to water users, water developers, water planners, and students of water and water problems. The Survey also does research in order to improve its ability to carry out its basic responsibility to provide water facts for the Nation's future.

(*a*) *Federal program*

The estimate for 1967 is $10,911,157, an increase of $271,696 over 1966. The increase consists of—

(1) A decrease of $200,000 for nonrecurring costs of channel clearance on the Gila River;

(2) A decrease of $113,000 representing priority adjustments;

(3) An increase of $65,000 for increased pay costs;

(4) An increase of $200,000 for coordination of Federal collection of water data;

(5) An increase of $225,000 for accelerated flood-plain mapping in Appalachia;

(6) An increase of $56,696 for studies of drought-related problems; and

(7) An increase of $38,000 for U.S. participation in the International Hydrological Decade.

Analysis of program components

Program component	Fiscal year amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−) 1967 compared with 1966		
			Total	Pay cost	Program
1. Coordination of Federal collection of water data	$214,000	$420,000	+$206,000	+$6,000	+$200,000
2. Basic data collection and analysis	2,561,000	2,516,000	−45,000	+12,000	−57,000
3. Regional water resource studies	269,000	270,000	+1,000	+1,000	
4. Analysis of water resources of basins	583,400	586,400	+3,000	+3,000	
5. Analysis of lake resources and problems	146,000	147,000	+1,000	+1,000	
6. Flood and drought problems	143,000	432,696	+289,696	+8,000	+281,696
7. Development and application of modern scientific methods	668,500	671,500	+3,000	+3,000	
8. Research on data use and automatic data processing	461,100	463,100	+2,000	+2,000	
9. Research on basic hydrological principles	2,585,461	2,542,461	−43,000	+13,000	−56,000
10. International Hydrological Decade	165,000	205,000	+40,000	+2,000	+38,000
11. Education and training	604,000	608,000	+4,000	+4,000	
12. Publication and support	2,039,000	2,049,000	+10,000	+10,000	
13. Nonrecurring items (obligations)	568,289		−568,289		−568,289
Unobligated balance available, start of year	−368,289		−368,289		+368,289
Total nonrecurring items (NOA)	200,000		−200,000		−200,000
New obligational authority	10,639,461	10,911,157	+271,696	+65,000	+206,696

(1) Coordination of Federal collection of water data

The estimate for 1967 is $420,000, an increase of $206,000 over 1966. The increase consists of:

(*a*) An increase of $6,000 for increased pay costs.

(*b*) An increase of $200,000 for program expansion.

Need for increase.—Bureau of the Budget Circular A–67 requires that Federal water-data collection activities be coordinated on a national scale, and responsibility for coordination has been assigned to the Geological Survey. The amount allocated to this activity in fiscal year 1966 was small because at the time the budget was prepared neither the full costs of new responsibilities nor the rate at which they could be assimilated could be foreseen accurately. The scope of the task is now clarified.

Program of work.—Coordination will involve (*a*) identification of needs among Federal agencies for specific kinds of water data, including their needs in common; (*b*) liaison with Federal agencies to determine current needs for water data; (*c*) canvass of water-data collection activities and plans of Federal agencies; (*d*) designation of a national water-data network[1] chosen from existing data stations of Federal agencies; (*e*) design of a more adequate network to be filled out as time and funds permit; (*f*) preparation and maintenance of a national catalog of water information; (*g*) preparation and promulgation of agreed-upon standards for data collection; (*h*) preparation of successive annual plans for water-data acquisition; (*i*) storage and retrieval of national network data and of information about other data; and (*j*) furnishing data and data-analysis services to those who request them.

In all these activities the Survey will be assisted and guided by the Federal Advisory Committee on Water Data and the Advisory Committee on Water Data for Public Use.

Coordination of data collection will be accomplished by maintenance and operation of the Survey's Office of Water Data Coordination; study, design, and establishment of data-storage and retrieval system; and provision of services to other agencies and to the public. Work in fiscal year 1966 consists of long-range planning, delineation of data standards, compilation and review of information about data collection, refinement of methods for network design, preparation of a manual on network design, and liaison with Federal agencies.

Volume of use of the data-coordination services cannot be estimated by so-called market surveys because experience shows that, once a data system is provided and its value recognized, use surpasses expectations of users themselves. Currently, about 40 percent of all data requests received by the Survey go to its Current Records Center in Portland, the only field center that is equipped to furnish current information quickly.

Long-range program.—In view of increased planning activities at all levels of Government, the potential service of water-data coordination is very large. It is anticipated that costs for this program will approach $1.5 million by 1970.

(2) Basic-data collection and analysis

The estimate for 1967 is $2,516,000, a decrease of $45,000 from 1966. The decrease consists of:

(*a*) A decrease of $57,000 representing priority adjustments in the program of automatizing streamgaging stations.

(*b*) An increase of $12,000 for increased pay costs.

Program of work.—This program component consists of operation and maintenance of the Federal part of the national data network of stations for streamflow, ground water, water quality, and sediment movement; it also includes special analyses and compilations of data and procurement of digital recorders for replacement of outmoded strip-chart recorders. Replacement of additional recorders is essential in connection with data-coordination activities and increasing numbers of requests for current data. This program component includes a large volume of automatic data processing, which will be described more fully under component (8) in explanation of the need for research on data use and automatic data processing.

Long range program.—In view of the accelerating tempo of water development and construction throughout the Nation, expansion of the national data network is essential. This is especially true because river-basin planning commissions will demand more data and increasingly accurate forecasts of streamflow, water

[1] The "national network" will not be a "Federal network." More than three-fourths of the Survey's network, for example, is maintained under the Federal-State program.

quality and ground-water storage. Anticipated need for expansion in this program component will entail a rise to $3 million by 1970 to improve the network and to provide more data.

(3) *Regional water-resource studies*

The estimate for 1967 is $270,000, an increase of $1,000 over 1966. This increase is for increased pay costs.

Program of work.—This program component includes about a dozen projects, each involving about 1 man-year annually of high-level professional effort plus supporting services by professionals, technicians, clerks, and secretaries. One group of projects consists primarily of studies of the water-bearing and water-yielding properties of given types of rocks that are widespread and have special or unique properties. Classical ground-water hydrology, for example, dealt largely with porous granular rocks such as alluvial sand and gravel. Other rock types have quite different properties. Examples are limestone, basalt ("lava"), crystalline rocks (granite, schist, etc.) and rocks containing mineral deposits and ore bodies (coal-bearing rocks; iron-ore bodies).

Long-range program.—Looking to the future, there will be steadily increasing demand for evaluation of the hydrological effects of land-management practices, overall evaluation of regional ground-water aquifers, and studies of lithologic terranes. Expansion of this activity to about $500,000 by 1970 would seem to be reasonable.

(4) *Analysis of water resources of basins*

The estimate for fiscal year 1967 is $586,400, an increase of $3,000 over 1966. This increase is for increased pay costs.

Program of work.—Studies of basin water resources in fiscal year 1966 and earlier years are aimed specifically at important regional water problems, but some are also exploratory—attempts to devise new and more comprehensive approaches to the study of water in all its aspects (surface, underground, quality) as a single resource. The principal basins under investigation in fiscal year 1966 are the Lower Colorado River Basin, the Brazos River subunit of the Permian Basin, the Mississippi Embayment, Potomac River Basin, and Delaware River Basin.

Long-range program.—Owing to increasing necessity for regional and basin-wide planning of water use and development, mounting demands will call for an increase in this program component to about $1 million by 1970.

(5) *Analysis of lake resources and problems*

The estimate for 1967 is $147,000, an increase of $1,000 over 1966. This increase is for increased pay costs.

Need for studies.—Natural and manmade lakes have received little detailed study in the United States. The citizen regards them as static water bodies and hydrologists all too commonly treat them as wide or deep places in rivers. The storage value of lakes is common knowledge, but the special kinds of water problems that arise in lakes have been neglected. The hundreds of thousands of natural lakes and impoundments which dot the American landscape have great value as streamflow regulators, water supplies, wildfowl habitats and resting grounds, and recreation centers. A few large lakes in North America contain about one-fourth of all the fresh surface water in existence. Much of this is in the Great Lakes, aggregating 5,500 cubic miles (about 6 quadrillion gallons)—about 15 times the amount of water discharged to the sea annually by all rivers in the United States.

Because of increasing demands on all water resources, both the natural behavior of lakes and their responses to human activities are increasing in importance. Lakes go through natural "aging" processes which involve gradual accumulation of vegetation until oxidation of decaying organic matter consumes all available dissolved oxygen, especially in the deeper water, and renders the lake a dead and offensive water body. Domestic, agricultural, and industrial wastes hasten this process. Many small lakes have been damaged and even Lake Erie has been polluted to the extent that the water supplies, residential and public property, commercial fishing, wildfowl, recreation, and shipping have deteriorated seriously.

The growing importance of lakes and lake problems is so general that the Water Resources Committee of the Office of Science and Technology recommended unanimously in 1965 that Federal effort be at least doubled in fiscal year 1967 and maintained at that level or higher during perhaps a decade. It

also agreed that the U.S. Geological Survey should play a lead role in investigating the behavior of these water resources.

Program of work.—The Survey's work on lakes heretofore has consisted of collecting basic data on about 1,500 lakes and reservoirs (chiefly in cooperation with States) and doing research on three or four projects each year to deal with specific problems. Basic data measurements apply chiefly to water levels, water volumes in storage, sediment accumulation, and evaporation losses. These are the more important data for lakes which have no serious water quality problems. Where important problems exist, other data and research are essential.

Survey research on lakes is concentrated on evaporation, water quality, controls on stratification, lake dynamics (circulation patterns), thermal loading, and relations between the lakes, adjacent ground water, and tributary rivers.

Long-range program.—Lake studies by the Survey should rise to $500,000 in fiscal year 1968 and to $750,000 by 1970, being maintained at that level or higher beyond 1970 until reasonable mastery has been achieved of the host of problems in lakes, large and small.

(6) *Flood and drought problems*

The estimate for 1967 is $432,696, an increase of $289,696 over 1966. The increase consists of:

(*a*) An increase of $8,000 for increased pay costs.
(*b*) An increase of $225,000 for flood-plain mapping in Appalachia.
(*c*) An increase of $56,696 for studies of drought-related problems.

Need for increase.—The increase includes $225,000 to cover flood hazard mapping in Appalachia, as recommended by the Appalachian Regional Commission, and $56,696 to make drought-related studies in order that the Nation may be better prepared for the droughts that periodically plague the continent. Emphasis in the latter item will be on low-flow and water-quality forecasting, with special attention to the Northeast.

Program of work.—Floods: For every river that is in flood at a given time, hundreds of other rivers are not in flood. To most people, therefore, floods seem to be abnormal events. However, floods are normal aspects of river behavior. Therefore, floods are statistically predictable, in terms of frequency and height, on the basis of long-term records. The Mississippi River flood of 1965, for example, had a height of 25.9 feet and maximum discharge of 172,000 cubic feet per second at St. Paul. Estimated damage from the flood was about $140 million in the Mississippi Valley and $80 million in Minnesota alone. Statistical analysis of streamflow records shows that the recurrence interval of Mississippi floods of this magnitude is about 100 years. This does not mean that no similar flood will recur during the next 100 years. An equivalent flood could occur next year. It does mean that, on the average, during a long period of time, equivalent floods will occur in about one year out of 100.

Although absolute prediction of the time, place, and magnitude of floods is impossible, statistical prediction has great value to planners and to authorities who may wish to establish flood-plain zoning or to use flood probability data for other purposes. Flood data and flood-frequency studies are used throughout the United States in connection with the design of dams, spillways, levees and other protective works, highways, bridges, public buildings, and many other activities.

One objective of the Appalachian regional program is to foster and encourage industrial and business development that will provide employment in selected growth areas for the inhabitants of the surrounding areas. In order to attract private capital there must be the best possible assurance of freedom from hazards such as that presented by floods. This requires either zoning or flood protection works or both. Flood plain mapping together with estimates of the frequency and depth of flooding in various parts of the area are essential both to intelligent zoning and to the design of protective works.

A preliminary list of 47 areas has been prepared by the Appalachian Regional Commission, which will be used in planning the investigations to be made under this item in 1967, 1968, and 1969 fiscal years.

Many of the selected growth areas are at the junction of two streams because of the wider flood plain area normally available in such places. There is a strong possibility that the flood frequency and flood intensity pattern of the two streams will be different and will require careful hydrologic analysis. This is particularly true in those instances where one of the two streams has a drainage area of only a few square miles so that it is subject to cloudburst-type of flooding. As

a part of the program a special analysis will be made of the frequency of flooding on small drainage areas in and adjacent to the region with a view to providing information that will be useful in the design of flood protection works along and bridges over such streams.

An essential element in the overall planning for the development of any community is its water supply. Water supplies in Appalachia are related to the streams and flood plain deposits. Their location and protection is an essential part of community planning for growth. Particular attention will be paid to existing water supply facilities and to areas of potential water supply development in the growth areas being mapped. Some sources of public water supply will be located outside the areas being mapped and may or may not be considered in the studies here proposed depending upon individual circumstances. Others, particularly developed and undeveloped sources of ground water within the boundaries of the growth areas, will be studied in considerable detail where appropriate because of the importance of such local supplies as a catalyst to industrial growth.

The benefit-cost value of flood studies seldom can be specifically identified. For example, in the design of a flood-control dam, the designer estimates how much the dam will reduce the flood crest. He then calculates the monetary value of the damage that will be averted, determining a benefit-cost ratio by comparing cost of averted damage with cost of construction. But neither the construction cost nor the savings could be estimated without the use of sreamflow data and flood data. These data tell the designer what floods may be expected and how often, and what downstream effect the dam will have on the flood.

The estimated total cost of flood-control structures in the United States is $6,240 million. The estimated annual benefits in averted damages is $610 million. Construction-cost savings attributable to adequate flood-frequency studies have been estimated to be approximately 10 percent, or a total of more than $600 million for existing flood-control structures. Similarly, flow data obtained during a flood provide the basis for operation of reservoirs, flow routing and other procedures to get the maximum flood-abatement advantage under the changing conditions that exist during a given flood. The Survey's flood studies annually save the Nation at least $50 million, according to a conservative estimate.

Droughts: A flood is a spectacular event, but a drought is less an event than a situation. It is a situation, moreover, that commonly develops slowly and insidiously, seldom being recognized by the general public until it has reached full-blown proportions. The current situation in the Northeast was predictable as an event though not in absolute time. It is an emergency only because it was not adequately provided for in plans and development.

The costs of adverse effects of drought cannot be computed accurately because relatively few effects can be evaluated specifically. One identifiable item is emergency expenditures for supplemental water supplies. Emergency expenditures by the Federal Government in Northeast probably will be at least several million dollars. The problem of where and for what purpose these funds should be spent has been solved expeditiously, due in part to the Survey's knowledge of the true nature of problems and of the locations of additional water supplies.

The importance of drought studies can hardly be overemphasized, and streamflow and ground-water investigations are part of these studies. Lack of rain affects immediately and directly the growth and well-being of vegetation, including agricultural crops. Rainfall records thus are an index of what might be called agricultural drought.

Streamflow is much less variable than rainfall. Perennial rivers, for example, continue to flow during long rainless periods, though flow may be drastically reduced during drought. Most rivers continue to flow because they are fed by ground water, but depletion of ground water leads to depletion of streamflow. Data on streams and ground water are indexes of what may be called hydrological drought. Records of hydrological drought are direct measures of water availability at given times and places. Furthermore, current and historical records can be used to predict future low flows under varied sets of conditions. Such predictions must be made continually during low-flow periods for several purposes: Prediction of water supplies available for use; prediction of flows available for dilution and conveyance of wastes; prediction of storage changes in reservoirs; prediction of water-quality characteristics; and many other purposes.

The United States has a poor record of foresight and preparation for inevitable droughts. The reason is that support for drought studies has been desultory.

During periods of good water supply, interest in drought dies. During drought, interest is chiefly in emergency measures to avert or alleviate water shortages. Following the great drought of the 1930's, the soil conservation program of the Department of Agriculture was inaugurated, and work in this program undoubtedly is responsible for alleviation of dust-bowl conditions, especially during the great dought of the 1950's. Nevertheless, the work in that program has been hampered by lack of accurately quantitative data on hydrologic aspects of drought and on the effect on water supplies of various land- and water-conservation measures.

The Geological Survey's program for drought study has been deficient throughout its history. Following the drought of the 1930's the Survey published a report on that drought. A comprehensive report on drought in the Southwest in general was published recently. A report on the drought of the 1950's with special reference to the midcontinent area, has just been published. The Survey also has made low-flow studies for various basins. Desultory work of that kind will not be adequate to cope with drought problems of the future because, the more highly developed is the Nation the more severe is the impact of drought. In an advanced state of development even mild drought will have serious economic and social impact.

Long-range program.—In addition to funding in 1968 and 1969 for studies in Appalachia, the continuing nationwide flood and drought problems must be faced, and it is recommended that funds for these purposes rise to $0.5 million by 1970. Work should include (a) flood-frequency studies for areas where floods are important factors and where new data and improved methods will permit derivation of definitive results; (b) improved hydrological basis for estimating maximum probable floods; (c) low-flow studies and forecasts for basins and areas where low flows are chronic problems in relation to water supply and waste dilution; (d) location, magnitude, and availability of emergency or supplemental water supplies in areas that are especially vulnerable to drought; and (e) studies of the impact of drought on the national economy.

(7) *Development and application of modern scientific methods*

The estimate for 1967 is $671,500, an increase of $3,000 over 1966. This increase is for increased pay costs.

Scientific knowledge is advancing rapidly, and many new scientific methods can be adapted to obtain more information about water, to improve the accuracy of data, and to make more complete analyses of data. The Geological Survey continually tests new ideas and methods for doing its work better, faster, more efficiently, and more completely. Some new methods save man-hours and dollars, but others actually raise overall cost simply because they make it possible to do things that otherwise would not even be attempted.

Methods currently under study or use include analog and digital computers, ultrasonic waves, radiochemistry, airborne measurement of evapotranspiration from large areas, airborne infrared imagery and photography, borehole geophysics, underwater television, automated data storage and retrieval, and remote-sensing devices aboard aircraft and satellites. Uses of analog and digital computers will be discussed under component "(8) Research on data use and automatic data processing."

Long-range program.—The Survey does not plan to expand this program component within budget limitations, but it will be necessary to continue a vigorous program of scientific development in order to improve our ability to provide accurate information on water resources and to do this rapidly and efficiently. Assuming that continued effort will be as successful as that in the past, this component should expand to about $800,000 by 1970.

(8) *Research on data use and automatic data processing*

The estimate for 1967 is $463,100, an increase of $2,000 over 1966. This increase is for increased pay costs.

Program of work.—Automatic data processing (ADP), chiefly by electronic methods and models, is a major activity in the Water Resources Division. The ADP system includes data storage and retrieval as well as computations for many kinds of analytical, interpretive, and research projects of the Survey. However, this program component includes only research and studies on new or extended applications of ADP in water resources investigations. Data storage and retrieval and computations, carried on as a service to field offices and research projects, are paid for out of project funds. The following discussion illustrates the importance of research and development on ADP.

The purposes of ADP are to handle data quickly and to make them available for use promptly; to release personnel from tedious, repetitive computations, thus permitting them to accomplish more work per man-hour and to make advanced studies for which they would otherwise have no time; and to make specialized analyses of data in order to extract more and better information from them.

ADP begins in the field. Thus far, ADP field equipment has been applied only to surface water, including its chemical quality and contaminants. No immediate need is apparent for field automation of ground water observations except in some special cases. Ground water data will, of course, be coded manually and included in the ADP system.

Recent accomplishments.—Surface-water data: The basic field instrument for surface-water data is a 16-channel tape-punching recorder, the punches on the tape being ended to represent a gage height or a chemical quality characteristic of the water. The punched tape, after removal from the recorder, is put through a converter in a national data center where it is converted to code on magnetic tape. This tape is then put in a computer which analyzes the data, and prints out rating curves, gage heights and discharges for streamflow, and chemical tables for water quality. The computer can be programed also to make many kinds of analyses and manipulations of the data.

The Geological Survey is the only organizaton in the world that has automated stream gaging on a large-scale production-line basis, having pioneered this kind of operation by working closely with manufacturers of equipment. After a trial period of several years with pilot models at selected locations, design deficiencies were corrected and 100 digital recorders were installed in 1960. The equipment has proved its utility through time and use, and 2,500 field units were in operation by the end of fiscal year 1965. An additional 1,000 instruments will be installed in fiscal year 1966. Plans call for 6,000 automated stations by the end of fiscal year 1970. Following is a summary of progress in field automation (left and middle columns) of stream gaging, compared to recommendations of the President's Water Policy Commission in 1956 (right column) concerning gaging-station requirements for the Survey's national network.

Fiscal year	Gaging stations in operation	Digital recorders in operation	Recommended number of stations
1955	6,860	0	
1956	6,910	0	6,850
1960	7,305	100	8,700
1965	8,100	2,500	9,900
1968	[1] 8,400	[1] 3,500	10,100

[1] Estimated.

Manual computation of streamflow records, including office and fieldwork, costs on the average $590 per station-year of record. Based on processing of records from 2,000 automated recorders, automated computation costs $540 per station-year. With about 35 percent of stations automated in 1965, the savings averaged 30 man-hours and $40 per station-year, or a total of 42 man-years and $100,000. The plan for 1,000 additional stations in 1966 will save about $25,000 and 5 man-years. These economies and improved efficiencies are examples of the justification for continued research and development on data use and automatic data processing.

These savings in dollars and man-years do not lead to reductions of budget or manpower. Rather, they have permitted the Survey to carry out its new and expanded work with smaller increases of funds and manpower than would have been necessary otherwise. They have also permitted us to absorb costs of some emergency and other unscheduled activities.

Water-quality data: Automatic recording of water-quality data has been accomplished only on a small scale but this will have to be increased in the future as the demand rises for current data to be put in the hands of water users immediately. Continuous sensing and automatic recording is desirable for observations of critical parameters of river quality—hydrogen-ion concentration, dissolved oxygen, dissolved solids, temperature—where information about momentary fluctuations in quality is essential to water users and water managers.

Single or multiple "sensors" are now operating at a few river stations and digital recording is being developed in a unified system of water-quality recording.

Automatic recorders now in use for water quality are still mostly strip-chart recorders from which data must be extracted by visual-manual methods. This is a considerable advance over older methods of periodic water sampling and laboratory analysis, but a further step is necessary: conversion from strip-chart recorders to the digital recorder. The recorder used for this purpose is the same as that used for stream gaging.

At the beginning of fiscal year 1966 only six digital recorders were in operation for monitoring water quality. These have proved so useful, however, that field requests for additional instruments are accumulating and demands exceed the rate at which they can be supplied.

The digital-recorder system for monitoring the four parameters of temperature, dissolved oxygen, hydrogen-ion concentration, and specific conductance costs about $750 per unit. This is a considerable saving from the $2,400 per unit for commercially available strip-chart instruments. The latter, moreover, do not record the data in a form that can be used directly for automatic data processing. The financial "saving," of course, does not lead to a surplus of funds. Rather, instead of purchasing one $2,400 instrument, we can purchase three $750 ones. This, however, pays dividends by eliminating the need for manpower to make visual-manuel transfer of data from strip charts to tables or cards.

Data-processing procedures have been developed for recording four water-quality parameters at 15-minute intervals. Tests of procedures show that any desired number of parameters may be recorded at 15-, 30-, and 60-minute intervals. These can be transferred to magnetic tape in a rapid-access storage and retrieval system and for any desired summation or analysis. These procedures will eliminate tedious and time-consuming methods of visual-manual extraction of data, manual computation and summation of values, and manual preparation of data for computer input. Ordinary methods for extracting data for four water characteristics at 15-minute intervals from strip charts require 2 man-days per year of record. The same data from a digital recorder can be processed in about 2 man-hours.

Electronic and mathematical modeling: Electrical analog models simulate ground-water and surface-water environments as well as interrelations between them. Models permit thorough and rapid analysis of hydrological systems, including details and complexities that would be unmanageable by ordinary methods. They also permit prediction of the effects of changes in available water resources caused by natural events and by water development, urbanization, industrialization, and other factors. An example is the Houston area analog with which 20- to 30-year predictions of ground-water use effects have been made.

Analog-model costs include the cost of design and the cost of construction. Design cost ranges from a few hundred dollars for a simple model to some tens of thousands of dollars for a complicated one that requires improvement in the state of the art. Construction costs vary widely according to the complexity and size of the study area, the scale of the model, and its degree of detail. Costs, however, are low compared to costs for traditional methods of analysis, usually ranging between a few hundred and a few thousand dollars per study area. Use of analog models saves innumerable man-hours of work with slide rules and desk calculators. The number of man-hours saved cannot be accurately estimated because the saving is cumulative: (*a*) an initial saving in the main project study; (*b*) successive savings because the model is retained permanently and used and modified as water development continues and new information accumulates; and (*c*) a bonus because with the analog the hydrologist can make studies and tests which would be extremely difficult or impossible by ordinary methods.

Use of digital computers in the Survey has been largely for fairly conventional analyses of data, the computer serving to save man-hours, speedup analyses, and to make more thorough analyses. Preliminary work with mathematical models and computers shows, however, that use can be much broader. Computers and analogs are mutually complementary and the Survey is currently at work to make combination studies, using computer and analogs jointly.

The theory of analog and digital models was developed largely in the Federal program. Construction and use of models for specific areas under investigation in the Federal-State program is done by the Survey's modeling unit at the expense of the program receiving the service. Field use of models raises new hydrological questions and problems for analysis in models and computers. Refinement of theory and testing of increasingly sophisticated models is done at Federal expense.

Long-range program.—Although no increase is requested of funds for automatic data processing research and development in fiscal year 1967, lag in development of data processing and modeling of hydrological systems will impair the Survey's ability to meet demands for water studies. The program already lags behind recommended goals. Operational goals call for automation of 7,500 gaging stations and 500 quality stations by 1970. This will be paid for out of field-project funds. Meantime, fiscal support for research and development should rise to at least $600,000 by 1970.

(9) *Research on basic hydrological principles*

The estimate for 1967 is $2,542,461, a decrease of $43,000 from 1966. The decrease consists of:

(*a*) A decrease of $56,000 representing priority adjustments of research projects.

(*b*) An increase of $13,000 for increased pay costs.

Program of work.—This program component complements component (7), "Development and application of modern scientific methods" (page GS–124) both directly support the operational program of water resources studies. The work must be maintained in order continually to strengthen studies of man-induced changes in the availability and quality of water supplies, including effects of urbanization, diversion, and storage of water, and waste management. The aim of research on hydrological principles is to improve human ability to deal with water problems. This program component includes a significant amount of work on river estuaries which will lead to establishment of a program component on estuaries, probably in fiscal year 1968. Also included in this component is the Survey's work on hydrological principles applicable to ground water management.

Little or none of the Survey's water research is "pure" in the classical sense for the simple reason that research projects generally arise from specific practical problems whose solution requires new knowledge or methods. Not many research projects lead to spectacular results in the popular sense, even though the findings may have widespread fundamental impact on the methods and concepts of hydrology and the practices of water management. Also, the easy problems in hydrology have been solved. Remaining ones remain because they are extremely difficult. However, a few examples illustrate that research does pay off in a practical way.

Long-range program.—Lack of an increase in the proposed financing for this program component in fiscal year 1967 does not imply that this activity should remain static. Operational goals of the Geological Survey, and of other agencies that apply hydrological principles in water studies, will be retarded without a broadened and vigorous program of basic studies. Fiscal support of this program should increase to about $3,500,000 in 1970.

(10) *International hydrological decade*

The estimate for 1967 is $205,000, an increase of $40,000 over 1966. The increase consists of:

(*a*) An increase of $2,000 for increased pay costs.

(*b*) An increase of $38,000 for program expansion.

Need for increase.—The international hydrological decade (IHD) is a 10-year program of international cooperation in scientific and applied hydrology. The small increase in IHD funds for fiscal year 1967 will be used to begin and extend specific programs needed to establish the U.S. part of the program on a scale commensurate with the Nation's leading role in hydrology and to provide information ttha will improve understanding of North American and global water resources. Enlargement of our scope of understanding is essential in order to determine and collect the kinds of data and information that will be needed for large-scale water development and planning in the United States and elsewhere.

Program of work.—The IHD was conceived and instigated by American hydrologists in collaboration with the Federal Council for Science and Technology. The idea was carried forward by the National Academy of Sciences—National Research Council (NAS-NRC), the American Geophysical Union, and the International Association of Scientific Hydrology. The U.S. Department of State advanced the idea further through the United Nations Educational, Scientific, and Cultural Organization (UNESCO). International Planning meetings, sponsored by UNESCO, were held in 1963 and 1964. Seventy-nine nations have joined the program, which began in January 1965. UNESCO has appointed

an International Coordinating Council, of which the United States is a member, and the Council held its first meeting early in 1965.

In this program, each participating country is responsible to organize and finance its own activities. Each country has a national coordination committee, and the U.S. committee, appointed by the NAS-NRC, has 21 members from research institutions, universities, and Federal agencies.

The White House has issued five news releases stressing the theme of international cooperation, and has proclaimed U.S. participation in the international cooperation year (1965), commemorating the 20th anniversary of the United Nations Organization. In a speech at Worcester, Mass. on June 10, 1964, the President expressed hopes for building a great world society and, referring to the ICY, said:

"I propose to dedicate this year to finding new techniques for making man's knowledge serve man's welfare. Let this be the year of science."

On August 1, 1964, the President met with his science adviser to discuss plans for the IHD. According to a White House press release on that date, the President pledged support of the program by Government agencies, and urged universities and scientific societies to participate. In October, the President initiated the water for peace program. The water for peace and IHD programs are being coordinated to eliminate duplication of services and to provide the optimum results desired by the President for "a massive cooperative international effort to find solutions for man's water problems."

The IHD program also was endorsed by the National Citizens' Commission Committee on Science and Technology in its report for the White House Conference on International Cooperation, November 28–December 1, 1965.

The proposed total U.S. program for the initial stage of the IHD is described in detail in a program report promulgated by the NAS-NRC early in calendar year 1965. This report has been reviewed by more than a hundred scientists in the United States, by scientists in foreign countries, and by the technical secretariats of UNESCO, the Food and Agriculture Organization, World Meteorological Organization, and several international scientific agencies. The program report received final review by the U.S. National Committee on September 21–22, and the Committee is now drafting a definitive program report.

The Survey's IHD projects are in program components to which the National Committee and the International Council have assigned high priority. These projects are of three kinds, as described below.

Ongoing activities which have international significance: These will be declared as contributions to the IHD. An example is the national transects and network of hydrological benchmarks which have been widely acclaimed at home and abroad as being among the more important of recent ideas, not only for international cooperation, but also for hydrology itself. This is the first time in history that a systematic program has been instigated to discriminate long-term variations in hydrologic regimes caused by variations in environmental phenomena that determine these regimes. The Survey is coordinating its share of this activity with parallel work of the Weather Bureau and other agencies through the National Committee for the IHD. Establishment of hydrological benchmarks in areas that have not been modified by man and will not be modified in the near future is essential for discrimination of the effects of man in other areas. Hydrological benchmarks are to hydrology what topographic benchmarks are to topographic mapping—the essential reference base to which other things may be compared.

Extensions of on-going activities: In extended form certain activities will contribute to the IHD. An example is the determination of continental water balances. The first phase of this project is to determine the total amount of water discharged by rivers to the sea. Much of the basic information already is available for principal rivers in the United States, and this will be compiled. Ungaged discharge from small streams will be estimated by standardized methods to compute the total. At the request of UNESCO, the United States is formulating a manualized guide for making such estimates. UNESCO will promulgate the guide and stimulate other nations to make similar estimates. For example, UNESCO currently is organizing liaison with South American countries to prepare water-balance estimates. Canada is undertaking similar studies. When all principal countries have made such compilations, hydrologists will have for the first time a reasonably accurate inventory of the world total of river-water resources. Direct-measurement data currently available are believed to account for only about 40 percent of the water discharged by rivers to

the sea, and thus current estimates of the total may be badly in error. For example, the Amazon, largest river in the world, had never been measured accurately until 1963–64, when measurements showed it to be nearly twice as large as had been supposed.

Later stages of the project will concern discharge of dissolved and sediment load by rivers to the sea, submarine discharge of ground water, and income to the continents of dissolved and entrained materials in precipitation (in collaboration with the Weather Bureau). Finally, compilation of these data will provide a balance sheet for the materials balance of the continent. Calculation of the dissolved and sediment load of 10 major rivers in the United States as a preliminary step in evaluating the total loads discharged will use $20,000 of the proposed fiscal year 1967 increase.

New activities: These are projects which would not necessarily be activated now outside of an IHD because they would have maximum value only if pursued in a number of countries in addition to the United States. The Survey has not finalized all plans in this category because information is incomplete about the intentions of other countries. Plans are firm, however, to establish instrumented observation stations on selected glaciers in Western States. The balance of the increase, $20,000, is to implement the investigation. UNESCO's Coordinating Council, the U.S. National Committee, and the International Commission on Snow and Ice have assigned high priority to glaciological studies. Overseas cooperation is assured by Scandinavian and central European countries. Canada already has established stations on four important glaciers. One highly important purpose of this activity is to correlate worldwide snow and ice data in an effort to establish historical and current trends in climatic change.

The Canadian National Committee proposes that Canada and the United States collaborate in an International Field Year on the Great Lakes. The U.S. National Committee has endorsed this proposal. Objectives of the work will be to improve observational, experimental, and theoretical techniques in lake research, leading to a scientific basis for more rational management of lake resources. The work probably would be undertaken in 1969. Preparatory work in 1968, however, will entail appreciable expense for planning conferences, equipment procurement, testing of instruments, and training of personnel.

Value of the IHD.—The hydrological cycle is a global phenomenon and the local and continental subcycles cannot be fully understood without knowledge of the whole cycle. The occurrence and distribution of water in any one part of the globe is a consequence of its distribution in all other parts of the globe, but specific cause-effect relations are problematical. Why is drought in Northeastern United States concurrent with heavy rain and floods in the Midwest and West and with a cold, wet summer in western Europe? No one knows, nor will they know until much more is learned about the global cycle. Without this knowledge phenomena such as the onset and persistence of continental drought cannot be predicted, nor can adequate measures be prepared for its management or mitigation.

Specific values of the IHD can be identified, also, on the basis of enlightened self-interest. In view of the large size of the U.S. foreign aid bill, it is important to accelerate the rate at which overseas countries improve their ability to help themselves and to cope with their own problems. This is a major objective of the IHD and will be achieved by setting examples and by stimulating countries to develop their own hydrological services and competence. Exactly those effects are already in evidence in countries of tropical Africa, and Latin America, where interest in the IHD is steadily rising.

The U.S. Agency for International Development (AID) has shown considerable interest in the IHD recognizing its potential to improve the effectiveness of foreign aid. In collaboration with AID, the Survey has had a small group of experts in West Pakistan for some years and has sent specialists on short-term assignments. The United States has been heavily involved in Pakistan ground water irrigation projects whose long-term economic viability depends largely on the durability of pumps, casings, and screens. Corrosion and encrustation of metallic appurtenances, requiring frequent and expensive repair and replacement, can spell the difference between success or failure of operations. The supposed life of water wells in the Indus Plain was 20 years when they were installed, but the actual life was only 2 years. Short-term field study and thermodynamic analysis of data (made by the Survey at the request of AID) showed that, owing to geochemical processes in the aquifer, corrosion and encrustation are unavoidable in conventionally constructed wells in that areas. Nevertheless,

the Survey specialist suggested alternate construction materials which will increase the service life of wells 5 to 10 times at a construction-cost increase of 8 percent in new wells and 16 percent in replacement wells. Average construction costs are $17,000 for new wells and $9,000 for replacement wells. Plans have been completed to install 600 wells in accordance with new specifications. This salvage of old investments and protection of new ones is important because the Indust Plains project is supported by U.S. funds.

This example could be repeated many times over in the program of collaboration in overseas activities between AID and the Survey. It illustrates one way in which U.S. technical knowledge can be transplanted overseas. Discussions are in progress with AID to determine how more scientific and technical knowledge can be exported as an AID contribution to the IHD.

Long-range program.—The United States is in the position that it originated the idea for an IHD, that the President has publicly pledged participation, yet the United States has only a token IHD program. In our own long-term interests we should establish a realistic and worthwhile program in order to produce useful results during the decade, whose final year is 1974. The program should increase very substantially by 1970, in line with a proposed definitive program which is in preparation by the NAS–NRC Committee.

(11) Education and training.

The estimate for 1967 is $608,000, an increase of $4,000 over 1966. This increase is for increased pay costs.

Program of work.—The education and training program provides specialized training in the purposes and methods of water resources investigations. The program is aimed to improve hydrologic education in general and to increase the supply of critically needed hydrologists. The program includes 1-year on-the-job training for new professional employees of the Survey; graduate and in-service training in hydrology; financial support to selected graduate students for research work in hydrology and related sciences; informal assistance to universities in initiating or improving hydrologic education and training; technical and management seminars; and correspondence courses in hydrology for Survey employees.

The Civil Service Commission and the Survey have agreed upon a training program for professional development of scientists in water resources investigations, providing for training of all professional personnel in grades GS–5 to GS–9. In the first phase of this program, the employee receives training in the skills of his initial assignment. In the second phase, he participates in a comprehensive orientation program covering the scientific activities of the water resources program. Ninety-five professional employees were enrolled in this program during fiscal year 1965. Anticipated enrollments in fiscal years 1966 and 1967 are 100 in each year.

The Survey continues informally to advise universities on curriculums alined toward training and research in hydraulics and hydrology, and to provide occasional guest lecturers to universities. The University of Arizona, under contract with the Survey, will provide a short course in hydrology for Survey employees on the university campus twice during fiscal year 1966. This 7-week course gives a fairly comprehensive intensive course of study in hydrology to about 50 professional employees each year. The course will be repeated during fiscal year 1967.

Twelve full-time professional employees participated during fiscal year 1965 in full-time graduate study under the terms of the Government Employees Training Act. These employees enrolled in advanced courses in geology, chemistry, engineering, hydraulics, and hydrology. About 50 employees per year, both professional and nonprofessional, enrolled at universities for part-time study in water resources and related fields. These activities will continue in fiscal years 1966 and 1967.

The Survey periodically holds scientific seminars covering such subjects as uses of statistics in hydrology, automatic data processing, hydraulics, hydrology, sediment and sediment transport, and water chemistry. A strong effort has been made to improve management by taking advantage of training courses in management, administration, and supervision, arranged by the Civil Service Commission.

Long-range program.—Owing to the importance of education and training in a scientific program, this program component should increase on a scale commensurate with program growth, rising to about $850,000 by 1970.

(12) Publication and support

The estimate for 1967 is $2,049,000, an increase of $10,000 over 1966. This increase is for increased pay costs.

Program of work.—The results of field and laboratory research and investigations by the Geological Survey made available to the public through several series of book reports and atlases. Timely publication of data and research results is necessary for optimum use of this information by those concerned with the development and use of water resources.

The publication cost of all reports of water-resources investigation published by the Survey are borne by the Federal program. This includes some reports of investigations conducted in financial cooperation with States and with other Federal agencies.

In fiscal year 1965, 110 book reports and 31 atlases, reporting the results of water-resources investigations, were published by the Survey. An additional 590 reports were released for publication by States and technical journals, open filing, or transmittal to other agencies.

The number of published and released reports will increase somewhat in fiscal year 1966 and fiscal year 1967. However, it is expected that improvements in the procedures for processing and publishing reports will hold costs down to the fiscal year 1965 level.

Incidental support costs in this component of the Federal program include, for example, partial support of Survey libraries and participation in the activities of national scientific committees. These costs are expected to remain unchanged in fiscal years 1966 and 1967.

Long-range program.—Improved and streamlined procedures can accommodate some but not all growth in this (publication and support) component. The anticipated rise in costs will bring the amount to $2.4 million by 1970.

(13) Nonrecurring items

The estimate for 1967 is zero, a decrease of $200,000 from 1966. The decrease is for nonrecurring channel clearance on the Gila River in connection with the phreatophyte study project.

(b) Federal-State program

The estimate for 1967 is $12,850,000, an increase of $926,000 over 1966. The increase consists of:

(1) A net decrease of $74,000 for pay costs, including $114,000 gross increased cost for fiscal year 1966 positions, less $188,000 nonrecurring financing in 1966 of the States' share of such costs.

(2) An increase of $1 million to match anticipated increases in State offerings.

Need for increase.—The requested increase will enable the Survey to meet anticipated increases in offerings of funds for well-qualified and urgently needed water-resources investigations in cooperation with State and local agencies.

Drought in the Northeastern States lends emphasis to the critically close relation between adequate water supplies and the economic stability and prosperity of industrial, metropolitan, and agricultural regions. Emergencies such as this drought bring a new awareness of the value of advance planning for water-supply development and management, and this awareness leads to an increased surge of requests for water-resources investigations which will provide the basis for solution of problems.

The President has directed every Federal agency with authority in the water-supply field to do all that should and can be done to contribute maximum assistance to local governments in meeting their responsibilities in water-supply matters. The Survey's Federal-State program exemplifies the shared responsibility called for by the President, but without the requested increase the Survey will be unable to carry its share of responsibility. Considering that the requested increase will be matched by State funds, lack of the increase will create a $2 million deficiency in the Survey water program at the very time when the national situation demands vigorous attention to newly intensified water problems.

Early in fiscal year 1966 the Survey's entire appropriation for the Federal-State program ($11,550,000) was fully committed to match cooperative offerings. Firm offers of nearly $400,000 more are being turned down for lack of matching funds. Additional offers of funds, which are expected later in the year will also have to be turned down. Some States will carry unmatched money over for matching in fiscal year 1967. This, together with additional cooperative offerings,

will cause total offerings to exceed those for any previous year. The sources and amounts of these offerings are shown on table below, based on recent information from field offices. The estimated increase shown by the table is $1,517,480. However, this has been arbitrarily scaled down by $217,480 on the premise that equitable and reasonable adjustments can be made, within the requested program increase.

WATER RESOURCES INVESTIGATIONS

Estimates of State and municipal offerings for fiscal year 1967

State	Matching Federal funds committed, 1966 [1]	Estimated offerings, 1967	Increase (+) or decrease (−)
Alabama	$211,800	$233,400	+$21,600
Alaska	19,200	83,000	+63,800
Arizona	368,700	455,450	+86,750
Arkansas	124,000	124,000	0
California	1,011,400	1,202,500	+191,100
Colorado	309,600	354,000	+44,400
Connecticut	142,500	135,000	−7,500
Delaware	17,300	32,000	+14,700
District of Columbia	3,800	4,000	+200
Florida	649,100	700,000	+50,900
Georgia	188,800	184,000	−4,800
Hawaii	248,000	227,500	−20,500
Idaho	143,500	145,900	+2,400
Illinois	187,300	187,900	+600
Indiana	271,800	345,000	+73,200
Iowa	178,800	186,270	+7,470
Kansas	349,000	413,000	+64,000
Kentucky	163,800	220,700	+56,900
Louisiana	456,200	361,000	−95,200
Maine	36,900	40,000	+3,100
Maryland	161,000	199,000	+38,000
Massachusetts	153,600	200,000	+46,400
Michigan	253,200	310,000	+56,800
Minnesota	210,500	225,000	+14,500
Mississippi	126,800	175,275	+48,475
Missouri	152,700	250,700	+98,000
Montana	110,000	111,500	+1,500
Nebraska	146,000	156,400	+10,400
Nevada	138,000	131,500	−6,500
New Hampshire	39,200	40,000	+800
New Jersey	251,200	300,000	+48,800
New Mexico	283,700	387,425	+103,725
New York	606,400	660,000	+53,600
North Carolina	280,300	315,000	+34,700
North Dakota	205,500	211,700	+6,200
Ohio	257,100	257,100	0
Oklahoma	117,000	125,550	+8,550
Oregon	168,500	184,885	+16,385
Pennsylvania	390,500	422,000	+31,500
Puerto Rico	146,000	205,000	+59,000
Rhode Island	30,300	37,000	+6,700
South Carolina	56,300	116,000	+59,700
South Dakota	96,500	139,000	+42,500
Tennessee	165,000	185,000	+20,000
Texas	681,800	691,175	+9,375
Utah	312,900	305,900	−7,000
Vermont	27,800	28,000	+200
Virginia	56,200	70,000	+13,800
Virgin Islands	32,500	34,000	+1,500
Washington	455,700	459,050	+3,350
West Virginia	49,800	61,000	+11,200
Wisconsin	146,900	256,250	+109,350
Wyoming	159,600	182,450	+22,850
Subtotal	11,550,000	13,067,480	+1,517,480
Adjustments to be made		−217,480	−217,480
Total	11,550,000	12,850,000	+1,300,000

[1] Does not include unmatched $374,000 of anticipated supplemental funds in 1966 for pay-raise costs.

The primary objective of most of the proposed investigations is to inventory and describe water resources of specific areas. The work will include systematic collection of water records, studies of the quantity, quality, and variability of surface- and ground-water supplies, and studies of the interrelations between surface waters and ground waters. These will lead to (a) appraisal of the

total water resource and (b) analysis of the effects on the supply of alternative courses of action in development and management. Survey and cooperating-agency officials work together to develop programs and to formulate plans in direct response to urgent needs recognized by local water experts. These programs will contribute to the national appraisal of water resources, in addition to meeting local needs.

Without the additional funds requested, the Federal Government will fall far short of contributing assistance in the amounts needed and will have to forego important activities in many problem areas. It will be seen from the table that areas of concern are not only in the drought-ridden Northeast, but also in the Great Plains, West Coast, and Gulf Coast States that have been ravaged by floods during the past year, as well as in the arid Southwest and in metropolitan areas.

The Survey and the Department of the Interior have been severely criticized by State officials for failure to keep pace with demands for program increases in fiscal year 1966. Establishment of a ceiling for fiscal year 1967 that permits no increase whatever will put the Department, in the eyes of State officials, in a position directly counter to presidential directives. The Survey and the Department should be willing to face criticism for well-founded policies, and the Survey recognizes the need for economy in Government operations. At a time when State and local agencies are demanding outright grants of Federal emergency funds, however, it would be false economy to turn down State offers for cooperative ventures that would be extensions of well established productive activities of proved worth. Existing circumstances very strongly justify that the Survey increase its Federal-State program. In view of the seriousness of water problems in most parts of the Nation, we see no alternative but to ask for a $1-million increase in the Survey's share of the Federal-State program.

Program of work.—Needs for water information extend through all levels of government, and it is advantageous both to the Federal Government and to States to share costs to the extent that this is possible and consistent with their common interests and responsibilities. The size and scope of the cooperative program clearly reflects the desire of State and local agencies to be partners in the nationwide water-resources appraisal. All the States, plus American Samoa, Guam, Puerto Rico, the Virgin Islands, and the District of Columbia, share in water-resources investigations through financial cooperation with the Geological Survey. More than 300 State and local agencies participate. Federal-State cooperation began in 1895 and since that time Federal funds have been available annually for this purpose. Since 1929, the appropriation language has required that the Survey's share not exceed one-half the total cost of investigations.

Long-range program.—On the basis of past history it seems realistic to assume that the Federal share of the Federal-State program will rise to an amount in the range of $14 to $14.8 million by 1970.

(c) *Employee compensation payments*

The estimate for 1967 is $54,843, a decrease of $696 from 1966.

This provides for the Geological Survey payment to the Bureau of Employees' Compensation to cover payments made during fiscal year 1965 on account of Survey employees injured since December 1, 1960 (Public Law 86–767, sec. 209).

6. SOIL AND MOISTURE CONSERVATION

The estimate for 1967 is $201,000, the same as for 1966.

Plan of work.—The Survey's program consists of two parts, (1) evaluation of specific sites as possible locations for water supply, and (2) research in arid-lands hydrology such as erosion and sedimentation principles, stability of river channels, effects of land treatment measures, and relations between rainfall, runoff, ground water, sediment transport, and other hydrologic factors. During 1967 both parts of the program will continue at the current level. Some current projects will be completed during 1966, some will be expanded to increase the value of the final results, and several new studies will be initiated.

The Geological Survey, within the soil and moisture conservation program of the Department of the Interior, provides basic hydrologic and geologic data and basic research needed for the improvement and maintenance of the productive value of about 477 million acres of public lands which are under the stewardship of the Department.

Efficient range management is based upon an adequate and well-distributed supply of stock water. The Survey provides the technical assistance required to

locate the wells and reservoir sites necessary to provide this water supply. Site examinations for stock water are made on request and studies of areal hydrology of stock-water developments are being conducted in several States.

Erosion and sedimentation are detrimental to public lands and create difficult conservation and maintenance problems for which practical solutions must be found. Investigations of the basic processes and factors that lead to erosion are being conducted in order to develop long-term effective measures to control erosion.

The hydrology of an area can be affected by the way the land is used. Studies are being made of the hydrologic effects of such land uses as grazing, water-spreading, and contour furrowing. The effects of vegetation modification on the hydrology of a watershed are also being investigated.

7. CONSERVATION OF LANDS AND MINERALS

The estimate for 1967 is $4,793,000, an increase of $109,000 over 1966. The increase consists of:

(1) A decrease of $309,000 due to program savings resulting from (*a*) conversion of royalty accounting to automatic data processing ($68,000); (*b*) deferment of publication, for public use, of many of the maps and reports prepared for mineral and water resource classification purposes ($43,000); and (*c*) completion of phaseout of Connally Act enforcement ($198,000).

(2) A decrease of $68,000 representing priority adjustments in the programs of mineral and water resource classification.

(3) An increase of $36,000 for increased pay costs.

(4) An increase of $450,000 for the expanded workload created by increased prospecting and production activity on Federal and Indian land, oil and gas, and mineral leases.

Analyses by subactivities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(*a*) Supervision of operations on Federal mineral leases	$2,999,806	$3,132,000	$3,543,000	+$411,000	+$29,000	+$382,000
(*b*) Mineral and water resource classification of Federal lands	1,319,915	1,354,000	1,250,000	−104,000	+7,000	−111,000
(*c*) Administration of the Connally Act	396,975	198,000	----------	−198,000	----------	−198,000
Total obligations	4,716,696	4,684,000	4,793,000	+109,000	+36,000	+73,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The Conservation Division has two functions; both in the category of resources management. They are—

The supervision of operations by those segments of the private industrial community engaged in the prospecting for, development, or production of leasable minerals; which are the organic fuels such as coal, oil, and gas; mineral fertilizers such as potash and phosphate; and sodium; from 77 million acres of leased Federal and Indian lands. The Geological Survey is required by secretarial delegation to supervise such operations for all minerals on acquired and Indian lands.

The classification, at the earliest possible date, of the potential of 53 million acres of Federal lands for the leasable minerals, and for sites for water development, conservation, and power.

Objectives.—The objectives of these functions are: (1) to insure the orderly development and maximum recovery of the Nation's mineral resources and to protect the public interest by assuring that an equitable payment is returned to the United States for the exploitation of its lands; and (2) to complete all mineral and water resource land classification. To accomplish the latter objective by 1990 would require, each year, the geologic mapping of thirty-five 7½-minute quadrangles, the classification of 2.5 million acres of potential mineral

land, and the reclassification of 240,000 acres of land potentially valuable for dams, reservoirs, and related installations.

The number of producing leases continues to grow each year as do the mineral production and royalties from them. These increases result in corresponding increases in supervisory workload.

Pressures continue to mount for disposal or use of the remaining public domain lands. Classification by the Geological Survey assures that resources, which are the substance of the continued high level of economic growth required by our increasing population, will not be lost because of incompatible uses of the land which contain them. These pressures are reflected in increased workload for the classification functions.

(*a*) *Supervision of operations on Federal mineral leases*

The estimate for 1967 is $3,543,000, an increase of $411,000 over 1966. The increase consists of:

(1) A decrease of $68,000 due to program savings resulting from conversion of royalty accounting to automatic data processing.

(2) An increase of $29,000 for increased pay costs.

(3) An increase of $450,000 for the expanded workload created by increased prospecting and production activity.

Congress, in the Mineral Leasing Acts, the first of which was approved in 1920, charges the Secretary of the Interior to issue and execute regulations under those laws for the prospecting for, development and production of, certain specified "leasable minerals" from leased Federal lands. Leasable minerals are the so-called mineral fuels and fertilizers. They are oil, gas, asphalt and bituminous rock, oil shale, coal, phosphate, potash, sodium, and sulfur. In addition, the Secretary is required by law to issue and execute regulations for the development of all minerals on leases on Indian, acquired, and Outer Continental Shelf lands.

The Geological Survey has been delegated the Secretary's authority to enforce the regulations applicable to all operations on such lands, for the commodities listed above.

SUPERVISION OF OPERATIONS ON FEDERAL MINERAL LEASES

Analysis of program components

Program component	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
			Total	Pay cost	Program
(1) Enforcement of operating regulations and inspection of mining and oil and gas operations	$1,298,000	$1,529,000	+$231,000	+$11,000	+$220,000
(2) Engineering appraisal and approval of plans for development	931,000	1,020,000	+89,000	+9,000	+80,000
(3) Investigations to determine disposition of Federal lands	120,000	122,000	+2,000	+2,00	
(4) Royalty accounting	783,000	872,000	+89,000	+7,000	+82,000
Total	3,132,000	3,543,000	+411,000	+29,000	+382,000

(*1*) *Enforcement of operating regulations and inspection of mining and oil and gas operations on Federal and Indian lands*

The estimate for fiscal year 1967 is $1,529,000, an increase of $231,000 over 1966. The increase consists of—

(*a*) An increase of $11,000 for increased pay costs;

(*b*) An increase of $90,000 for continuing inspectional program of mining and oil and gas operations;

(*c*) An increase of $80,000 for supervision of core hole drilling offshore southern California within what is commonly known as the "disputed area"; and

(*d*) An increase of $50,000 for core drilling on the Continental Slope within the Gulf of Mexico.

Need for increase.—(a) Continuing inspectional program of mining and oil and gas operations, $90,000.—The increase is needed for funds (largely for

additional engineers) to provide adequate supervision for an increasing number of oil and gas and mining operations. The number of oil and gas leases and the production from operating mines continues to increase steadily. Producing leases increased 70 percent in the 10 years 1956–65. The value of mineral production, including oil and gas, increased 140 percent, from $655 million to $1.57 billion per year, while royalties returned to the Government increased 188 percent, from $73 million to $210 million per year, in the same period. These are measures of workload, and if the interest of the beneficiaries of the mineral leasing laws are to be adequately protected, the level of supervisory effort (funds provided for supervision) must correspond to increase in workload.

This workload of supervision is entirely a reflection of activity by industry in developing the resources from Federal lands under lease. When it increases, as it constantly has since approval of the Mineral Leasing Act of 1920, engineers must be added to the work force in order to maintain an acceptable level of supervision, and funds must be provided to permit them to schedule inspections of remote operations, such as to platforms far out in the Gulf of Mexico where the only feasible transportation is by helicopters which are expensive to charter.

(*b*) *Supervision of core hole drilling offshore southern California within what is commonly known as the "disputed area," $80,000.*—The so-called disputed area covers approximately 10,600 square miles over which jurisdiction was claimed by both the State and the Federal Government. Hearings to resolve the opposing claims were held by the Supreme Court in October 1964. The decision favorable to the Government was handed down on May 17, 1965. The Survey is now faced with new supervisory responsibilities that cannot be fulfilled satisfactorily without additional funds and personnel.

Since 1956, 178 core holes, some as deep as 8,000 feet, and averaging about 5,000 feet, have been drilled within the area under permits issued by the State and with close supervision of operations by State inspectors. It is known that the core hole program has revealed a wealth of confidential information as to potential oil and gas-bearing structures and even in some instances the actual presence of hydrocarbons. It is also known that among major operators some companies have drilled a relatively large number of holes, some a few, and others none. In fairness to all potential bidders on anticipated lease sales within this area, and to insure maximum competition, it is planned that fixed periods ranging from 1 to 3 years will be set up within which core drilling will be authorized under the supervision of the Geological Survey.

The "disputed area" has great potential value for new oil and gas discoveries and there is intense interest in having the area opened to leasing and development as soon as possible. Judged from the prices paid from time to time for adjoining State leases it is estimated that bonuses which will be paid for leases within this area will exceed a billion dollars. It is vitally important that the core hole program not be delayed because some of the lands are already threatened with drainage. It is equally important that the operations receive close supervision in order to secure compliance with well-depth restrictions, other regulatory measures, and to insure the maximum possible protection to recreational and fishery resources.

(*c*) *Core drilling on the Continental Slope within the Gulf of Mexico, $50,000.*—A major oil company is embarking on a program of drilling 100 core holes over a 3-year period in water depths ranging from 600 to 3,500 feet in an area extending from the United States-Mexican border to the southern tip of Florida on the Gulf of Mexico. This area is seaward of the area presently mapped for leasing purposes.

The program is being conducted in an area where no drilling has been done to date, and where little is known as to stratigraphic and structural conditions or the possibilities of finding oil or gas or other mineral deposits. The sole purpose of the drilling is geologic exploration and research and the permit authorizing the operation did not convey any rights as to future leasing or development of mineral deposits. The core holes will be shallow, not to exceed 1,000 feet, with maximum depths to be agreed on or prescribed. Costs for drilling will be relatively low (about three-quarters of a million dollars for 100 holes) and it is therefore anticipated that similar operations by other companies will be approved from time to time in the future.

The cores obtained in this project will be made available to the Geological Survey for sampling at Survey expense. Also, the Survey will receive copies of electrical logs and other available information. These data have an inestimable value for research purposes and future leasing and development.

In the drilling of wells, particularly in unexplored areas and in water depths such as those here involved, there is always risk as to safety, pollution, and loss of natural resources. It is a new field of activity in which there is much to be learned and prudence dictates that the operations be closely supervised even if nothing is gained thereby except training through experience in a new field of operations.

Program of work.—The basic element of the Survey's program to enforce the operating regulations is periodic examination by qualified engineers of all operations to determine that requirements of the regulations are being complied with.

Engineers qualified in petroleum or mining engineering determine if drilling and production of oil reservoirs and mineral deposits are performed according to approved plans; perform tests of pressures and flows from oil- or gas-bearing formations; inspect mines for explosive gas accumulations; check or estimate production of oil and gas and minerals as a control for verifying the accuracy of royalty returns by operators.

(2) *Engineering appraisal and approval of plans of development, unit area proposals, secondary recovery programs, and plans for reclamation of strip mined areas*

The estimate for 1967 is $1,020,000, an increase of $89,000 over 1966. The increase consists of—

(*a*) An increase of $9,000 for increased pay costs; and

(*b*) An increase of $80,000 for increased workload.

Need for increase.—Engineering review of lessee's plans for drilling programs and mine development is an essential part of supervision of operations. Conservation of resources by insuring that the maximum yield is obtained from deposits of petroleum or minerals is a primary function of supervision. Developments must be designed and operated to obtain this objective. This can only be insured by requiring the review by qualified engineers of all plans for development. The volume of engineering work of this kind is a function of the pace of development on Federal land leases. The continuing increases in the activities described in component (1) result in an increased engineering appraisal workload. The increase requested will provide for the additional engineers required to adequately handle this increased workload.

Program of work.—Congress has passed the mineral leasing laws and the Secretary of Interior has issued regulations to insure that mineral resources on Federal and Indian lands are developed in an orderly manner; that maximum recovery of such resources is realized; that all practicable measures are taken to protect workmen and miners; and that the Government receives its share of production from its land.

The Secretary's regulations require that proposals for prospecting and development on Federal and Indian lands be reviewed in the Geological Survey by competent engineers. All plans for mine development and drilling programs are examined to determine if such plans are adequate to achieve these objectives. The Survey is concerned that all modern techniques be utilized wherever they are required to obtain maximum recovery of mineral resources.

Its engineers work with lease operators to arrive at the mining or oil and gas recovery techniques best adapted to individual situations.

In cases where oilfields are approaching exhaustion by primary producing methods, Survey engineers review the production history, analyze unrecovered reserves, and suggest or approve methods of secondary recovery which will most economically reduce viscosities or increase pressures to permit recovery of additional petroleum which would not otherwise be recovered. Common methods used for this are the injection of natural gas or water into oil-bearing formations to restore pressures; by burning some of the oil in place to reduce viscosity by heat, thereby enabling the rest to flow more freely into pumping wells; or by introducing miscible fluids or treating by steam.

Maximum primary recovery of petroleum from new areas or zones is achieved with an optimum spacing of producing wells, i.e., not more or less than will permit maximum production with minimum expenditure of reservoir energy. It frequently happens with observance of such conservation practices that owners of lands in such areas must enter into agreements whereby production and expenses can be allocated without each owner drilling a well. Survey engineers analyze the Government's interest and enter into unit negotiations to insure that its interests are protected.

Vigilance must also be maintained to discover unleased Federal lands on or adjacent to producing fields to preclude petroleum being drained by a nearby producer and to negotiate agreements to return to the Government its fair share of production, or to recommend offering of such lands for lease by competitive bidding.

These are all complex engineering determinations required for adequate supervision of operations on leased Federal lands. They continue to increase in number and complexity each year.

(3) *Investigations to determine disposition of Federal lands under application for leases or permits*

The estimate for 1967 is $122,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

Program of work.—The determination of whether mineral lands are only potentially valuable or are known to be valuable demands geologic and engineering evaluations. This major determination results in either noncompetitive or competitive leasing and must be soundly based scientifically not only to protect the Federal mineral interest but also to withstand adverse actions on the part of applicants. The extent, depth, quality and other workability factors for a commodity must be established in advance of development.

Such determinations must be evaluated with respect to encouragement of mineral development, thereby stimulating the national economy. New resources of raw materials in an undeveloped area create additional markets as well as provide employment locally.

These investigations are made by professional mining geologists or engineers of the U.S. Geological Survey who must employ all scientific knowledge and experience if supervision of operations on Federal lands is to be effective and equitable.

(4) *Accounting and collection of royalties and rentals, and auditing production records*

The estimate for 1967 is $872,000, an increase of $89,000 over 1966. The increase consists of:

(a) A decrease of $68,000 for program savings resulting from conversion to automatic data processing.

(b) An increase of $7,000 for increased pay costs.

(c) An increase of $150,000 for expanded workload.

Need for increase.—Royalty accounting problems include both distribution of impounded funds from offshore Louisiana operations and conversion to automatic data processing procedures.

A partial release of the impounded oil and gas receipts from offshore Louisiana operations in the disputed zone has been approved by the Supreme Court. The impounded money awarded to the United States amounts to approximately $170 million. The impounded money awarded to Louisiana amounts to approximately $33 million. The distribution of these funds was on the basis of royalty records developed and maintained by the Geological Survey.

The conversion of royalty accounting to automatic data processing has permitted the processing of additional accounts with available personnel. The savings reported represent costs of additional accountants which would have been required had not conversion to automatic data processing progressed as satisfactorily as it did. The procedure for postbilling review of accounts, however, developed by the Survey, and approved by the General Accounting Office, in response to criticism by that agency in its report of June 1955 because of deficiency in such charge and billing review, has been sketchy—somewhat in the nature of random sampling. The 18-percent increase in the number of accounts from 1961 to 1965 as reflected by the increase in producing leases and the 41-percent increase from $142 million to $200 million in the same period in royalties from oil and gas highlights the magnitude of increases in accounting.

Program of work.—An important function of supervision of operations on Federal mineral leases is to insure that all royalties owed to the Government for development on its land are paid.

Accounts are kept for each producing lease. These are coded to the terms of the lease and statements are rendered accordingly. Royalties are paid directly to the Geological Survey from where they are covered into the U.S. Treasury for later allocation as provided by law. Proceeds from public lands, for example, are

eventually distributed 52½ percent to the reclamation fund, 37½ percent to the States where the minerals were produced and 10 percent to the Federal Treasury.

Royalty accounts are being programed into the Geological Survey computer and this conversion is scheduled for completion by the end of fiscal 1966.

Conversion to automatic data processing will not, however, materially reduce the accounting workload. Automatic data processing equipment can perform only a part of total royalty computations. Basic calculations performed in the regional offices derive input data required for machine processing and print out of statements. More complete review of accounts has been recommended in reports of the General Accounting Office, and as accountants are freed from other work by use of automatic data processing more emphasis will be placed on this phase of the work. As the number of accounts increases and royalty returns grow, additional accountants will be required.

(b) Mineral and water resource classification of Federal lands

The estimate for 1967 is $1,250,000, a decrease of $104,000 from 1966. The decrease consists of:

(1) A decrease of $43,000 due to program savings by deferment of publication of maps and reports.

(2) A decrease of $68,000 representing priority adjustments.

(3) An increase of $7,000 for increased pay costs.

Mineral and water resources land classification was developed early in this century to evaluate the resources of, as well as to protect, public domain lands containing sites for development of water resources and such minerals as coal, petroleum, and phosphates which could not be fitted into the pattern for disposal under the land and mining laws. In order to prevent fraudulent acquisition of Federal mineral and waterpower lands Congress, in 1910, passed a law permitting the withdrawal of such lands until they could be classified. A huge area thought to be valuable for what we now call the leasable minerals and for waterpower sites was hastily withdrawn under this law. Almost 50 million acres of this land is still withdrawn. Much additional public domain land not withdrawn is thought to be valuable for these commodities and uses and remains to be evaluated and classified.

Mineral land classification sets in motion the unique legal concept of landownership, which was defined by Congress as "separation of estates." This simply means that one party may own and use the land surface while another may lease and develop minerals underlying the surface. Mineral classification reserves mineral rights to the Government, permitting disposal of the surface for other uses. It thus complements the Mineral Leasing Acts by reserving to the Government the title to minerals which would otherwise be alienated with the surface rights. Classification for water development, especially waterpower, provides that the surface of the land can be owned and used until it is required for water development, usually dams and reservoirs. When so needed, it must be returned to the Government. Reservations of this kind help to implement the national policy for power development expressed in the Federal Power Acts.

MINERAL AND WATER RESOURCE CLASSIFICATION OF FEDERAL LANDS

Analysis of program components

Program component	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
			Total	Pay cost	Program
(1) Geologic and engineering investigations	$542,000	$476,000	−$66,000	+$2,000	−$68,000
(2) Classification programs in support of the Mineral Leasing Act and the Federal Power Act	542,000	545,000	+3,000	+3,000	----------
(3) Classification programs in support of other agency programs	204,000	206,000	+2,000	+2,000	----------
(4) Publications	66,000	23,000	−43,000	----------	−43,000
Total	1,354,000	1,250,000	−104,000	+7,000	−111,000

(1) Geologic and engineering investigations leading to classification of withdrawn Federal mineral lands and lands valuable for water resource development

The estimate for 1967 is $476,000, a decrease of $66,000 from 1966. The decrease consists of:

(*a*) A decrease of $68,000 representing priority adjustments.

(*b*) An increase of $2,000 for increased pay costs.

Reason for decrease.—It was administratively determined that this is a lower priority program than others despite benefits to public land administration which would accrue from its early completion. In order to provide for essential increases elsewhere a program reduction of $68,000 was applied here.

Program of work.—Mineral resource development as a source of national revenue was initiated in 1906 when President Theodore Roosevelt's administration moved to prevent from further alienation under the agricultural land laws those lands containing coal by temporarily withdrawing them from settlement until they could be investigated and classified for disposal under the coal land laws. It later became evident that other fuel minerals such as oil and gas and fertilizer minerals such as phosphate, potash, and sodium, disposal of which was first authorized under the placer mining laws, were being alienated by disposal practices which failed to protect the public interest and these too were temporarily withdrawn from settlement as their value became recognized. These temporary withdrawals for classification at the initiative of the Secretary of the Interior constituted the first constructive step toward a national policy of determining competently the mineral value of the public lands before proceeding with their disposal or development.

Congress in 1910 confirmed the power of the Executive to withdraw public domain lands for classification and the temporary withdrawals were continued indefinitely or until classification and disposal of the land was completed. However, even with the legal tools for evaluation the mineral and land laws fell short of providing for disposal of these mineral resources in a manner which was equitable to the Government and to the developer and after several years of trying to rewrite an equitable law, Congress in 1920 passed the first Mineral Leasing Act. This act provided for disposal, by leasing, of selected minerals (coal, oil, gas, oil shale, phosphate, potash, sodium) with the Government taking a share of production in return for the development of its lands.

The mineral classification program is complementary to the leasing program because it retains in Government ownership deposits of leasable minerals which are known to be valuable. The title to these deposits would pass with disposal of the surface were the lands not evaluated and classified.

The policy for classification of public domain lands for sites for water conservation and development has paralleled the development of the policy for classification of mineral lands. The inadequacy of land disposal laws and regulations to prevent alienation of valuable dam, reservoir, and power sites by homesteading or other inapplicable means prompted the Secretary of the Interior in 1909 to temporarily withdraw waterpower sites pending legislation by Congress to appropriately provide for their utilization. Classification of such sites was specifically authorized in the act of 1910 which authorized the President to withdraw public domain lands for classification.

The Federal Power Act of 1920 provides the authority to license waterpower sites on Federal lands. Classification by the Geological Survey also complements this act by insuring that the title to lands of the public domain suitable for such sites remains in the Government until they are needed for development. The Federal Power Act provides the means for utilizing such lands for agriculture or other appropriate uses until they are so required. Classification of lands for retention from disposal by the Secretary of the Interior upon the advice of the Survey is the only authority for protecting water development sites from alienation in advance of project approval.

The original classification emphasis in regard to water resources was for hydroelectric power, but with population expansion and national development the sites protected originally for power have become more valuable in many cases for other purposes such as municipal water supply, flood control, recreation, etc. The value of protecting such sites was clearly expressed in the Senate select committee report on National Water Resources, Committee Print No. 31, page 42, where it is stated:

"Although technology has increased the range of sites which are physically and engineeringly feasible for economical water storage, such sites are still

limited in number. Many of them already are identified. If the premise of this report is accepted—the need to plan now for ultimate full regulation of all major streams—then protection or reservation of remaining sites seem prudent. * * * Little administration provision exists to forestall encumbrance of sites by other land uses, an important future problem. It is one of applying zoning, purchase, or other techniques of controlling land use to the preservation of unique and good sites for future valuable use * * *."

The only known application of such techniques to Federal lands is the classification program of the Geological Survey.

Classification of Federal mineral lands is an analytical determination, according to established standards as to whether or not land is mineral or nonmineral in character.

Geological investigations which are required to gather the data on which to base such determinations include the analysis of new discoveries and available information plus the determinations of the quality, depth, and thickness of leasable minerals on Federal lands. Typical functions performed in such investigations are:

Detailed geologic mapping to outline occurrence of federally owned minerals.

Detailed sampling and trenching programs to determine the quality of such minerals.

Analysis of geophysical and other subsurface data to evaluate the extent of such minerals.

Library research and synthesis of reports on mineral occurrences.

Evaluation of new mineral discoveries on Federal lands.

Geologic maps are prerequisite to all geologic investigations for mineral land classification. In order to complete classification of the remaining 53 million acres of withdrawn and potentially productive Federal mineral land by 1990, 35 7½-minute quadrangles must be mapped geologically each year.

Geologists of the Conservation Division map in areas not adequately covered by other geologic mapping programs. Trenching and drilling in order to sample deposits is performed concurrently with geologic mapping when appropriate and undertaken separately where adequate mapping is available from other sources.

Classification of lands for reservoirs and powersites is also an analytical determination as to whether such sites have adequate development potential to warrant classification. Engineering investigations must be made to gather basic data on location, topography, foundation conditions for dams, and streamflow in order to properly evaluate the development potential of any site. Typical investigations undertaken to secure such data are:

Studies of existing maps and reports of stream valleys and basins to locate sites which appear to be topographically favorable for dams and reservoirs.

Field reconnaissance of selected sites to determine if detailed investigation is warranted.

Analysis of waterflow data for selected sites to determine the amount of water available for storage.

Mapping of selected sites where adequate maps of another agency are not available.

Integration of various data collected in order to evaluate potential of sites and determine whether the sites should be classified as valuable or not valuable for water project purposes.

When a positive classification has been made the information as to lands affected is transmitted to the Secretary of the Interior with a recommendation for formal classification which, if he approves, makes the land classified subject to disposal or use under the terms of the Federal Power Act.

Many previous withdrawals and classifications, for reasons of changed patterns of development, up-to-date and better information on streamflow, and more complete map coverage, are now considered to have a different potential for development than they had at the time of the original classification, and review of all withdrawals is in process. The engineering investigations involved in review are the same as for lands not yet classified.

(2) *Classification programs in support of the Mineral Leasing Act and the Federal Power Act*

The estimate for 1967 is $545,000, an increase of $3,000 over 1966. This increase is for increased pay costs.

Program of work.—The entire mineral classification program can be said to complement mineral leasing because by retaining title to them in the Government

leasable minerals become available for future development under the Mineral Leasing Act.

Certain specific geologic functions of classification, however, are directly related to day-to-day supervision of operations on mineral leases. These include:

Definition of known geologic structures of producing oil and gas fields. The determination that lands are on or off a known geologic structure controls whether the land is offered for competitive or noncompetitive lease.

A competitive lease is sold to the highest bidder (bonuses amounted to nearly $2 million in 1965). Noncompetitive leases are essentially permits to explore for oil and gas and are granted to the first qualified applicant. Rental for competitive leases is $2 an acre per year and 50 cents per acre for noncompetitive leases prior to obtaining production. Royalty rates are 12½ percent of the value of production from noncompetitive leases and are on a sliding scale up to 25 percent from competitive leases.

Definition of known mineral leasing areas. This applies to leasable minerals other than oil and gas and has the same effect for determining whether mineral lands are leased competitively or noncompetitively as known geologic structure determinations have for determining the type of leases for oil and gas lands.

Reports to the Bureau of Land Management on all oil and gas lease offers as to whether or not lands are subject to competitive or noncompetitive leases.

Determining under provision of the act of August 8, 1946, the producing limits of oil and gas fields and the determination of the discovery of new deposits. Such determinations establish the applicable royalty rate for leasehold production.

Providing advisory services with respect to supervision of technical operations under Federal leases for oil and gas and other minerals such as (*a*) recommending logical areas and where applicable, the depth of test wells for proposed unit plans and participating areas; and (*b*) providing basic geologic data and consultative services on mineral occurrences, stratigraphy, and geologic structure for mineral operations on Federal leases.

The relation of reservoir and power site classification to the Federal Power Act is similar to the relation of mineral classification to the Mineral Leasing Act.

Power site classifications hold Federal lands for future development under licenses issued by the Federal Power Commission, which would otherwise have to be condemned and which might have been used for purposes incompatible with power development to the extent that costs of acquisition would preclude development.

The Federal Power Commission has authority to permit restoration of withdrawn or classified power site lands, not imminently subject to development, to limited disposal or use with the provision that such lands will be released at no cost except for improvements when they are required for development.

The Federal Power Commission calls on the Geological Survey for reclassification of the power values and imminence of development on all classified public lands for which an application is made under the terms of the act in order to determine if proposed use will in any way injure the power values of the land or interfere with development.

The Geological Survey investigates each individual case and reports back to the Commission its analysis of the effects of each proposed use on the power values of the lands affected. It recommends action to be taken and, in instances where power values are found to be negligible, initiates the cancellation of classifications and withdrawals in order to return the land to the public domain unencumbered.

(3) Classification programs in support of other agency programs

The estimate for 1967 is $206,000, an increase of $2,000 over 1966. This increase is for increased pay costs.

Program of work.—Classification work in aid of other agency programs is almost entirely concerned with problems related to administration of Federal lands under their jurisdiction and the workload is generated by requests from these agencies for reports and counsel, particularly with regard to mineral and waterpower evaluation of lands subject to disposal under appropriate statutes.

All applications to the Bureau of Land Management for purchase, exchange, or selection of public lands are referred to the Geological Survey for determination of their mineral and waterpower values before the applications are approved. Likewise, mineral appraisals by the Geological Survey are requested for lands proposed for sale by the General Services Administration; Department of Health,

Education, and Welfare; Bureau of Indian Affairs, etc. There were approximately 7,000 requests for individual case reports in fiscal 1965. It is expected that the number of such requests will continue in 1966 and 1967 at the same or a slightly higher level than in 1965. The increasing demand placed upon public land for urbanization and other development accounts for the continued increase in the number of such reports.

(4) Publications

The estimate for 1967 is $23,000, a decrease of $43,000 from 1966. The decrease is due to program savings by deferment of publication of maps and reports.

Reason for decrease.—Data gathered in field mapping and mineral and water investigations are used for classification purposes prior to publication. Subsequent publication is considered to be a function that can be deferred when necessary. Classification investigations are, however, made with public funds and are public information. The maps and reports prepared from such investigations should receive formal publication without unavoidable delay wherever the scope of investigation is broad enough to make a significant new contribution to the knowledge of the Nations mineral and water resources.

Program of work.—Geologic maps prepared on a quadrangle basis contribute to the geologic atlas of the United States. A significant loss of public and private money and manpower is always possible because of the danger of duplication of expensive programs when results are not made generally known. The cost of publication is usually a nominal part of total project costs.

Approximately 10 reports and 20 geologic quadrangles and engineering maps resulting from mineral and water resources classification could be published in 1967; however, the funds requested for this work will permit publication of only about one-fifth of these.

(c) Administration of the Connally Act

The estimate for 1967 is zero, a decrease of $198,000 from 1966. The decrease results from the completion of phaseout of Connally Act enforcement.

8. GENERAL ADMINISTRATION

The estimate for 1967 is $1,948,000, a decrease of $4,000 from 1966. The decrease consists of—

(1) A decrease of $20,000 due to program savings; and
(2) An increase of $16,000 for increased pay costs.

Plan of work.—This activity provides for the executive direction and overall management of the Geological Survey, as well as such essential services as organization and procedures, systems development, manpower utilization, budgeting, accounting, voucher examination, internal audit, payroll, personnel, purchasing, property control, mail and messenger. It is financed from funds appropriated directly and by an assessment against reimbursements from other Federal agencies and certain non-Government sources.

A comparison of funds for executive direction and administration, relative to the entire program of the Survey follows:

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Direct appropriation	$1,913,972	$1,952,000	$1,948,000	−$4,000	+$16,000	−$20,000
Assessment against reimbursable programs	792,540	852,000	932,000	+80,000	+9,000	+71,000
Total general administration (obligations)	2,706,512	2,804,000	2,880,000	+76,000	+25,000	+51,000
Total Survey program (obligations, excluding special-purpose buildings activity)	104,537,526	115,089,762	117,158,000	+2,068,000	+852,000	+1,216,000
Ratio of general administration total (obligations) (percent)	2.59	2.44	2.46			

[1] To provide for increased pay cost for fiscal year 1966 positions.

CONSOLIDATED ACCOUNTS AND CENTRAL SERVICES FINANCED BY BENEFITING ACTIVITIES

Services, supplies, or equipment which are in common need by two or more divisions are, for efficiency and economy, reported in consolidated accounts. Charges are initially made to these accounts, are ultimately charged to the activity benefited, and are justified in the budget document for those acivities. The actual costs of these accounts for 1965 and the estimates for 1966 and 1967 are summarized below:

[In thousands]

	Actual, 1965	Estimate, 1966	Estimate, 1967
CONSOLIDATED ACCOUNTS			
Motor vehicle fleet operation	$1,394	$1,362	$1,424
Rental and maintenance of certain facilities at headquarters and field centers	625	724	766
Warehouse stock of common-use supplies and materials	834	713	760
Survey's proportionate share of departmental charges, safety committee, professional staffing committee, and contingencies arising from operation of field centers	113	120	130
Total consolidated accounts	2,966	2,919	3,080
CENTRAL SERVICES			
Map reproduction	2,299	2,637	2,500
Editing and illustration of publications	2,459	2,590	2,620
Distributions of maps and reports, response to public inquiries and related functions	1,753	1,988	2,091
Property maintenance and instrument development	556	586	600
Computing and tabulating services	751	852	1,280
Total central services	7,818	8,653	9,091
Grand total	10,784	11,572	12,171
Less interoffice billings	642	763	802
Net cost	10,142	10,890	11,369

Financial support for these accounts and services is summarized as follows:

[In thousands]

	Actual, 1965	Estimate, 1966	Estimate, 1967
Topographic surveys and mapping	$3,902	$4,196	$4,121
Geologic and mineral resource surveys and mapping	3,151	3,547	3,816
Marine geology and hydrology	45	83	83
Water resources investigations	2,647	2,594	3,011
Soil and moisture conservation	3	4	4
Conservation of lands and minerals	212	193	146
General administration	182	192	188
Net cost [1]	10,142	10,809	11,369

[1] Includes charges to direct appropriations and reimbursements.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Obligations by objects:				
Direct obligations:				
11 Personnel compensation	$47,768,772	$50,600,000	$51,700,000	+$1,100,000
12 Personnel benefits	3,591,830	3,790,000	3,885,000	+95,000
21 Travel and transportation of persons	3,048,542	3,245,000	3,019,000	−226,000
22 Transportation of things	850,629	965,000	980,000	+15,000
23 Rent, communications, and utilities	2,180,583	2,365,000	2,540,000	+175,000
24 Printing and reproduction	1,087,962	1,300,000	1,255,000	−45,000
25 Other services	2,688,278	3,295,020	3,372,000	+76,980
Services of other agencies	680,524	705,000	510,000	−195,000
26 Supplies and materials	3,476,920	3,635,000	3,475,000	−160,000
31 Equipment	2,980,711	3,510,000	2,955,000	−555,000
33 Investments and loans	262,711	843,742	800,000	−43,742
42 Insurance claims and indemnities	55,677	9,000	15,000	+6,000
Subtotal	68,673,139	74,262,762	74,506,000	+243,238
Quarters and subsistence charges	−5,500	−2,000	−2,000	
Total direct obligations	68,667,639	74,260,762	74,504,000	+243,238
Reimbursable obligations:				
11 Personnel compensation	23,292,818	25,582,000	27,903,000	+2,321,000
12 Personnel benefits	1,701,415	1,850,000	2,055,000	+205,000
21 Travel and transportation of persons	2,116,803	2,160,000	2,195,000	+35,000
22 Transportation of things	709,314	850,000	890,000	+40,000
23 Rent, communications, and utilities	1,043,645	1,275,000	1,410,000	+135,000
24 Printing and reproduction	225,292	280,000	260,000	−20,000
25 Other service	3,106,356	4,568,000	4,127,000	−441,000
Services of other agencies	422,196	230,000	265,000	+35,000
26 Supplies and materials	1,316,630	1,540,000	1,570,000	+30,000
31 Equipment	1,832,718	2,485,000	1,970,000	−515,000
42 Insurance claims and indemnities	24,111	10,000	10,000	
Subtotal	35,791,298	40,830,000	42,655,000	+1,825,000
Quarters and subsistence charges	−1,357	−1,000	−1,000	
Total reimbursable obligations	35,789,941	40,829,000	42,654,000	+1,825,000
Allocation accounts:				
24 Printing and reproduction	3,344			
25 Other services	62,575			
26 Supplies	357			
31 Equipment	1,456			
32 Lands and structures	875,216			
Total allocation	942,948			
Total obligations	105,400,528	115,089,762	117,158,000	+2,068,238
Program and financing:				
Total obligations	105,400,528	115,089,762	117,158,000	+2,068,238
Advances and reimbursements from:				
Other accounts	−18,793,076	−22,228,000	−22,177,000	+51,000
Non-Federal sources	−16,996,865	−18,601,000	−20,477,000	−1,876,000
Comparative transfer from "Salaries and expenses," Office of Minerals Exploration	−466,038			
Unobligated balance available, start of year	−400,000	−1,242,150	−984,000	+258,150
Unobligated balance transferred from "Salaries and expenses," Office of Minerals Exploration		−811,742		+811,742
Unobligated balance available, end of year	1,242,150	984,000	400,000	−584,000
Unobligated balance lapsing	397,301			
New obligational authority	70,384,000	73,190,870	73,920,000	+729,130
New obligational authority:				
Appropriation	70,384,000	71,680,870	73,920,000	+2,239,130
Proposed supplemental due to pay increases		1,510,000		−1,510,000

PREPARED STATEMENT

Chairman HAYDEN. Dr. Pecora, you may proceed with your presentation now. If you so desire, you may file your written statement for the record and summarize it orally.

Mr. PECORA. Thank you, sir.

With your permission I should like to file a written statement and highlight a few points that may be of interest to you, sir.

(The statement follows:)

This is my first appearance before you as Director of the Geological Survey. Since I took office 4 months ago I have been engaged in studying and analyzing the bureau and in obtaining the views and suggestions of many people who represent other Federal establishments, the State geological surveys, the universities, and industry. Perhaps this is a good occasion to report to you a few of the highlights of views that have been expressed to me, because without question they reflect the impact of work we do, with funds and authorization provided by the Congress, in the fields of science and technology for the public interest.

First and above all let me report the universal admiration I encountered for my predecessor, Dr. Thomas B. Nolan, whose career service has spanned 43 years with the Geological Survey—11 of these as Assistant Director and 10 as Director. His leadership of this institution has reflected great credit to the entire Federal service. His knowledge of every nook and cranny of the Survey and his dedication to the public service are, of course, well known to this committee.

Everywhere, also, I have encountered full endorsement and support for what we do and expressions of the need to accelerate our kind of work throughout the country. This perhaps is the greatest single message I report to you. The people who use our results and benefit by our research and service applaud our efforts, see the urgent need for more, and would be willing to step forward and say so. I have personally received hundreds of letters, unsolicited, and had hundreds of conversations that support these observations. We have used the taxpayers' dollar with integrity, with prudence, and with great success.

The basis for such public support is provided by the record of accomplishments and our historical position in mission-oriented basic research, technology, and service. For the record let me summarize a few facts that have come out of recent analyses.

We publish our results, as you know, in the form of technical books and pamphlets, maps and charts, and articles in scientific, technical, and trade journals. They are widely recognized as standard and authentic reference documents. Individual book publications (bulletins, professional papers, water supply papers) issued for public sale by the Government Printing Office now occupy 245 feet of library shelf space (or forty-nine 5-foot bookshelves). In addition 30,000 different topographic, geologic, and hydrologic maps have been issued and thousands of articles have appeared in scientific, technical, and trade journals. And yet only 20 percent of the country has been geologically portrayed and topographically less than 75 percent is adequately mapped.

I am impressed by the many recent examples where work of the Survey has provided new techniques or instruments widely used by science or industry; fostered the discovery of new deposits of mineral, fuel, water, and stone and aided in the creation of new industry where none existed before; or extended the life, and even resuscitated, a local industry being depleted of its basic resource; and aided in analyses of hazards of the land. A list of examples would be long but let me cite a few from recent activities to illustrate the practical benefits to the Nation.

The announcement of new methods of detecting and analyzing for silver and gold that can be done in the field and thus facilitate the search for new deposits.

The development and installation of automatic water-quality metering systems for continuous monitoring of stream quality.

Creation of a major gold mine near Carlin, Nev., accredited publicly to the basic work and reporting of the Geological Survey.

Discovery of a major silver deposit at Creede, Colo., accredited publicly to a Geological Survey report.

Aid in relocating the port of Valdez, Alaska.

Discovery of rich oil shale in Alaska.

Discovery of a buried river channel near Salisbury, Md. that can provide large additional supplies of fresh water.

The crust of the earth embraced by the United States is a veritable three-dimensional jigsaw puzzle. This is the foundation on which man lives; that contains the mineral and water resources on which he is so dependent; that provides hazards as well as benefits to his safety and his engineering works. To outline and resolve the three-dimensional puzzle is one of the primary tasks of the Geological Survey. By engineering map expression of the surface through topographic work, by geologic map expression of rock formation framework, and hydrologic analyses of the subsurface, we attempt to achieve a composite picture of what lies below the ground surface. Here then shows to best advantage the research capability to contrive new scientific principles that can be applied to discovery and understanding—whether for man's benefits, or hazards, or pure understanding that can be applied elsewhere.

Recent attention focussed on the resources of the Continental Shelf involves participation by the Geological Survey. About 70 percent of the rock formations visible on the land were once formed under the ocean. We look upon the shoreline not as a geologic or bureaucratic boundary but as a temporary position of the continental border. Our three-dimensional analysis must apply to the offshore area as well. This is praticularly timely because current annual production of petroleum from offshore locations exceeds $500 million and Federal royalties are approximately $90 million.

Over the past 10 years the roster of full-time scientists and engineers has decreased from 3,500 to about 3,200, or a drop of approximately 10 percent. But the quality of the staff has been substantially upgraded. Currently more than 400 are Ph. D.'s and some 40 percent have the master's degree. We continue to use the part-time employee mechanism to avoid duplication and to utilize existing facilities elsewhere. Historically the Geological Survey has had close ties with the universities. The Survey would like to expand its use of university facilities and personnel in pursuit of its mission.

In closing, I should like to comment on this year's justification. In its preparation we have kept in mind your suggestions given last year. Although the document is perhaps rather long in some respects, we hope it is better oriented toward your needs.

Also, you will note that in budgetary changes involving four activities, two are registered for decreases (geology and topography); the increase for conservation requested for 1967 over 1966 is $109,000 or about 2 percent; and for water resources the net increase is $1,197,000 or about 5 percent.

The chart showing distribution of total funds illustrates the complex character of the program and the substantial portion that derives from other agencies. The Federal program should expand in the future to parallel the economic growth of the Nation. Hindsight has shown that we have in fact contributed far more in economic benefits than the cost through appropriations.

Comparison of 1966 and 1967 Appropriations

Mr. Pecora. Although the Bureau request is an increase of $729,000, I should state that for two of the operating divisions out of four there are net decreases. For the Geologic Division there is a net decrease in new obligational authority of about $430,000, and for Topography a net decrease of about $150,000.

In the Conservation Division activity there is a net increase of $109,000, or roughly 2 percent of its budget, for increased work in supervision of mineral leases.

For the water activity there is a net increase of $1.2 million, and much of this is for State co-op matching funds.

ASSOCIATIONS ESTABLISHED DURING TENURE OF OFFICE

In general, Mr. Chairman, we recognize that the budget is very stringent because of the abnormal situation that exists in the budget throughout.

I would like to take this opportunity, if I may, sir, to report some of the associations that I have established over the first 5 months of my office.

I am very pleased to report above everything else the high regard that is held throughout the community for my predecessor, Dr. Nolan. He is well known to you, of course. He is still with us as a senior research geologist and will continue his work on mineral appraisals and geology in the Western States.

DEVELOPMENTS AND BENEFITS

I have encountered full endorsement throughout the country for the program that we have had over the years and the benefits that have resulted directly from our work.

In addition to our continued relationship to universities and industry, we have developed new principles, both in exploration and in geologic information itself, resource information on water, minerals, rock, and stone.

All of these directly feed into the economy and into the whole practice of science and technology, and as I look at the situation that faces us I would hope that over the succeeding years we may be able to increase our efforts because of the direct benefits that do come to the Nation.

Thank you, sir, for permitting me to make this statement. I should be very happy to answer any questions that may arise.

APPALACHIAN AREA PROGRAM

Chairman HAYDEN. The budget statement shows proposed reductions of $2,366,734 below the amounts appropriated for fiscal year 1966 activities. This reduction is offset by increases of $3,095,864 for the various activities in the coming year.

Of these increases, $836,000 are assigned to the several programs specifically for the Appalachian area, which will provide a total of $4,604,000 for Appalachia. The largest increases by activity over the whole survey are for water resources investigations and for conservation of lands and minerals.

TOPOGRAPHIC SURVEYS AND MAPPING

The two largest changes in your topographic surveys and mapping activity are shown as a decrease of $684,000 resulting from improved methods, and a $500,000 increase to accelerate mapping in Appalachia.

Would you please comment specifically on these two changes, indicating some of the improved methods and some of what is especially planned for Appalachia?

Mr. PECORA. Examples of improved efficiency are the use of more efficient map-compilation instruments; the expanded use of computers for the analytical aerotriangulation of ground survey control and for geodetic computations; the use of new and more efficient super-wide-angle photography as source data; and the extension of the use of the survey-developed airborne control survey system.

STRIP MINING

In our program for Appalachia we have planned to use facilities of all our activities as apply to the problem of the region, particularly first with respect to the strip mine problem.

We all recognize that in the national production of coal in the United States about 40 percent of coal production comes from strip mining, and this is largely from the midcontinent and the Appalachian region.

Normally in Appalachia the strip mines are deep excavations on flat or deeply dipping beds; some of the pits are as deep as 750 feet. This not only contributes to an unsightly landscape and adds to hazards of the land, but also contributes to pollution of streams. One of our problems, and a problem also of the Bureau of Mines, will be to determine, if we can, the substances in detail which under the action of the oxidizing atmosphere will contribute to the pollution of the streams by adding acids that normally are not added unless the beds are disturbed by the process of mining.

TOPOGRAPHIC BASE ENGINEERING MAPS

In addition, we would propose to make some detailed topographic base engineering maps in areas that do not now have these detailed maps. They are needed for planning and they are needed for the construction problems, and for decisions as to location of industries.

MINERAL EXPLORATION

We, of course, also propose to do a modest amount of mineral investigations. However, for next year this amount has been lowered in our budget. The supplemental appropriation last year was for $500,000 for expenditure in Appalachia and of this, $400,000 was toward the geological and mineral surveys and $100,000 for topography.

Next year the supplemental no longer exists and for mineral surveys $100,000 has been added to our base for work in Appalachia. This amount will be used to identify the most favorable prospects for early economic development of the dozens of materials which could contribute to industry in the Appalachian region. We hope to locate mineral resource targets which industry could then use for their own program of development.

This in general, sir, is the nature of the work that we plan to do in Appalachia.

POSSIBLE LENGTH OF PROGRAM IN APPALACHIA

Chairman HAYDEN. Do you look upon this Appalachian program as something continuing for a large number of years?

Mr. PECORA. I would say that it would have to be on a long-term basis. It is a large region and is under forest cover in many areas. Much work through the use of new techniques will have to be done to determine the nature of the structure and the resources.

Most of the work will be done on the surface. It seems to me, as we have shown in other places, that the great contribution to new resources will be by the application of new principles that we have developed and by developing still other principles during the course of the work for application in a third dimension. This is the key to all of our future discoveries of mineral resources throughout the country, if not the world.

WILDERNESS ACT OF 1964 PROGRAM

Chairman HAYDEN. What are your activities outlined by the Wilderness Act of 1964; and how much do you estimate is to be the cost of these activities in the coming fiscal year?

Mr. PECORA. Sir, the wilderness program as defined called for the Geological Survey and the Bureau of Mines to investigate mineral potential in a great variety of areas throughout the United States.

Last summer we were able to finish field studies of about seven of the more accessible areas, and we are preparing reports as requested by the Congress. In most of the other and more remote areas I must say that the work will be a lot more difficult than we had anticipated.

All of the areas present serious problems as regards accessibility. Some of these are heavily covered. They are much more expensive to traverse, yet we need to get into the country and make the mineral surveys for which we are held responsible by the Wilderness Act. In some of the areas the work will go much more slowly than it has gone in the first summer, but we have a program to meet and we shall follow the program with the budget given us.

From what we have learned already in some areas such as in the Pacific Northwest it would seem to me that perhaps the funds may be insufficient for the schedule and program to do the full job that the Senate would like to have us do.

REVISIONS OF TOPOGRAPHIC MAPS

Chairman HAYDEN. I note the statement that many of the 1:24,000 standard quadrangle maps of Appalachia were made 10 to 20 years ago and have never been updated. Is this peculiar to this area or is it true with regard to the whole of the United States?

Mr. PECORA. It is true with regard to the entire United States for both the 1:24,000 scale and the older maps at the 1:62,500 scale. In some remote areas, maps that were made as much as 50 or 60 years ago have not been updated, while in other areas enough urbanization and growth of industry have occurred to warrant revising the maps every 10 years. In such areas the maps should be brought up to date if they are to maintain their purpose of serving as the basic data for planning and development. The revision part of our topographic program is a necessary function of the activity, which needs to go on all the time.

Chairman HAYDEN. How long do you estimate will be required at the present rate of appropriation to bring all of your maps of the United States up to date?

SELECTION OF 7½-MINUTE QUADRANGLE AS BASE

Mr. PECORA. Well, sir, I would answer this in two parts.

In the first place, having selected the 7½-minute quadrangle as the optimum base for engineering and planning for development, and best utilization of land and other resources, the job now having highest priority, we believe, is to finish the coverage of the country at the 1:24,000 scale. This scale coverage is already complete for 34 percent of the country. At the present rate of about 3-percent additional map coverage at this scale each year, we hope by 1975 to have complete coverage, some of which would be at the 1:62,500 scale, and that early in the 1980's the 1:24,000 scale coverage would be complete for 49 of the 50 States.

Then as this gets done the revision work needs to be increased to catch up with the changes in the fast growing areas. We are far behind in our whole mapping program, unquestionably.

NATIONAL ATLAS OF THE UNITED STATES

Chairman HAYDEN. With regard to the National Atlas of the United States how much was appropriated in fiscal year 1966 and how much is requested in the fiscal year 1967 budget?

Mr. PECORA. May I ask Mr. Whitmore for those figures?

Mr. WHITMORE. For the present fiscal year, $335,000 was appropriated. For fiscal year 1967 we plan to use $565,000, in order to be on schedule for a fiscal year 1968 issue date.

FUNDS TO COMPLETE NATIONAL ATLAS PROGRAM

Senator MUNDT. Before you leave that, Mr. Chairman, may I ask how much do you think will be needed to complete the project of this National Atlas?

Mr. WHITMORE. We haven't determined yet what all of the costs are going to be for such as printing and binding, but we think we are still within the range of the last estimate, considering increases in costs of personal services.

RECEIPTS FROM SALES TO EXCEED COSTS

Senator MUNDT. Do you still hold to your belief that the Atlas will pay for itself through the sale of it?

Mr. WHITMORE. We think so; yes, sir.

Senator MUNDT. To confirm that guess you kind of have to know what it is going to cost, don't you?

Mr. WHITMORE. Yes, indeed. But a more critical figure is approximately how many copies will be sold. We have a reasonably close idea of cost, but we do not yet have a reliable estimate on the number of copies that will be required. However, if sales are in proportion to the sale in other countries, we will more than cover the cost, even on the first edition.

Mr. PECORA. I believe that the initial price that was set for the atlas is lower than the price for similar atlases in other countries, so that we would not feel embarrassed if the price were raised over our initial estimate.

Senator MUNDT. You would raise the price of the book?

Mr. PECORA. Yes, if necessary; also a very important aspect of this is that separate sheets or groups of sheets from the map are to be sold separately. This will be an added source of income.

I would say that we have no qualms about the sales end or the value of the atlas program. We will put some specific figures into the record if you would like.

Senator MUNDT. Very good.

(The information follows:)

1.	Previous estimate	$1,300,000
2.	Increases since previous estimate due to agencies not supplying data in acceptable form, and increases in salary and other costs	400,000
3.	Revised estimate	1,700,000
4.	Summary of expenditures by fiscal year:	
	Through fiscal year 1965	335,000
	Allowance for fiscal year 1966	335,000
	Estimated for fiscal year 1967	565,000
	Estimated for fiscal year 1968	465,000
	Total	1,700,000

Senator BARTLETT. Mr. Chairman.

Chairman HAYDEN. Senator Bartlett.

MAPPING PERFORMED BY CONTRACT AND BY GEOLOGICAL SURVEY

Senator BARTLETT. On that point, Mr. Director, may I ask how much of this mapping is done by contract and how much by the Survey itself?

Mr. PECORA. Many agencies contribute basic information to the Geological Survey. Some of this is in final form. Much of it is not, in which case we need to redraft parts of it and make it conform to the Atlas format.

Mr. WHITMORE. May I ask, are we speaking about the topographic mapping, or the Atlas?

Senator BARTLETT. Both.

Mr. WHITMORE. As for the Atlas, quite a fair amount. As for the topographic mapping, practically all aerial photography, helicopter services and the like are obtained by contract; at the present time very little of the rest of the work utilizes contract services.

Senator BARTLETT. And, on the Atlas mapping, how much of that is done by contract? What percentage would you say?

Mr. WHITMORE. Perhaps a fourth, depending on how much of the printing will have to be done under contact.

Senator BARTLETT. Thank you.

EARTHQUAKE AND VOLCANO STUDIES

Chairman HAYDEN. Your estimate for earthquake and volcano studies in the coming year is almost $1¼ million. Would you review

the work which you plan to do? Is there any way at all of predicting the occurrence of an earthquake?

Mr. PECORA. Sir, this is a complex problem. We plan to emphasize as much as possible our modest but intensive research program in the western earthquake belt, concentrating primarily on the San Andreas fault zone. I would say that we have made a good start in predicting earthquakes because we know much of the area where a high probability for earthquakes exists. This is the first step one needs to make.

Second, we have extensive records. A fault zone where an earthquake strikes may be active again. And, third, in mapping the geological structure of the United States, which has been one of our principal activities in response to our organic act, we have been locating the faults, the breaks in the crust of the earth, where earthquakes have occurred, and we will eventually have detailed structure maps of our country.

PREDICTION OF EARTHQUAKES

Finally, in order to predict an earthquake with more precision one would need to take the pulse of these active faults or inactive faults and determine if the two blocks which are rubbing together are active, are building up stresses and strains, or whether they are quiet. Part of the prediction program then will be a thorough geological analysis to determine the geological structure, the materials involved on either side of the earthquake fault, so that one can predict the response of those rocks and materials should an earthquake occur. Finally, it must be determined whether a fault is active or quiescent. All of these are problems of determination of the behavior of the crust of earth, whether it be earthquakes or volcanoes.

VOLCANO PROGRAM

We have done this with respect to the volcano program in our Hawaiian Volcano Observatory and over the past 10 years have achieved success in just this attempt. We would need to expand the volcano program for other volcanoes, particularly in the Western chain of Alaska down through our Western States, because some of these volcanoes are dormant.

In other words, there is a pulse that can be taken. There is a temperature relationship that can be measured. We would like to get evaluations of infrared measurements from highflying airplanes which would show changes between one flight and a later flight, let us say every month or every year.

RELATION OF VOLCANOES AND EARTHQUAKES

These are ways by which we can help determine the pulse of volcanoes. There is a parallelism of programs relating to volcanoes and earthquakes. These again are only parts of the total hazards of the land. We are dealing with rock bursts in mines. We are dealing with subsidence of the land. We are dealing with landslides, both on land and offshore, so the whole program is one of really trying to assess and determine the geologic hazards of the land through the many processes of study that we have developed.

Senator BARTLETT. Mr. Chairman, may I ask a question at that point?

Chairman HAYDEN. Certainly.

PREDICTION OF VULCANISM

Senator BARTLETT. Can you predict with any degree of certainty now when a volcano is liable to blow its top?

Mr. PECORA. Over at the Hawaiian Volcano Observatory we have a high degree of certainty. For the other volcanoes we do not because we have not put in the same instrumental and scientific study that we have in Hawaii.

Senator BARTLETT. But it can be done?

Mr. PECORA. We think it can be done.

AGENCY COORDINATION IN EARTHQUAKE PREDICTION

Senator BARTLETT. Now, on the earthquake program, isn't there underway or isn't there a plan to have underway a coordinated Government program in which several agencies would be involved as to prediction where and when earthquakes might occur?

Mr. PECORA. Yes, sir. Following the Alaskan earthquake of 1964, Dr. Hornig, the Science Adviser to the President, asked a panel of eminent scientists to make a study of this problem of earthquake prediction, and in the report which they submitted and which was made public by Dr. Hornig the recommendation was made for a major 10-year program of study of the earthquake prediction problem to be done through research and development.

COST OF PROPOSED EARTHQUAKE PREDICTION STUDIES

Senator BARTLETT. This would be quite costly, I imagine?

Mr. PECORA. According to the panel report the final figure, total over 10 years, was $137 million. I believe that is the correct figure.

Senator BARTLETT. Has any start been made on this?

Mr. PECORA. No start has been made on this, sir.

Senator BARTLETT. Any appropriations asked for the program in this budget insofar as you know?

Mr. PECORA. Insofar as I know, no appropriations have been requested. We are handling our aspect of it as we did after the Alaskan earthquake by shifting funds within our organization to meet the catastrophic problem that existed at that time and we would propose, sir, inasmuch as appropriations were given to us last year for earthquake studies, to continue this with the thought that perhaps the problem may come up for consideration by this committee and other committees.

Senator BARTLETT. That is, you proceed with this program even if it isn't the coordinated one that the group you mentioned recommended?

Mr. PECORA. The program that was recommended was acceleration of effort by all of those facilities currently engaged, in the Federal Government, State governments, industry, and in universities. It would be our approach, if funds were available in the future, to work

with the universities and with other institutions in order to have a full coordination of the program.

Senator BARTLETT. Let me ask you a question which I know will be difficult, perhaps impossible, to answer, but I would like to project it, anyway.

ADVANCE WARNING ON EARTHQUAKES

If substantial progress were made in this kind of a study, if you achieved a point similar to that which you have in Hawaii in respect to the volcanoes, how much warning do you think might possibly be given as to the imminence of a major earthquake?

Mr. PECORA. I don't know that I could answer at this time without having a group of records which we would have to build to determine the rate of activity along a fault plane. I think this is the key, and since we do not have this kind of a record I don't think it would be possible at this time to determine the free time one would have for prediction, but we certainly could indicate the fault zones that have a high pulse, a high activity, and these could be identified so that construction, for example, would not be done or it would be recommended that construction not be made across such a fault or adjacent to such a fault if the rock formations were of the kind that would respond with high hazards.

For example, construction put into bedrock would have less reaction to an earthquake pulse than that put on sand or gravel and clay, so that if we found a fault were active at high pulse and it were in soft ground we would issue a very strong indication that by all means this location would be much more dangerous than one in hard rock.

I think that until we get into the problem we would not have any confidence of what kind of leeway or leadtime we might have in predicting action, but we certainly could pick the hot ones.

Senator BARTLETT. Let me pursue this a bit further, although I should not in view of what you said.

Let us say that a community exists. It has been built, and the land is unstable. You have made your studies. You see an earthquake coming. In that case, do you think you could give enough warning to people so they could evacuate a seacoast town to avoid a tidal wave, for example?

ALASKAN EARTHQUAKE REPORT

Mr. PECORA. That is our hope, that we can get enough information bearing on the problem to be able to do this. With respect to the Alaskan earthquake, you may remember, Senator, that about 2 or 3 years before the earthquake occurred we issued a report which, in fact, indicated that there had been some reaction as a result of previous earthquakes and effect of slides in the city of Anchorage. This was pointed out to the local people and to the people in the construction business. These people apparently felt that this need not be taken into consideration.

Then, unfortunately, when the Good Friday earthquake did occur more of the same geologic failures occurred which were similar to those we had mapped earlier and, in fact, a very disastrous condition developed.

The reports of that are familiar to you, but you may not know, for example, that our chapters are now coming out on that earthquake, and on its relationship to the communities. The most recent publication is on Valdez, for example. Do you have it?

Senator BARTLETT. It was delivered to me personally by a neighbor, Henry W. Coulter, who is in the Geological Survey; yes.

Mr. PECORA. And Whittier. We have issued three chapters thus far. Others are in press at the Government Printing Office showing the effect of the earthquake on communities, on structures, and on the grounds that are involved.

EFFECTS OF EARTHQUAKES IN FAULT AREAS

I think this relationship of showing the effects after the earthquake is very important in determining what might happen in an area where an earthquake fault might be identified so that we can predict the kinds of things that may happen. As I read the story, construction is still going on in Anchorage on the same kind of ground, but in Valdez, however, the port of Valdez is moving about 4 miles away to safe ground which we selected at the request of the citizens of the city of Valdez.

Senator BARTLETT. That is right. Thank you very much.

Mr. PECORA. Thank you, sir.

ASSISTANCE FOR MINERALS EXPLORATION

Chairman HAYDEN. In the section of your budget statement on minerals exploration you say that the increased interest in gold and silver has more than doubled the number of applications being received for exploration assistance.

Do the explorations thus far indicate any appreciable increase in gold and silver resources?

Mr. PECORA. Yes, sir. I will make a general response first by saying that applications to the Office of Minerals Exploration, which was transferred to the Geological Survey last year, have more than doubled over the last year. One in particular near Creede, Colo., is a very interesting story, and I believe that in itself makes the entire program worthwhile.

SILVER ORE ZONE IN COLORADO

Specifically, two of our geologists prepared a report which was published in 1962. It showed a certain structural relationship where the Bulldog Fault Zone, parallel to the long-producing Amethyst Zone, might be worthy of exploration. A private group developed some funds, came to the Office of Minerals Exploration for additional funds which were provided, and with the joint funding did underground work and, in fact, located a major ore-bearing zone which will be a principle silver producer.

This has been going on over the past 2 years although the decision for the construction of a mill has not yet been reached. As you know, it takes time to determine the full dimensions of a deposit.

This information has come to the public through a few trade journals, but not in great detail. I feel free to mention that here is a case

where a contract will prove most beneficial in new production of silver.

SILVER AND GOLD ORE IN UTAH

This is directly related to the OME program as well as to our regular geologic program. In other parts of our continuing minerals investigation program the dimensional analysis of mineral districts has also proved most rewarding. In Tintic, Utah, for example, a few years back a major ore body of silver, base metals, and gold was found which gave rebirth to a dead district.

GOLD DEPOSIT IN NEVADA

In the case of the Carlin, Nev., region a new gold deposit was discovered as a result of our published information. Here is a new gold mine which is the second largest gold mine in the United States and the first major find in gold in the past 50 years. Thus, with or without the Office of Minerals Exploration, the combined effort of our geologic staff in determining the three-dimensional analysis of the crust yields targets, ideas, and suggestions which the mineral industry, with risk capital, develop and explore further to create new industries.

Chairman HAYDEN. Senator Mundt.

EXPLORATION IN BLACK HILLS, S. DAK.

Senator MUNDT. I want to ask a question about that exploration.

Chairman HAYDEN. Yes. Go ahead.

Senator MUNDT. Is any of this exploration for new metals going on in South Dakota out in the Black Hills?

Mr. PECORA. We do not have any OME contracts in South Dakota; no, sir.

SURVEY PARTICIPATION IN NEW MINERAL FINDS

Senator MUNDT. Is this exploration done with the industry on a reimbursable basis? Do you pay the industry, or do you do it yourself?

Mr. PECORA. Let us take it in two parts.

In the first part, which is part of our regular appropriated activity, this is done directly by us and the information is published so that it may be available to everyone in the public sector.

In the case of the Office of Minerals Exploration, which in effect helps the small miner; this is available to everyone in the industry and anyone can make an application for a contract on a piece of ground under the supervision of the individual or group.

INTEREST ON OME LOANS

However, there are some limitations, as you know. There currently is a poverty clause requirement that in order to have a contract valid the group making application must show that it cannot get funds from a bank. There is also a very high interest rate—these are facts which I am giving—6½ percent, which is a fairly high rate for a loan.

LIMITATION ON OME FUNDING

There is also a limitation at the present time of $250,000. Any one contract cannot exceed that amount. The present funding level of the program is about $1 million. According to these restrictions a major company which has resources of its own would not be able to come into this program, and a small company would have to be sure that it has a deposit that is worth taking a risk on, and we would have to pass on that.

SURVEY PROGRAM IN SOUTH DAKOTA

Senator MUNDT. In view of the fact that you are not doing any exploration out in the Black Hills and in view of the fact that that is now the home of the largest and richest gold mine in North America, and perhaps in the world, and in view of the fact that we continue to need more gold, I am wondering why no exploration is being done to the length and breadth of the hills because the gold resources which are known are fairly well concentrated in the Lead-Deadwood area.

Does this mean that it has all been explored and that is all there is?

Mr. PECORA. No, sir. I perhaps misled the Senator. In our regular program we do have a large program in South Dakota. I can give the figures. It is in the area of the Office of Minerals Exploration, which is the loan office, that applications have not been coming in.

We have a major program in South Dakota to the tune of about a half million dollars of our funds from appropriations being spent on work directly related to the State and some of this is matched by the State, too. I believe sincerely, Senator, that if you go hunting for an animal you find out what his natural lair and habitat is. With the major gold mine in the United States located in South Dakota and with the rocks favorable for gold and other minerals, I am confident that one can find additional mineral resources if one seeks them.

Senator MUNDT. I misunderstood your first answer because I thought you were not doing any work out there, because I quite agree with you this is an environment which has been quite productive.

Mr. PECORA. Yes, sir.

Senator MUNDT. And has not been thoroughly explored as far as I know. Its production is pretty well limited in one area of the long chain of hills that go from the north end of the State to the south end of the State so it looks like a happy hunting ground.

Mr. PECORA. It is by our analysis, as are certain districts in many other States, too, but with the limitation of our budget and program one has to make value judgements in distributing the funds across the country. We only spend it in support of the national program.

ABSENCE OF LOANS FOR BLACK HILLS EXPLORATION

Senator MUNDT. If I may redefine your answer, from my own understanding what you have said is you are not making many or any loans——

Mr. PECORA. Any loans?

Senator MUNDT. As to private concerns and industries out there, primarily because nobody has been asking for them?

Mr. PECORA. That is correct.

GEOLOGICAL SURVEY MAPPING AND SURVEYS IN BLACK HILLS

Senator MUNDT. But that you are on your own as part of your Geological Survey operation expending about a half million dollars a year hunting for new minerals in the area?

Mr. PECORA. This includes topographic mapping, geologic mapping, and mineral surveys, and water surveys; yes.

Senator MUNDT. How much of it is in minerals exploration?

Mr. PECORA. $150,000 for minerals investigations and geologic surveys. This is peanuts, Senator with respect to the possibilities a mineralized State like this has not only in the hard rock, lode mining, but also in the soft placers and in the bedded deposits that are in the sedimentary sections, but then the same story can be told for each State.

Senator MUNDT. It looks to me like minerals exploration on that chart shows nothing.

Mr. PECORA. Minerals exploration refers to the Office of Minerals Exploration. This is the loan program. I am sorry.

Senator MUNDT. That is quite all right.

Thank you, Mr. Chairman. I understand, but I do think it is a woefully inadequate program.

Mr. PECORA. Yes, sir.

BUDGET REQUEST REDUCED BECAUSE OF LEFTOVER FUNDS

Chairman HAYDEN. Let me ask this question. If the number of applications for assistance is increasing, why is the amount asked for financial assistance decreased below the fiscal year 1966 level?

Mr. PECORA. This is the sort of value judgment one makes because we had some money left over last year unused and this stayed in the pot. It was more or less agreed upon earlier that the pot would stay about a million dollars and so we didn't ask for more because we could meet this figure.

Chairman HAYDEN. Senator Bartlett.

GOLD DISCOVERY AT CARLIN, NEV.

Senator BARTLETT. You told us, Mr. Pecora, about the discovery of a major silver deposit in Colorado.

Mr. PECORA. Yes, sir.

Senator BARTLETT. Will you tell us something about the major gold discovery at Carlin, Nev.?

Mr. PECORA. Yes, sir. Carlin, Nev., is in the northern part of the State in what we call the Great Basin country west of Elko and east of Winnemucca and Battle Mountain.

The Carlin district is a new gold district. As a result of our geological studies in the field which have been going on for a number of years, our field parties reported a three-dimensional structure which proved favorable to a new concept here: that segments of the crust of the earth, during crumbling of the earth, overrode other segments and concealed what were gold-bearing regions.

NEW METHOD OF FINDING GOLD-BEARING ORES

Invisible volcanoes at depth streaming up hot fluids, hot gases, carrying the metals formed what we call a halo, an alteration halo, in the

rock, and this alteration material can be seen if one happens to observe it. It is different from other rock, but in this case this material contains invisible gold. The gold-panning technique would show nothing.

Now, the normal habit of the prospector is to take his gold pan and to break up the rock or take the gravel and he can get some colors, or he can take a sample and send it to the laboratory and get a fire assay. In this case however, because of some new techniques that we have developed in chemical analysis which make it possible on the spot rather quickly to determine at very low cost values of gold, whether it is visible or invisible, down to a couple of cents per ton, it was possible for us to show that this one area had a possibility in gold if it could be explored in great depth and great breath. This information was made available through a publication.

EXPLORATION BY NEWMONT CO.

Subsequent, the Newmont Co. acquired the land and spent a considerable sum in exploration. The chairman of the corporation in a public statement at the mine dedication last year called attention publicly to the contribution made by the Geological Survey and made a statement which was issued to the press that about $125 million worth of gold had been blocked out; that the value of this is about $12 per ton; that a mill was going to start in production; and that they would continue their exploration.

This would create a new industry that would extend beyond 10 years, probably in a 10- to 20-year range for just this block of ground. But as more exploration develops more ground, of course, the industry would extend for a longer period. The important thing here to me is that a new technique that identified invisible gold was involved in this whole program and we feel sincerely that we can apply the same technique and develop new techniques in other places in the basin range as well as the whole country, not only for gold, but also for other minerals and metals.

Senator BARTLETT. This is the first hopeful note about gold mining that I have heard for years.

Mr. PECORA. I think it is the first outstanding gold discovery for about 50 years.

Senator BARTLETT. Very encouraging.

ANNUAL PRODUCTION OF CARLIN MINE

Senator MUNDT. How much is the Carlin mine producing annually?

Mr. PECORA. Something in the range of about 2,000 tons a day. They counted on 10 to 20 years to use up $125 million worth of ore. This was the intent.

Senator MUNDT. Between $5 and $10 million a year?

NATIONAL GOLD PRODUCTION

Mr. PECORA. Yes. Our national gold production at the present time is between $50 and $55 million a year and less than half of this comes from gold mines and placer mines per se, and the remainder comes from byproducts of copper mining, silver, et cetera.

EXISTING EXPLORATION CONTRACTS

Chairman HAYDEN. How many DMEA exploration contracts are still in existence; and how long do you expect to have these contracts to supervise?

Mr. PECORA. Well, sir, originally I think there were something like 4,000 applications that we investigated. At the present time we have still in force about 170 contracts—168 I think is the correct figure—and the number will be diminished each year; but it would extend to the year 1989 before they are all complete. The year 1989 would be the completion date on the contracts still in force.

WATER RESOURCES INVESTIGATIONS

Chairman HAYDEN. There is an indication that the Federal portion of the water resources investigations activity will be increased by $519,696 in fiscal year 1967. Where is this increase to be applied?

Mr. PECORA. Mr. Hendricks, our Acting Chief Hydrologist, will answer that.

Mr. HENDRICKS. You refer, I think, sir, to the increase in the Federal program which is divided principally into two parts. One is for flood hazard mapping in the Appalachia program under design by the Appalachian Regional Commission, and, second, further implementation of the Geological Survey's responsibilities for water data acquisition coordination under what is known as Bureau of the Budget Circular A–67.

FLOOD AND DROUGHT PROBLEMS

Chairman HAYDEN. For flood and drought problems you indicate a need for $432,000 in the coming year. This is an increase of about $290,000 over the amount which was available during this year. Of the increase, $225,000 is for flood plain mapping in Appalachia. What is the total amount to be available in this area?

Mr. PECORA. May I again ask Mr. Hendricks to answer that question? Mr. Hendricks is our Acting Chief Hydrologist.

Mr. HENDRICKS. $225,000 is the total amount to be available to the Geological Survey for flood plain mapping in Appalachia. In addition, however, $1.6 million of the Survey's regular program for 1967 is related to water resources in Appalachia.

Chairman HAYDEN. What drought-related problems are to be studied with the remainder of the increase?

Mr. HENDRICKS. Work to be accomplished with the remainder of the increase will be on the hydrology of drought effects, such as those being experienced in the Northeast. Emphasis will be placed on the techniques of low flow and water quality forecasting.

PHREATOPHYTE STUDY PROJECT, ARIZONA

Chairman HAYDEN. With regard to your phreatophyte study project in the San Carlos Reservoir in Arizona, how much do you have budgeted in fiscal year 1967?

Mr. PECORA. Mr. Hendricks is our specialist on this problem and I would like him to answer the question if I may, sir.

Mr. HENDRICKS. May we include that specific figure for the record, sir?

Chairman HAYDEN. That may be done.

Mr. HENDRICKS. All right.

(The information follows:)

$180,000 of the requested appropriation for fiscal year 1967 is budgeted for the Survey's phreatophyte project to evaluate water losses in the project area.

STATUS OF GILA RIVER PHREATOPHYTE STUDY

Chairman HAYDEN. What is the status of this study at the present time?

Mr. HENDRICKS. The first phase of the Gila River phreatophyte project, which is the preclearing evaluation of the consumption of water by the existing phreatophytic vegetation, will be completed this fall.

After the clearing of the phreatophytes from the project area then the second phase of the project will begin, which is the evaluation of the losses from the replacement vegetation. The difference, of course, between the water use by the existing vegetation which is being determined in the first phase and the use of water by the replacement vegetation which we evaluate in the second phase will be the savings accomplished.

It is expected and needed that in fiscal year 1967 the phreatophytes should be removed from the project and from the contiguous areas.

I would like also to call your attention to the $200,000 that was budgeted in fiscal year 1966 for the removal of sediment and other debris from the project channel area in the Gila River which was interfering with the prosecution of the project.

The floods of last December interrupted this work, inundating part of the project area, and, therefore, this work cannot be completed this fiscal year. We expect that approximately $75,000 of the appropriated money will be returned to the Federal Treasury, sir.

AREA COVERED BY PROJECT

Chairman HAYDEN. Does the research project encompass the whole reservoir area or only part of it?

Mr. HENDRICKS. The project area, sir, includes the Gila River section of the tributary area immediately above the reservoir. When the phreatophytes are cleared, because of the very close interrelationship between the loss from the phreotophytes within what has been commonly known as the project area and the contiguous areas, which includes the upper part of San Carlos Reservoir and the lower part of San Carlos River, we should like to have the clearing extended to include all of that contiguous area.

AUTHORIZATION FOR CLEARING GILA RIVER CHANNEL

Chairman HAYDEN. I see. As you may know, there exists authorization for the Corps of Engineers to clear the channel of the Gila River but at the present time it is not possible for the Corps to go ahead with that work.

What will be the effect on your research work if the channel clearing is not accomplished?

Mr. HENDRICKS. Sir, our project would be interrupted at the midpoint and reach no conclusive basis whatever for judging the magnitude of savings that could be effected by removing the phreatophytes if this clearing does not take place.

Chairman HAYDEN. I am advised by the Corps of Engineers that it has prepared specifications for the clearing as well as cost estimates. Have these by any chance been made known to the Geological Survey?

Mr. HENDRICKS. Yes, sir. The Geological Survey, the Bureau of Indian Affairs, and the Corps of Engineers have collaborated in the preparation of specifications and of the estimates of cost to accomplish the clearing of the phreatophytes.

Chairman HAYDEN. What is the estimated total cost of clearing the channel?

Mr. HENDRICKS. The total cost over a 5 year period, sir, for clearing phreatophytes from the channel and flood plain is estimated to be $2,109,000.

CONTRACTING WITH SAN CARLOS APACHE INDIANS FOR CLEARING THE CHANNEL

Chairman HAYDEN. Could the Geological Survey do the work either by itself or by contracting for its performance with the San Carlos Apache Indians? I understand that certain clearing work for the research project is now done by contract with the Indians.

Mr. HENDRICKS. The present thinking, sir, is that the Bureau of Indian Affairs would perform the general supervisory and on-the-ground planning functions under a repayment plan, that we would contract with the San Carlos Apache Indian Tribe for those parts of the work which they are prepared and able to accomplish.

DURATION OF RESEARCH PROJECT AND ESTIMATED YEARLY COST

Chairman HAYDEN. How much time would be required to do the channelization work and does that fit in with the projected length of your research project which, I understand, is scheduled to come to an end in 1971?

Mr. HENDRICKS. The phreatophyte removal is planned to be in synchronization with our loss evaluation project and would extend over the 5-year period that I previously mentioned.

Chairman HAYDEN. If you did the work, how much would be necessary in the coming fiscal year?

Mr. HENDRICKS. The estimate for 1967, sir, is $651,000.

AUTHORITY FOR CONTRACTING FOR WORK OF CHANNEL CLEARING

Chairman HAYDEN. Do you have legislative authority to do the channel clearing work either yourself or by contract with the Bureau of Indian Affairs?

Mr. HENDRICKS. Yes, sir, we have all the authority we presently need except to contract with the Apache Indian Tribe, and this may be accomplished either by having the Secretary of the Interior exercise his

authority in execution of the specific contract or for the Secretary to redelegate the authority to the Geological Survey. It can be handled in either manner.

Chairman HAYDEN. Thank you.

INTERNATIONAL HYDROLOGICAL DECADE

What is the International Hydrological Decade; and what do you plan by way of program expansion for which you ask an additional $38,000?

Mr. HENDRICKS. Sir, the expansion in this program will constitute principally three parts. This is a very small increase so that the operation in any one of these three categories will not be very ambitious, but we plan, as part of the program for determination of the worldwide salt and water balance, to determine the sediment and chemical discharge of 10 of the principal rivers in the United States. That's the first segment of the work.

In a second segment we plan to expand the instrumentation on U.S. glacier and snowfields as a part of the worldwide effort to evaluate the water resources in ice and snow.

In the third phase, which is minor, we will support the National Coordinating Committee which is sponsored by the National Academy of Sciences.

PARTICIPANTS IN EDUCATION AND TRAINING PROGRAM

SELECTION

Chairman HAYDEN. How are participants in your education and training program selected?

Mr. HENDRICKS. Sir, we have two kinds of programs. One is under the Government Employees Training Act. We require our people who participate in that program first to be qualified to meet the requirements of an educational institution for advanced work.

This means having the necessary course background, plus the necessary language background. Then we examine their record of performance with the Geological Survey and pick from the lists of applicants for this kind of assistance those that seem in our judgment to have the best combination of academic record plus work record.

EMPLOYEES OF GEOLOGICAL SURVEY

Chairman HAYDEN. Do they go to school on scholarships or are they employees of the Geological Survey for whom time is made available for study?

Mr. HENDRICKS. Under the Training Act they are employees of the Geological Survey during the time they are doing their training.

Mr. PECORA. Mr. Chairman, may I add one comment to this general study because it is very important? Our talent for our professional work comes from the campus. In many cases the schools do not educate and train the individuals in our specific and specialized kind of work so we have to add some training on top of what they have and that is part of this program.

INTERMITTENT EMPLOYEE SYSTEM

In other places of work the universities contribute to our accomplishment of mission by a program which we call our intermittent employee system.

Here young graduate students, undergraduates, and young members of the faculty participate in our program on a part-time basis and in this process we have a chance to contribute to the student and the school, on an earn-while-you-learn basis. He is training himself by this procedure to have the talents then which can get him into the national picture, either by joining a State survey, the Federal survey, a university, or a company; so that our participation in the overall training is twofold and two-pronged.

One is once we get them we sharpen them up, and the other is by participating in the university program, which we have done, as you know, since our very beginning of organization.

RECLAMATION OF STRIP MINED AREAS

Chairman HAYDEN. In your conservation activity I note a reference to plans for reclamation of strip mined areas. Just what do you do in connection with the strip mining problem?

Mr. PECORA. If I may, I will ask our Chief of the Conservation Division, Mr. Duncan, to step forward.

Mr. DUNCAN. The stripping of public lands and Indian lands in the West is, of course, causing unsightly scenes along the roads and highways, and contrary to the departmental program for repair. They also could in time cause pollution of streams in the western area.

However, right now they are limited in extent and so far as we know they have caused no acid pollution, but the work is increasing so much on stripping that enormous areas within the next 10 years will be stripped in the West, especially in western New Mexico and in your State of Arizona, and southeastern Utah and western Colorado.

It is a program that we must do as mining progresses to protect minerals, to protect other resources, and to assure some, if you want to say, beautification of the country. Even though the mining is in an arid area, proper restoration eliminates the chance of pollution and should help on any bad effects on drainage areas.

RESTORATION OF STRIP MINES TO GRAZING LANDS

Chairman HAYDEN. With respect to grazing lands that have strip mines, is there any way of restoring them to growing grass again?

Mr. DUNCAN. That is a problem that is being undertaken now by State authorities, and I believe the State Agriculture Department in North Dakota is trying to find a grass which can be developed or a forage material that can be used in those arid areas. We have found further east in Oklahoma that it is better not to completely level off the ground because the valleys hold water or the area develops a better forage or tree crop.

In the West it is a question just what can be planted.

Deferring Publication of Maps and Reports

Chairman Hayden. Why are you proposing to defer publication of some of your maps and reports?

Mr. Pecora. These maps in particular refer to work done by the Conservation Division, not the Geologic Division. The increasing demand activity in leasing and minerals classification of Mr. Duncan's division has risen so sharply that he has had to put something aside, and that which he has put aside is based on a value judgment to hold back publication of some of his reports, perhaps for another year, to get the other work done because the other work is regulatory and needed on the spot.

It is a difficult decision to make and it had to be made.

Status of Construction at Nuclear Research Laboratory in Denver

Chairman Hayden. What is the status of the nuclear research laboratory at Denver for which construction funds were provided 2 years ago?

Mr. Pecora. This building is now under construction, but it is my understanding the cornerstone has been or is about to be laid and we expect it to be ready for occupancy this fall.

It is my further understanding that everything is proceeding properly.

Site for New Geological Survey Central Headquarters Building

Chairman Hayden. Last year, in response to my question, your predecessor advised that a new central headquarters building for the Geological Survey in Washington was delayed pending acquisition of an area in Maryland known as the Gold Mine Tract. Funds have been provided for the purchase of that area.

Do you have any further information regarding the status of this building?

Mr. Pecora. Sir, Secretary Udall has made arrangements with the General Services Administration for inspection and evaluation of other sites. It is my understanding that this is now in a stage of deliberation between the Secretariat and General Services Administration and I believe Secretary Udall will report on this to this committee in the near future.

Lead and Zinc Stabilization Program

Chairman Hayden. There will be placed in the record the justification statement for your request of $390,500 to carry on the lead and zinc stabilization program for the coming year.

(The justification follows:)

The estimate for 1967 is $390,500, an increase of $141,200 over 1966. The increase consists of:

(1) An increase of $140,000 for stabilization payments.

(2) An increase of $1,200 for administration.

Analysis by activities

	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
1. Stabilization payments	$74,155	$200,000	$340,000	$140,000		$140,000
2. Administration	47,759	49,300	50,500	1,200		1,200
Total obligations (financed from prior year unobligated balance)	121,914	249,300	390,500	141,200		141,20

Estimated requirements for stabilization payment funds stem from two factors: (*a*) estimated production by the small producers; and (*b*) differential between market prices for the metals and the base price fixed by the act.

	Actual, fiscal year 1965	Estimate, fiscal year 1966	Estimate, fiscal year 1967
Estimated stabilization payments:			
Lead	$27,380	$74,000	$144,000
Zinc	46,775	126,000	196,000
Total estimated stabilization payments	74,155	200,000	340,000

Estimated stabilization payments are as follows:

	1966		1967	
	Lead	Zinc	Lead	Zinc
Short tons	3,084	9,000	6,000	14,000
Rate of subsidy (per short ton)	$24.00	$14.00	$24.00	$14.00
Total stabilization payment	$74,000	$126,000	$144,000	$196,000

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
OBLIGATIONS BY OBJECTS				
Allocation to General Services Administration:				
11 Personnel compensation	$19,857	$20,500	$21,200	+$700
12 Personnel benefits	1,442	1,600	1,600	
23 Rent, communications, and utilities	2	50	50	
24 Printing and reproduction	226	300	300	
25 Other services	26,015	26,200	26,700	+500
Services of other agencies		500	500	
26 Supplies and materials	217	150	150	
41 Grants, subsidies, and contributions	74,155	200,000	340,000	+140,000
Total obligations	121,914	249,300	390,500	+141,200
PROGRAM AND FINANCING				
Total obligations	121,914	249,300	390,500	+141,200
Recovery of prior year obligations	−65,149			
Unobligated balance available, start of year	−2,992,517	−2,935,752	−2,686,452	+249,300
Unobligated balance available, end of year	2,935,752	2,686,452	2,295,952	−390,500
New obligational authority				

SUPPORT FOR PRICES NOT NECESSARY

Chairman HAYDEN. This is $140,000 more than the estimate for this year. Do you have any particular discussion of the program?

Mr. PECORA. Sir, in the past 2 years it has been unnecessary to use the authorization under this program because the price of lead and zinc has remained above the price that was picked as a base; but if the price should drop we would need to support the small producers. This was the only reason for putting it in.

It would not be expended unless the characteristics specified in the act were effective.

Chairman HAYDEN. Senator Bartlett, do you have any questions?

OIL SHALE DISCOVERY IN ALASKA

Senator BARTLETT. I have a few questions, a very important one at the outset, extraordinarily important.

You mentioned the discovery of rich oil shale in Alaska.

Mr. PECORA. Yes, sir.

Senator BARTLETT. I wonder if you would give us some details relating to that?

Mr. PECORA. Yes. As part of our program in Alaska some beds of very rich oil shale were encountered during the course of fieldwork. The individual bed reported at the time was not thick. I think it was measurable in a few feet, but it was one of the richest producing organic beds that we have encountered, something in the order of 50 percent by weight in one sample.

About 50 percent by weight of one sample was the petroleum residue material, and in addition to this the ash contained a great number of minor elements which we had not suspected existed in this kind of material in Alaska before. We have begun a special field program to investigate this district further to see whether or not this bed might thicken elsewhere or other comparable beds might exist.

Senator BARTLETT. You don't yet know the extent of this deposit?

Mr. PECORA. No, sir; we are unable to evaluate the total picture, but we are happy that we have something to work on of this character.

Senator BARTLETT. And you are going to continue, as you say, your work?

Mr. PECORA. Yes, sir. Part of this will be done on our own funds and part of it in cooperation with the Naval Petroleum Office.

Senator BARTLETT. When was this discovery made?

Mr. PECORA. It was reported first through an open file release in 1965, and a press release on the discovery was issued a month ago.

ALASKAN OIL SHALE IN NAVAL PETROLEUM RESERVES

Senator BARTLETT. From what you say about the interest of the Office of Naval Petroleum Reserves I infer that this deposit lies within——

Mr. PECORA. Naval petroleum reserves, yes, sir; and they are interested and likewise are encouraging us to put some more people to the task of evaluating it.

Senator BARTLETT. It is in the Brooks Range?

Mr. PECORA. It is on the north slope of the Brooks Range; yes, sir.

Discovery of Buried River Channel Near Salisbury, Md.

Senator Bartlett. Would you please give us some more particulars about the discovery of the buried river channel near Salisbury, Md?

Mr. Pecora. Yes. This has been a very nice piece of work because it required a neat sophisticated analysis of a set of conditions which normally would have been overlooked. In the course of field investigations done by the Federal survey in cooperation with the State survey it was noted that certain of the drainage courses did not respond in a normal fashion when they were measured along the course. This indicated perhaps a loss of water in the flow characteristics and led our group to make vertical drill holes to determine what was beneath the surface which would cause this. The drilling led to the discovery of an ancient river channel covered by 200 or so feet of marine sediments, and the restoration of the picture is as follows: In the ice age, when the seashore line was farther out and the shelf was exposed to the atmosphere, the warming situation took place and ice melted faster. Melting of the ice provided floods of great character.

High quantities of water would flow out, and these formed channels which cut into the existing terrain. Of course, the melting of the ice put water in the ocean, the water level rose, and so the sea came over and covered this area, concealing sediments in this ancient channel.

This one channel in particular near Salisbury, Md., we believe can be traced in a sinuous pattern for about 40 miles and has a large quantity of water storage characteristics, enough to support an increase in population of hundreds of thousands of people.

It is our belief that there are others like this here and elsewhere and we intend to devote some efforts in trying to find some of these.

Senator Bartlett. This water doesn't flow? It is just stored?

Mr. Pecora. It is a free flow because there is a hydrostatic head, with rainfall on the land filling it in, and the water moving down channel toward the original shoreline. It is a constant flow of water which is provided here.

It is a major discovery, sir. I wish it were possible in the Southwest, also, where we could use that kind of water.

Study of the Oceans

Senator Bartlett. Dr. Pecora, not too long ago a paper ran an editorial entitled something like this: "What Comes Next After Space?"

I wrote a letter back to the editor and I said the answer is obvious—a study of the oceans, a discovery of what wealth the oceans hold for us that could be redeemed immediately and the enlargement of the area of our scientific knowledge.

I am excited to read your report concerning marine geology because it is indicated here that you have already launched upon this endeavor, and will you agree with me that there is a vast potential on the Continental Shelves and elsewhere in deeper waters for vast mineral deposits and other treasures as yet unexplored?

Mr. Pecora. Without any reservation I would agree with the Senator. It has been our belief and we have held this for many, many years that a great deal of work can be done beyond the continental

margins. The shoreline as we look at it is a temporary thing. Ten thousand years ago it was way out. We don't know where it will be in the future.

SEDIMENT OFF ATLANTIC AND GULF COASTS

We feel, for example, on the east coast in particular, the Atlantic coast and gulf coast, there is much sediment off shore under water that is the same as sediment on shore, practically a 1-to-1 ratio, and the on-shore, the above-water, Coastal Plain deposits have fabulous mineral resources at the present time, oil, and gas, and coal, and phosphate in particular.

RECENT PHOSPHATE FIND IN NORTH CAROLINA

A recent find of phosphate in North Carolina, which will be the principal industry in North Carolina within a decade, is within this group of deposits. We feel further that in the west coast offshore and on the Alaskan shelf there is great potential not only for the mineral fuels, but also resources.

These could be resources that are formed as part of a marine process; that is, the phosphate nodules or the formation of saline deposits. This could also be a part of the process of concentration of heavy minerals such as gold or tin placers, or ilmenite sands, or magnetite, or platinum; things of this kind.

There is great potential that exists offshore, and we are just about touching it.

PUBLIC AND PRIVATE OFFSHORE DEVELOPMENT

Senator BARTLETT. My understanding is that private industry already has a very active interest in this and private industry has proceeded in a preliminary way to exploit some of these resources; is this correct?

FEDERAL ROYALTIES FROM GULF COAST AREA

Mr. PECORA. In the gulf coast, of course beyond the 3-mile limit—this is the public land area—we supervise the drilling and leasing, and the royalties just from this area alone are——

Mr. DUNCAN. Approximately $90 to $100 million.

Mr. PECORA. $90 to $100 million this year just in that portion of the coastal area. We haven't touched the Atlantic or the west coast beyond the 3-mile limit, but within the 3-mile limit there is activity going on.

EXPLORATION FOR MINERALS OTHER THAN OIL AND GAS

Senator BARTLETT. The interest to which I referred was for minerals other than oil and gas. This is present, is it?

Mr. PECORA. The interest is present in industry as well as on our part. Exploration on the west coast, for example, has centered around the manganese nodules in particular. We have recognized places offshore on the Atlantic coast on the shelf where we have had a program for the last 2 or 3 years with the Woods Hole Oceanographic Institution.

We are interested very greatly in that and we will pursue it in the next year or two.

COOPERATION IN OFFSHORE EXPLORATION WITH OTHER AGENCIES

Senator BARTLETT. And it is a cooperative effort, I assume, with the Bureau of Commercial Fisheries in all of this?

Mr. PECORA. The Bureau of Mines, Bureau of Commercial Fisheries, and Geological Survey all have an interest in offshore investigations. Ours particularly is below the sea bottom in the resources of the solid shelf, and fisheries, of course, would be above.

Senator BARTLETT. I applaud the Survey for its progressive approach to this. It is highly important.

Mr. PECORA. We would like to do more, sir. It needs to be done.

Senator BARTLETT. I think so. Thank you.

Chairman HAYDEN. Senator Byrd?

ACID POLLUTION OF STREAMS IN APPALACHIA

Senator BYRD. Dr. Pecora, does present knowledge permit an evaluation of the degree to which restoration of strip-mined areas will alleviate the pollution of streams in Appalachia?

Mr. PECORA. In my opinion, Senator, present knowledge is not sufficient. There is a broad area of research that needs to be done on the source of the materials that are yielding the acid pollution.

Basically we are dealing here with the addition of acid ingredients into the water of the streams. We have some ideas as to the minerals which are in the sulphide state, for example, and which when exposed to the atmosphere will break down and yield acid ingredients, but I believe a real program needs to be done in the study of the source materials and the effect of disrupting the natural environment through the course of mining.

GROUND WATER ACID CONTENT

For example, much of the ground water which seeps into the streams from undisturbed areas contains acids which the ground waters have picked up from the subterranean areas; but there is a neutralizing effect which goes on in the environment so that there is equilibrium and no major problem results. Suddenly when the underground mine dumps or strip mines are opened for the rain and atmosphere to operate upon, this adds an acid impulse to the streams which nature cannot neutralize within the source area.

I believe this whole system needs to be studied. It will be studied both by the Geological Survey and the Bureau of Mines in this area.

ACID MINE DRAINAGE PROJECT, ROARING CREEK, W. VA.

Senator BYRD. Are you familiar with or are you working in conjunction with the pilot acid mine drainage project in the Roaring Creek area of Randolph County, W. Va.?

Mr. HENDRICKS. Yes, we are cooperating with the Public Health Service and Bureau of Mines in this project.

MINE WATER POLLUTION

Senator BYRD. Many people are concerned with mine water pollution, but overall progress seems slow. In your opinion, what change

in emphasis or what appropriate steps should be taken to combat the overall problem of mine water pollution?

Mr. PECORA. I would emphasize a comment I made earlier, Senator, and say we must increase our research efforts to determine what it is that is causing the pollution. I am reminded of the situation in the South Pacific when the skin eruption called yaws was encountered. We could treat them, but until we found out what caused them we were unable really to solve the problem. The same principle operates here.

We need to find the basic causes of mine drainage pollution and determine it quantitatively and then we can come up, I think, with a solution.

NO FUNDS IN 1967 BUDGET FOR ADDITIONAL POLLUTION RESEARCH

Senator BYRD. Does your fiscal year 1967 budget estimate make provision for this additional research that you feel is needed?

Mr. PECORA. Unfortunately, it has not been included in the budget. We are planning to include this program in our budget proposal for fiscal year 1968.

Senator BYRD. For fiscal year 1968?

Mr. PECORA. We think it is badly needed and we are, of course, doing some work on a peripheral basis related to the specific problem, both in water and mineralogy. We would be very happy to furnish for the record, Senator, a summary of the program as we see it, present and future, if you would like.

SUMMARY OF SURVEY PROGRAM ON APPALACHIA MINE POLLUTION

Senator BYRD. I wish you would. Would you indicate where the research would largely be conducted?

Mr. PECORA. Yes.

Senator BYRD. And the estimated cost, and your schedule of activity and progress, and so on that you would hope to achieve?

Mr. PECORA. Thank you. We would be very happy to do that.

(The information follows:)

The Geological Survey has developed a program of streamflow restoration through mine-pollution investigations in Appalachia, which it plans to submit with the 1968 budget. The program is designed to assess the geologic, hydrologic, geochemical, and biochemical factors that cause, prevent, inhibit, and govern the generation of mine pollutants in natural coal environment. It includes the following closely integrated, regional appraisal, detailed site appraisals, and laboratory studies:

1. Regional appraisal of all geologic, hydrologic, and geochemical elements in the coal-bearing parts of the Appalachian region that bear on polluting mine-water discharge. Emphasis will be on the northern States of the region where the pollution problem is most acute. These appraisals will require about 4 years.

2. Detailed investigations at selected coal mines of geologic, hydrologic, geochemical, and biochemical factors that affect the generation of pollutants and their discharge to surface drainage systems. This phase of the program will require about 3½ years.

These investigations will be conducted at three sites, two in the bituminous coal field and the other in the anthracite coal field. Mines in Harrison County, W. Va., and Northumberland County, Pa., contribute large volumes of mine pollutants to the surface drainage. Selected mines in or near these counties will be intensively studied to determine the causes and effects of pollution, and methods of preventing or controlling it.

The streams in the Richland area of Tazewell County, Va., contain little or no mine-derived polluting substances, even though this is an active mining district. Reasons for the lack of pollution will be ascertained for application to prevention of pollution elsewhere in the Appalachian region.

3. Environment-oriented laboratory studies to define precisely the basic mechanisms, kinetics, and reactions of pollutant generation. Laboratory studies will be conducted conjunctively with the regional appraisal and detailed field investigations in order that each phase of the program benefit immediately from findings in other phases. This phase of the program will require about 5 years.

Fundamental knowledge necessary to achieve success in abating mine pollution will be provided by the program. For example, it will fill deficiencies in knowledge about (1) the basic mechanisms, kinetics, and chemistry of processes that generate pollutants in natural coal environments, (2) the role of bicarbonate-rich and alumina-rich ground water in influencing the yield of dissolved minerals and acid, (3) the pollution-assimilation characteristics of different watersheds, (4) the role of micro-organisms and naturally occurring organic substances in the rocks in catalyzing or buffering the decomposition of sulfuric substances in different rocks and environments, (5) effect of reducing inflow of water to a mine as compared to reductions in load of the mineralized effluent, (6) the role of differing rock chemistries and water qualities in influencing the quality of the effluent, (7) the differences between acid-free and acid-producing areas, and (8) the significance of petrologic, mineralogic, lithologic, structural, and geochemical variations as related to the generation of pollutants.

New Approach to Survey Program

Mr. Pecora. The Geological Survey program will cost about $5.3 million for the 6-year period of investigation. Yearly costs will be, initially, $1.3 million and will gradually reduce to $150,000 in the final year.

The approach to the Survey program proposal is new and is unlike current and past investigations of mine pollution which have emphasized control and treatment through engineering works. The program objective is to provide an understanding of the basic causes and processes of pollutant generation as the essential first step in preventing and abating mine-derived pollution. The goal of the program is to explain the generation of mine pollution as a base on which other Federal and State agencies can develop technology which they can use with confidence in the prevention, inhibition, and abatement of underground mine-derived pollution.

The program would not in itself abate or prevent pollution; it would, however, at modest cost and within 6 years provide a sound scientific basis for planning systems to avoid or minimize pollution.

Potential for Discovery and Development of Mineral Resources of West Virginia

Senator Byrd. What is the potential for the discovery and development of mineral resources in West Virginia and in all the Appalachian area and how does the present level of effort on the part of the Geological Survey relate to that potential?

Mr. Pecora. I believe, sir, that the potential in Appalachia for future mineral resource discovery is very great. Again, I would have to say that because of the heavy cover by forests and flood plain we need to develop and apply new techniques and refine old techniques in order to get a three-dimensional or X-ray look into the situation under the surface.

We can apply geochemical techniques as well as measurements of quality of water and soil. We can apply geophysical techniques with instrumentation which provides information on concealed conditions.

We can apply the geological analysis, which we call the three-dimensional analysis, and in this character one gets a cross section of the crust as it exists in any part of the country; utilizing all sources of information of this kind we then can provide targets or ideas that can be used for further exploration by drilling on-site. We feel that not only for Applachia, or West Virginia, or any State, but for the country as a whole, we need to have a much higher level of effort in this kind of application, particularly since in the last two decades we have come up with many new techniques and the successes have been showing as a result of the application of these techniques.

I could stay for an hour and give you example after example where our work has led to targets which led to industrial participation and led to creation of new industry, extension of resource base, and this sort of thing.

I believe that we are in a healthy shape in future years to engage in this kind of a program all through the country and I believe, sir, that the Appalachian area is as potentially important as any part of the country.

Senator Bartlett has mentioned Alaska in an earlier statement. Here is an area, of course, quite inaccessible and this would be higher cost for mineral investigation because we would need helicopters and support of parties, but if one puts aside the accessibility or inaccessibility, the advisability and inadvisability, one can say without any question of doubt that the potential is great.

We need to make the effort.

Potential of Oil Shale Deposits

APPALACHIAN AREA

Senator Byrd. What are the prospects as you see them at the moment for oil shale deposits in the Appalachian area of a quality that would be economically feasible to process?

Mr. Pecora. This recent report prepared by two of our people, Mr. Duncan and Mr. Swanson, surveyed the organic shale situation throughout the world. In the Appalachian region I would think that the relative assay of the shale in organic constituents is much less than exists in the western basins of Wyoming, Colorado, and Utah.

ALASKA

Senator Bartlett. And Alaska?

Mr. Pecora. And Alaska, with deep apologies, Senator, but one cannot foresee, of course, whether or not oil shales will in the near future or distant future yield to our energy picture. But if we need to go to the oil shales then the organic shale situation in the Eastern States would have to be looked at also because of their mineral constituents.

Organic Shales as Source of Minerals

This is the interesting part about so many of our organic shales. In the past we have been thinking of them merely as a source of energy, but we find, for example, in their coking residues that they contain a wide variety of very interesting minerals.

GOLD YIELDS FROM LIGNITE COKE

One coke from a lignite in one of our Western States, for example, yielded $2 of gold per ton of coke. This is shocking when one reads this kind of information, so we are making a very extensive mineral study of the organic shales not only for their energy characteristics, but also for their minor element constituents. We are learning a lot about the chemical association of elements and minerals and how they form in these basins which will help us, you see, in future exploration programs when we need to get into them in greater detail.

APPALACHIAN AREA MINERAL DEPOSITS

Senator BYRD. In connection with these studies of which you speak, are there any indications that there may be mineral deposits in the Appalachian area which have been heretofore unknown?

COPPER SULFIDE DEPOSITS IN WEST VIRGINIA

Mr. PECORA. Yes. We believe that there are mineral deposits, per se. For example, one knows, from our literature, of the copper sulfide deposits that have existed in a few places they are being mined.

We feel there are places where these sulfide deposits were much more extensive and have been disrupted by the breakage of the crust in the structure, and we need to find where they are concealed.

MINERAL POTENTIAL IN EASTERN UNITED STATES

Also, you may remember that the first major gold mining in the United States was in the Southeastern States in the Appalachian region and it was only when California in 1849 made the big splash that the gold miners who were panning for gold from the Potomac down into central Florida went West. We feel there is a possibility for looking into other elements of this kind, metals of this kind, in the Eastern States.

We don't sell the East short. The big mineral production in metals is in the West largely because the geologic environment is such that these metals and minerals are characteristic of this part of the crust and also the rock is more easily seen, and accessible; but we feel there is great potential in the East, more than just in the oil, and gas, and coal, and water.

EXPOSURE OF MINERALIZED AREAS BY NEW ROAD CONSTRUCTION

Senator BYRD. Do you feel that this is so, not only on the basis of your energy studies which you are now conducting, but also on the basis of this new process which you touched upon with regard to Alaska?

Mr. PECORA. And also exposures. As new roads are built, mineralized areas can be exposed. For example, just recently—I think it was in New Hampshire—a roadbuilding program at one interstate area showed a copper mineralization. Recently you may have read in the papers that in Maine two deposits of copper were brought to light.

This sort of thing can continue to take place. It is because of the heavy forest cover and the lack of accessibility in some of the back country that we have hope that the application of our new geological techniques in Appalachia, and in the eastern region generally, can overcome these difficulties.

Geophysical Techniques

It is primarily through the use, as I mentioned earlier, of geophysical techniques. We have three general approaches, one which measures the magnetism of the rock. If the magnetic properties are higher than the rock around it, there is an indication that maybe there is an iron ore body there. This took place in eastern Missouri, for example, a few years back.

Discovery of Pea Ridge Iron Ore Body

In our airborne magnetometer survey, in conjunction with the State survey, we pointed up an anomaly. The anomaly means that there was a higher magnetic reaction here than in the area around it, so mining companies drilled and discovered the famous Pea Ridge iron ore body just put into production last year, generating several millions of dollars a year and putting hundreds of people to work.

This kind of thing can be found elsewhere in the East. We also have, of course, the radiometric techniques in geophysics which led to knowledge of uranium distribution, and in some places uranium is associated with other minerals as a pathfinder, so one leads to another.

Then we have the third, resistivity, which helps in sulfide exploration, and here is where the copper sulfide and perhaps some of the other metals can be found. It is not only in the organic shales. I am expanding your thought here, Senator.

Work With Geological Survey of West Virginia

Senator Byrd. Are your studies at the present time encompassing Greenbrier County in the southern portion of West Virginia and on over in the Jefferson National Forest near Bluefield, Va.?

Mr. Pecora. I would have to put that into the record separately, Senator, if I may, but at the present time we have an excellent State cooperative program with the State Geological Survey of West Virginia, which at the present time in all phases is unfortunately only a half million dollars. What areas are being covered in particular, I cannot respond to at this time.

I should like to be permitted to put it into the record, if I may.

(The information follows:)

At the present time there are no mineral studies underway specifically directed at Greenbrier County and southward to Bluefield, W. Va. This region is included, however, in the overall mineral appraisal being made of Appalachia as a whole.

APPALACHIAN AREA MINERAL POTENTIAL

Senator BYRD. As you are able to expand your surveys and get into new areas and as you are able to utilize new techniques is there a possibility that minerals such as lead and zinc, and bauxite, and copper, and so forth might be found in economically recoverable quantities in Appalachia?

Mr. PECORA. Of course, the Appalachia region already has a history of production of many of these metals. The Tennessee lead-zinc area is a well-known one. Our three-dimensional geologic analysis some years ago in one place led to a target—again where a plate of rock had covered another plate of rock—and drilling through the upper plate hit a major ore body. I have confidence that we need to make the effort.

We have the techniques, we have the talent, and we have the time I suppose. What do we lack?

NATIONAL STANDARD SCALE OF TOPOGRAPHIC MAPPING

Senator BYRD. Doctor, what is your standard scale of mapping in, let us say, West Virginia?

Mr. PECORA. We have several scales of mapping for the different map products throughout the country. Our principal scale for the topographic maps is 1 to 24,000, produced as 7½-minute quadrangles.

Mr. WHITMORE. That has been the standard scale for all areas except Alaska, where the principal scale is 1 mile to the inch.

Senator BYRD. One mile to the inch?

Mr. PECORA. One mile to the inch for Alaska; elsewhere, 2,000 feet to the inch, or 1 to 24,000.

Mr. WHITMORE. One to twenty-four thousand.

Senator BARTLETT. Sounds like discrimination to me.

Senator BYRD. One to twenty-four thousand. What does that mean?

Mr. PECORA. One inch on the map represents 24,000 inches on the ground or 2,000 feet to the inch. It permits showing much more detail than the standard 15-minute quadrangle at the scale of about 1 mile per inch, and with greater accuracy. For these reasons nearly all important map-using organizations insist on this larger scale map for their professional work.

Senator BYRD. This is as distinct from topographic mapping?

Mr. PECORA. These are the topographic quadrangle maps, or base maps.

Senator BYRD. These are?

Mr. PECORA. Yes, and the accuracy of the geologic map is only as good as the base on which the geology is plotted.

MAPPING OF WEST VIRGINIA ON STANDARD 1:24000 SCALE

Senator BYRD. I believe about 44 percent of the State of West Virginia has been mapped at the standard scale of 1 inch to 24,000 inches.

Mr. PECORA. That is topographic.

Mr. WHITMORE. That is right.

Senator BYRD. And that only about 34 percent of the United States is covered at that scale?

Mr. WHITMORE. That is right, as of June 30, 1965.

Mr. PECORA. Yes, I would say those figures are correct.

TOPOGRAPHIC MAP COVERAGE IN OTHER COUNTRIES

Senator BYRD. I understand that many other countries are much more completely mapped?

Mr. PECORA. Yes, many countries are completely mapped topographic.

Senator BYRD. Why is a country with our enormous resources lagging behind other countries in mapping?

Mr. PECORA. I would have to come up with off-the-cuff responses to that. First, our country is younger than many other countries. They have been at it longer.

Secondly, our country is larger than many of the countries where there is full coverage, such as England, or Denmark, and other countries of Western Europe.

Thirdly, I am inclined to think that we aren't working at as high a level of effort as other countries have.

Senator BYRD. That is probably the key, isn't it?

Mr. PECORA. Today I would say it is the key.

Senator BYRD. How would we compare, let us say, with the Soviet Union if you have any knowledge of their problems?

Mr. PECORA. I can't refer to any specific knowledge but we have reason to believe that they have full coverage at some scale larger than 1 mile per inch. We have a list on page 49 of the budget preparation showing that 15 countries have 100 percent coverage, and we have only 71 percent coverage.

Senator BYRD. India has 85 percent?

Mr. PECORA. Yes, because the British had a program going for many years.

ADVANTAGES OF COMPLETE MAPPING COVERAGE

Senator BYRD. Yes, yes. I see. What concrete benefits could West Virginia and the United States derive from complete topographic coverage at this scale?

Mr. PECORA. Sir, it is our belief that the depiction of the surface of the land, such as provided by the topographic quadrangle maps has many benefits beyond those which we require within the Bureau or the Department for our studies of land, water, and mineral resources, and that sort of thing.

Topographic maps are needed, for example, by highway planners and urban developers. They are needed by industries who wish to establish a plant under the proper topographic conditions, including consideration of floods and flood protection, water supply, drainage, and similar matters.

For example, one Kentucky highway official recently stated that the entire cost of topographic mapping in the State of Kentucky was

accounted for and saved through economies of location and construction in just 100 miles of their highway construction. Also, if they don't have the maps when needed, they must themselves make special-purpose piecemeal surveys and maps which uses up valuable time, a greater unit cost is involved, and piecemeal information often is incomplete to the point where the most economical solution is overlooked.

We have made inquiries of hundreds of professional map users throughout the country, and the findings are shown in one of the illustrations in the topographic section of our justification. In the area of water planning, for example, as much as $100 million a year is saved because the maps are available for their use. The maps are made available to the public at a price intended to recover the costs of printing, the storage, and distribution.

A large company or an engineering firm may be able to afford to make the necessary surveys and maps, but the time lost probably is the most important matter. The fisherman, or the boy scout, or the school teacher who needs a map can't afford to pay a lot, but can afford the small price charged for the published quadrangle maps.

UPDATING AND PROVISION OF MAPS TO OTHER FEDERAL AGENCIES

Senator BYRD. Somewhere in the material here—I can't find it just now—I noted that many of the agencies are having to improvise and bring up to date their old maps at a great cost and so on, and the Department of Defense at a 1964 Federal map users conference stated that the Department should have available today complete mapping of the United States at large, medium, and small scale.

Are we in this 1967 budget going to provide the financial resources necessary to obviate these costs to the various agencies that have to improvise and so on, and are we going to be able to provide to the Department of Defense these maps that it considers so necessary?

Mr. PECORA. Well, sir, I regret to say that the budget permits only a 2- to 3-percent rate of increase in our mapping program.

Mr. WHITMORE. That is an increase in production of new maps or replacement maps without an increase in appropriation, because of the gain in efficiency. It doesn't permit any increase in revising the maps. This unsatisfactory situation with respect to revision has been this way for many years. Of course, we try to take care of the highest priority needs first. We get this expression once a year formally, through the Bureau of the Budget, from all map-using Federal agencies, from many of the States, and some of the smaller subdivisions of the States, and then do our best to meet the highest priorities first in each case.

PRIORITY OF DEFENSE MAP NEEDS

Of course, defense would get the very top priority. In case there is a national emergency our whole activity would be devoted to defense.

MEDIUM- AND LARGE-SCALE MAPPING

Senator BYRD. What percent of the entire United States is presently mapped in conformity with the criteria, if I might use the word, of the Department of Defense?

Mr. WHITMORE. There are various needs. Their medium scale need is covered, 1 to 250,000 scale.

Senator BYRD. Is what?

Mr. WHITMORE. Their medium scale, which is 1 to 250,000, or 4 miles to the inch, that is all available.

Senator BYRD. For the entire United States?

Mr. WHITMORE. Yes, sir. The larger scales which they need——

Senator BYRD. Pardon me. How current is that first?

Mr. WHITMORE. We keep the 1:250,000 maps revised to meet their needs. This is one of the highest priorities and if we could not quite do it they would do it themselves.

Senator BYRD. So you have the entire country mapped?

Mr. WHITMORE. Yes; at the 1:250,000 scale.

Senator BYRD. But now you were proceeding with——

Mr. WHITMORE. The larger scale, 1:24,000, or the mile per inch where that is the only thing available, again we try to meet their most urgent needs for revision, and if we can't quite do it on schedule they will themselves do it, particularly for maneuver areas, training areas, and so forth. We cooperate fully on this.

FLOOD-PLAIN MAPPING IN APPALACHIA

Senator BYRD. As to your flood-plain mapping in Appalachia, does this include flood, low flow, and drought studies?

Mr. HENDRICKS. The particular item that is in the budget, sir, relates to flood-plain mapping, as such, and to the related studies of floods in the general area that would relate to the evaluation of the flood hazard and damage potential in the flood-plain areas. The drought studies included in our budget relate only in part to work in Appalachia.

Senator BYRD. When will your flood-plain mapping in Appalachia start, or has it already begun?

Mr. HENDRICKS. It will start in fiscal year 1967, sir.

Senator BYRD. It will start in fiscal year 1967. All right.

PROGRESS IN GEOLOGIC STUDIES IN APPALACHIA DEVELOPMENT ACT

Now, would you insert in the record information which would reveal the progress that you have made under the accelerated program of geologic study provided by the Appalachia Regional Development Act?

Mr. PECORA. Yes, sir; I will be happy to do that. This would be a minerals study.

Senator BYRD. Yes; a mineral resource compilation, and so on.

(The information follows:)

Funds were appropriated for fiscal years 1965 and 1966 to initiate a survey of the mineral resources of Appalachia, which form the base for industrial development; and for preparation of geologic maps needed for economic planning and development.

Compilation of existing data on the mineral and fuel resources listed below is essentially complete. Drafts of reports have been prepared, are being edited and reviewed at the present time, and are scheduled for release during fiscal year 1967.

Metalliferous mineral resources:
- Aluminum
- Copper
- Chromium
- Columbium and tantalum
- Gold and silver
- Iron ore
- Manganese
- Nickel and cobalt
- Thorium and rare earth metals
- Tin
- Titanium
- Uranium
- Vanadium
- Zinc and lead
- Zirconium

Construction materials:
- Dimension stone
- Cement materials
- Crushed stone
- Sand and gravel
- Lightweight aggregate
- Roofing granules

Mineral fuels and associated resources:
- Coal
- Petroleum and natural gas
- Peat
- Asphalt

Nonmetalliferous mineral resources:
- Abrasives
- Asbestos
- Barite
- Carbonate rocks
- Clays
- Feldspar
- Fluorspar
- Fertilizer raw materials
- Gemstones
- Graphite
- Gypsum
- Lithium and beryllium minerals
- Mica
- Kyanite group of minerals
- Olivine
- Saline minerals and brines
- Silica
- Sulfur
- Talc

Regional geologic and geophysical surveys are underway in the Knoxville and Winston-Salem 2° quadrangles, at a scale of 1:250,000. Regional geologic mapping began on the Knoxville sheet in fiscal year 1966; field work is 47 percent complete at the present time, and is scheduled for completion in fiscal year 1967; a report will be prepared in fiscal year 1968. Field investigations in the Winston-Salem 2° quadrangle are 41 percent complete, but the maps are not scheduled for completion until after fiscal year 1967. A detailed study of a small portion of the Brevard mineral belt in Georgia has been completed, and a report is presently in technical review.

Engineering geologic studies are in progress to obtain and compile data on the location of construction materials and distribution of geologic units that influence planning and construction of major projects. The Roanoke, Baltimore, and Charlottesville 2° sheets are well along, and will be completed and reports written by July 1966. Field investigations will be completed this year on the Cumberland, Charleston, Clarksburg, Bluefield, Huntington, Cincinnati, and Louisville 2° quadrangles. Data are being compiled only for the parts of the 2° sheets that are within the area defined as Appalachia.

Underground Waterways in West Virginia

Senator Byrd. I have just one further question. In the eastern panhandle area of West Virginia we have a considerable number of caverns, Seneca Caverns and Smoke Hole Caverns, and so on, and we have a Lost River there.

There is an area where the river disappears from sight and somewhere on down the valley it may again come into view. I am not sure.

Does this indicate that there are underground waterways in West Virginia? You were talking about them in Maryland I believe.

Mr. Pecora. Yes. There is no question, in country where limestone is one of the formations that may be involved, that underground solution-ways do exist and many rivers flow underground and through passages. They may, or may not come out on the surface again.

This is true. This is, of course, one of the great experiences of the cave explorers, to look for just this kind of a situation in limestone country.

U.S. MAPPING COVERAGE

If I may take the occasion, Senator, to extend one remark beyond the topographic map base, you were asking for some details on coverage. Seventy-one percent of the country is covered by some form of adequate mapping, on the larger scale in the sense of mile to the inch or 1:24,000, 71 percent on a topographic coverage.

However, on a geologic coverage, which parallels this, only 20 percent is covered, so that there is yet 80 percent of the Nation to be analyzed in three dimensions from the surface on down.

Even though we have been in existence for 87 years, we see the future activity covering a lot of new ground and with a lot of new potential resulting from the work.

EXTENT OF UNDERGROUND WATERWAYS IN WEST VIRGINIA

Senator BYRD. Could you surmise as to the extent of underground waterways in West Virginia at this time which heretofore have not been known?

Mr. PECORA. I would have no personal knowledge, but I should be very happy to look into this and place it into the record so that it would come to your attention.

(The information follows:)

Underground rivers occur only in the extreme eastern part of West Virginia and in the State's eastern panhandle, these being the only parts of the State in which extensive, fairly pure limestone crops out at the land surface. The eastern limestone underlies about 4 percent of the area of the State. Being a highly soluble rock, the limestone dissolves readily and forms sinkholes and caverns. Streams occupy many of the caverns to form the so-called underground rivers.

A large number of the caverns and associated subsurface riverflow have been mapped by the United States and West Virginia Geological Surveys and by speleological societies. There is no intent to identify all of them but we are rapidly understanding the reasons for their existence and the theory of their occurrence. The interest in the subsurface rivers is manifold—as underground natural features of scientific and lay interest; as they relate to water; as they relate to engineering works and land stability; and as commercial cavern enterprises, to name a few.

With respect to water resources, the underground rivers are important as the sources of a large number of major springs in eastern West Virginia. The caverns constitute intricate underground networks that act as collecting tubes for water draining from large tracts of limestone. Because these "rivers" are at shallow depth, because they rely on direct surface water infiltration, and because they yield water from highly porous limestone rock, discharge from the outlet springs may be very great following rainfall. But as days pass, the discharge of springs associated with the eastern West Virginia limestone normally declines. Spring discharge typically fluctuates over a wide range throughout the year depending on the frequency and duration of recharge from rainfall.

These rivers do not lend themselves to development as a water resource in their own right, either by subsurface dams or by wells tapping them. Because natural filtration is nil, they are under constant threat of pollution from surface developments.

However, inasmuch as the underground rivers eventually discharge to streams, they are a prime source of surface water supply. Streams in this region demonstrate the same flow characteristics as springs, fluctuating greatly in flow in response to rapid outflow of water derived from infiltration of precipita-

tion. Limestone areas are notoriously poor areas for construction of dams because these rocks form a leaky, unstable base, and damsites in this part of West Virginia, and in parts of other Eastern States underlain by similar limestones, must be selected with especially great care.

KARST TOPOGRAPHY

Senator BYRD. Do the caverns to which I have just alluded in your judgment result from underground waterways in some previous age?

Mr. PECORA. Yes, this is the result of ground water solution in limestone country. We call limestone country karst topography.

Senator BYRD. Thank you, Mr. Chairman.

Chairman HAYDEN. Senator Mundt, do you have any further questions?

HYDROLOGY OF ARID LANDS

Senator MUNDT. Yes, thank you. I was interested in your discussion on page GS–156 of the justifications of investigations of various phases of the hydrology of arid lands. You mention investigations in South Dakota. Would you please furnish me with a copy of any reports on South Dakota?

Mr. PECORA. The study of hydrology of arid lands which was conducted in several Western States, including South Dakota, under the soil and moisture conservation program was mainly an investigation of piping, an erosional feature of certain sedimentary formations, and its geomorphic results. An interim report was published in the International Association of Scientific Hydrology, and we will be glad to send you a copy. The final report of the project will be published as a professional paper by the Geological Survey. In addition, we have published numerous reports on hydrologic conditions in South Dakota as the result of other studies, many of which were carried out in cooperation with the State of South Dakota. We have summarized the current program and listed the pertinent reports in "Water Resources Investigations in South Dakota," a copy of which we will furnish you.

MINERAL DEFICIENCIES IN CROP AND RANGE LANDS

Senator MUNDT. Recently I have been approached by some of my constituents who are concerned with the mineral deficiencies in crop and range lands of the western part of South Dakota. They would like to have a survey of agriculturally important minerals in the Black Hills and contend that such a study would be extremely worth while. They envision that such a study should lead to a description of the location and extent of deposits, identification of the minerals, an analysis of the elements, their chemical form, and solubilities. I wonder if you could have your people look into this matter a bit and provide the committee with an estimate of what a pilot study along these lines might cost?

Mr. PECORA. Identification of soil characteristics and mineral deficiencies in crop and range lands is within the mission of the Department of Agriculture rather than the Department of Interior. We do not have information as to the nature of the deficiencies mentioned, so we cannot adequately assess the needs and availability of corrective materials.

If the needed corrective additives are those commonly used, such as limestone, phosphate, and potassium minerals, appraisal of sources of supply in South Dakota can be made by reference to the report "Mineral and Water Resources of South Dakota," which was printed in 1964 for the use of the Committee on Interior and Insular Affairs.

Of considerable value to the problem would be a study in which differences in chemical composition of soils would be related to different types of bedrock in the State. If systematic relationships could be established, the results could be used to predict soil deficiencies or excesses from the known distribution of geologic formations. Selenium, for example, is known to be characteristically high in certain rock units, and doubtless accumulates in the overlying soils. A modest pilot study of this type, perhaps cooperative with the South Dakota School of Mines and Technology, would be feasible at a financial level of perhaps $75,000 per year.

Relationship With Universities

Senator Mundt. What is your present relationship with universities, particularly in the Midwest? If you were directed by Congress to expand your university program, what would your funding requirements be? What is your capability for carrying out an expanded program?

Mr. Pecora. The Geological Survey has traditionally maintained a close and mutually beneficial informal working relationship with many universities. Formal relationships consist mainly of part-time employment of both faculty and students, though a few formal contracts for research and computer use are in effect. These part-time employees: (1) participate in or conduct regular Geological Survey investigations, (2) provide specialized laboratory support for regular Survey field projects, and (3) act as advisers—these include many of the outstanding earth scientists of the academic world, such as Dr. Frank Press of MIT, Dr. Francis Birch of Harvard, Dr. John Verhoogan of Berkeley, Dr. Konrad Krauskopf of Stanford and Dr. W. W. Rubey of UCLA. During 1965 the Survey paid about $200,000 in salaries for seasonal or part-time work to men affiliated with 58 academic institutions. In addition, a number of universities provide office and laboratory facilities for Survey research scientists. On the other hand, the Survey constantly provides leaders and speakers for university seminars and special programs, and Survey scientists frequently accept short-term academic appointments while on leave.

With specific reference to the Midwest, Survey scientists occupy facilities provided by Ohio State, University of Wisconsin, and the University of Wyoming. A major contract for development of an infrared imaging system was recently let to the University of Michigan. Scientists from at least 11 midwestern universities (Chicago, Southern Illinois, Minnesota, Kansas, Missouri, Michigan, Rice, Colorado, Colorado School of Mines, Wyoming, Washington University at St. Louis) have been employed on a part-time basis during the past year.

By virtue of the long and close association with universities, and the immediate ties through part-time (WAE) appointment, the Sur-

vey could readily expand the university program, were funds available. In essence, we have the machinery and connections established; all that is needed is fuel in the form of funds. Worthwhile projects totaling at least $3 million per year could be implemented; in fact, we currently have some proposals from universities, one of which is from the South Dakota School of Mines.

The Survey has competent leadership in every field of geology, in hydrology, and in topographic mapping, so that the capability for efficiently managing and directing any expanded program of university support is now in existence.

Upward Pressures on Prices of Metals

Senator Mundt. In the international market we see strong demand and upward pressures on the prices of many metals—copper, aluminum, gold, silver, and so forth. What is the condition of U.S. mineral resources and how can you help the country improve the supply situation and level off the pressure on prices?

Mr. Pecora. For a few metals, such as tin and platinum, the U.S. resources are very small, and little hope exists for increasing them. But for most metals—copper, iron, aluminum, gold, silver, etc.—we have not only know resources equivalent to a few to several years of production at present rates of mining, but an excellent opportunity to increase the resources by continued studies. Provided such studies are made at an adequate rate, the United States can achieve self-sufficiency in most mineral commodities and at reasonable prices.

Studies to increase mineral resources are made by many agencies, public and private. In these studies, the Geological Survey long has had the lead role in gathering the basic geologic data, which is an essential first step in the establishment of new resources and in narrowing the search for them. Experience shows that such investigations must be conducted well in advance of needs because the typical cycle from discovery to production is measured in terms of years or tens of years. The products of these investigations and research are used by the producers in every field of the mineral industry. Such use reduces overall costs to the consumer by reducing the need for every segment of the minerals industry to conduct its own basic data gathering.

As new resources become harder and harder to find, the need for the investigations that must precede discovery increases. The Geological Survey is acutely aware of this need and within its resources, is doing all that it can to meet it.

Value of Programs to Urban Areas

Senator Mundt. In view of of the fact that most of our population, our industry, and our commerce are concentrated in urban and metropolitan areas, how do the Geological Survey's research and engineering help these heavily populated areas?

Mr. Pecora. Three plans of our program have a direct bearing on developments in and around metropolitan areas: topographic mapping, engineering geology studies, and studies of the hydrologic conditions.

Topographic surveys and mapping provide accurate information about the land surface and the use to which it is being put that is indispensable in urban planning and development. The value of topographic maps is recognized by all agencies involved in any type of municipal development.

The Geological Survey's eengineering geology program, although stressing research on geologic hazards such as ground response to earthquakes, landslides, and subsidence in urban areas, also provides basic environmental data on the surface and subsurface needed for intelligent zoning and land use planning. Special interpretative maps, including sources of construction materials, ground conditions, and location of unstable foundation conditions, are now being produced. In addition to formal reports, we commonly are called upon for advice and specific data to meet urgent planning needs. For example, in Seattle our advice was sought in planning construction of sewer tunnels to avoid serious problems due to high water table and swelling clays.

In Anchorage, Alaska, the Bootlegger Cove clay, which constituted the principal failure zone that caused the landslides during the March 27, 1964, earthquake is being carefully delineated to assist city planners to prevent improper development on unstable ground. Similarly, landslide maps prepared by the Geological Survey in Los Angeles have formed the basis for revisions in the zoning regulations. The entire town of Valdez, Alaska, was relocated because of engineering geology assessments of the geologic hazards. In Washington, D.C., urbanwide studies have shown a rapid decrease in availability of unique and valuable sources of construction materials due to construction of large developments on them; better planning could enable the use of the materials followed by development as the deposits are depleted and the excavacation sites are regraded.

Hydrologic studies which effect urban development range from areal projects to determine the occurrence of ground water and its availability for municipal supplies to the monitoring of water quality in relation to effect of urban and industrial drainage. Studies of present and potential polution problems of both surface and underground water supplies are becoming increasingly important. Flood plain inundation mapping and flood plain hydrology are essential to proper planning in assessing flood plain occupancy hazards.

The drought in the "wet" Northeastern United States and the recent floods in arid Arizona point up the variants in the hydrologic picture and the necessity of both long-term records and detailed studies before investing the tens of millions of dollars represnted by urban developments.

Coordination With Other Agencies

Senator Mundt. Recognizing the Geological Survey as the lead Federal agency in geology, water resources and topographical mapping, do you have any problems in coordinating your work with that of other agencies?

Mr. Pecora. Insofar as our geologic studies are concerned there are no problems of coordination with other Federal agencies for the bulk of the work done in the traditional fields; the Survey has been accepted

as having primary responsibility. Both formal and informal arrangements are made with agencies that have related missions, such as the Bureau of Mines, the Atomic Energy Commission, NASA, and the Army Corps of Engineers, so that the work meshes rather than duplicates. In the wilderness studies, for example, responsibilities have been cleanly divided and joint Survey-Bureau of Mines reports will be issued.

In some of the earth science fields that have developed rapidly during the past few years—earthquake studies and marine geology are cases in point—clearcut definition of limits of authority have not yet been made, although we consider these fields to be the specific responsibility of the Survey. At the present time, work is coordinated by discussions of the programs of the various agencies within the Interagency Committee on Oceanography and the informal Interagency Geophysical Discussion Group, as well as by direct discussions with representatives of other agencies.

The Survey's position as the lead agency in the collection and interpretation of basic water facts is well established and accepted by other agencies. Coordination by the Geological Survey of water data acquisition under BOB circular A–67 has not been fully implemented, but no problems have been experienced in dealing with other agencies. Many Federal agencies have overlapping definitions of responsibility in water resources research. The Committee on Water Resources Research of the Federal Council for Science and Technology was established as a mechanism for coordinating water research and, of course, there are informal contacts between the various agencies. However, we feel that there is no undesirable duplication of effort in our water resources activities.

No serious problem exists in coordination of the national topographic program with other agencies that make and use topographic maps. Agreements have been reached with these agencies so that their efforts supplement the national topographic program, accordingly there is no duplication of effort.

Senator MUNDT. Did the Bureau of the Budget allocate to your agency all of the funds Congress appropriated for your various programs for fiscal 1966?

Mr. PECORA. Yes; they did.

SUBCOMMITTEE RECESS

Chairman HAYDEN. If there is no further business we will recess until 10 o'clock, Tuesday, March 1, to hear the Bureau of Mines.

(Whereupon, at 11:45 a.m., Monday, February 28, 1966, the hearings were recessed, to reconvene at 10 a.m., Tuesday, March 1, 1966.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

TUESDAY, MARCH 1, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senators Bible, Byrd, and Mundt.

DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

STATEMENTS OF WALTER R. HIBBBARD, JR., DIRECTOR; FRANK C. MEMMOTT, DEPUTY DIRECTOR; CARL RAMPACEK, ASSISTANT DIRECTOR, ADMINISTRATION; PAUL ZINNER, ASSISTANT DIRECTOR, MINERAL RESOURCES DEVELOPMENT; JOE B. ROSENBAUM, ACTING ASSISTANT DIRECTOR, MINERALS RESEARCH; JAMES WESTFIELD, ASSISTANT DIRECTOR, HEALTH AND SAFETY; HENRY P. WHEELER, JR., ASSISTANT DIRECTOR, HELIUM; RICHARD H. MOTE, CHIEF, OFFICE OF PROGRAM COORDINATION; ELWOOD THOMSON, CHIEF, DIVISION OF BUDGET; AND SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

INTRODUCTION OF DR. WALTER R. HIBBARD, JR., DIRECTOR, BUREAU OF MINES

Chairman HAYDEN. The subcommittee will be in order.

This morning the Bureau of Mines budget estimate for the fiscal year 1967 will be examined by the committee. Here to present the justification for this estimate is Dr. Walter R. Hibbard, Jr., who is the new Director of the Bureau of Mines. I believe that he was sworn in about the 1st of December.

Dr. Hibbard, we are glad to have you with us and would like for you to give us a little of your background.

Mr. HIBBARD. Yes, sir; I have a biographical sketch for the record, if I may.

Chairman HAYDEN. Please do.

(The biographical sketch follows:)

Dr. Walter R. Hibbard, Jr., one of the Nation's outstanding metallurgists, became Director of the Bureau of Mines on December 1, 1965, following earlier successes as an educator, researcher, and as an industry manager of scientific and engineering research.

Born in Bridgeport, Conn., January 20, 1918, Dr. Hibbard was graduated from Wesleyan University, Middletown, Conn., and received a doctor of engineering degree from Yale University in 1942. Following his military service in World War II as an officer in the Navy Department's Bureau of Ships, he joined the Yale faculty as an assistant professor and later became associate professor.

Dr. Hibbard's growing reputation in teaching and research attracted industry, and in 1951 the General Electric Co. enlisted him for its research and development center in Schenectady, N.Y. There he progressed to the position of manager of metallurgy and ceramics research, which he held until he was called to public service by President Johnson as Director of the Bureau of Mines.

As an expert in such fields as the plastic deformation of metals and the metallurgy of copper and its alloys. Dr. Hibbard has won wide recognition from many professional societies. In 1950 he received the Raymond Award of the American Institute of Mining, Metallurgical, & Petroleum Engineers. From 1957 to 1961 he served as a director of the institute, and is now its president-elect for 1966. In addition, Dr. Hibbard belongs to the British Institute of Metals and the New York Academy of Sciences, and is a fellow of both the American Academy of Arts and Sciences and the American Association for the Advancement of Science. He also is a member of the Materials Advisory Board of the National Academy of Science, and is currently its chairman.

Dr. Hibbard has been elected to many honorary and professional fraternities including Phi Beta Kappa, Sigma Xi, Alpha Chi Sigma, and Gamma Alpha. He is the author of more than 70 scientific papers and has been widely recognized as a major contributor to the science of metallurgy. He is a registered professional engineer.

Dr. and Mrs. Hibbard have three children and reside in Rockville, Md.

RÉSUMÉ

Mr. HIBBARD. I come from New England where I studied chemistry at Wesleyan, Middletown, Conn. Later I studied metallurgy at Yale and have a doctor of engineering degree from there.

Subsequent to that, I was in the Navy during World War II, in the Navy Department's Bureau of Ships, Metallurgical Division of the Research Branch. There, I was concerned with the material aspects of the Navy, and in particular with the conservation of critical materials.

After the war, I returned to New Haven and became an assistant professor of metallurgy on the Yale University faculty. I remained there for 6 years, teaching and doing research. From there I went to the General Electric Co. research laboratory in Schenectady, N.Y., where for nearly 15 years I carried out both research and development work. For the last 10 years I managed the research and development operations.

My whole career has been concerned with the minerals industry, and my most skillful abilities are concerned with the management of research and development.

FUNDS FOR APPALACHIA PROGRAM

Chairman HAYDEN. Dr. Hibbard, in addition to your regular work performed under the Organic Act establishing the Bureau of Mines, you also are participating in the program to assist the economy of Appalachia. Some of the program is specifically set forth and authorized in the Appalachian Regional Development Act of 1965, and part

of the program is carried on under your other authorities. In order that the committee may have a clear picture of your activities, would you please prepare for insertion in the hearing record a table showing funds which have been appropriated for Appalachia and which you are requesting for Appalachia in this budget. Please prepare the table for fiscal years 1965, 1966, and 1967 by activities and subactivities as you present them in your 1967 budget estimate.

BREAKDOWN OF BUDGET REQUEST

It would be well for you to break down the amounts to show the funds provided for in the regular appropriation estimate, and those provided as part of the Appalachian Regional Development Act of 1965.

I know that all of the funds which you request for Appalachia are not specifically authorized by the 1965 act, but part of the funds are in addition to your regular program in Appalachia and are there as a result of passage of the act.

Mr. HIBBARD. Yes, sir.

(The information follows:)

	1965	1966	1967
Appalachian region mining area restoration:			
1. Subsidence, caving, and mine fire control	$11,800,000	(1)	$9,000,000
2. Strip and surface mine area restoration	4,200,000	(1)	1,566,000
Subtotal	16,000,000	(1)	10,566,000
Conservation and development of mineral resources:			
2. Resource development of minerals	300,000	(1)	150,000
Total	[2] 16,300,000	(1)	10,716,000

[1] The $16,300,000 (2d Supplemental Appropriation Act, 1965) became available Apr. 30, 1965—too late to obligate and thus programed for fiscal year 1966 and subsequent years.
[2] To be funded from 1965 carryover funds.

PREPARED STATEMENT

Chairman HAYDEN. And now, Dr. Hibbard, if you have a written statement you may submit it for printing in the record.

Mr. HIBBARD. Yes, sir.

(The statement follows:)

Mr. Chairman and members of the committee, I welcome the opportunity to appear before this commitee to present for your consideration the estimate of funds required to support the activities of the Bureau of Mines during fiscal year 1967. This is my first appearance before this committee, and I hope that the testimony which I am about to present will clarify for you some of my views regarding research and the mission of the Bureau of Mines. Please do not hesitate to interrupt me at any time if you have questions.

In the short time I have been Director of the Bureau of Mines I have tried to become conversant with all its principal activities and operations. However, there are still many details of the Bureau's very complex operations that I must learn. The Bureau's activities, as the members of this committee are so well aware, range from the basic procedures of inspecting coal mines for safety to highly specialized scientific and technical research on minerals vital to our defense and economic welfare. Nevertheless, I have probed into every major aspect of the Bureau's programs and have gone over the proposed budget for 1967 very carefully. It is my belief that this is a balanced and a modest budget in the light of the national needs and the resources available to the Bureau.

Coming to Government service, as I did, from private industry—in fact, from one of the oldest and best known research centers in private industry—I could not help applying to the Bureau's conduct some of the highly critical measurements that a sound company made of its own operations. In my careful observance of the Bureau, I have been impressed by the work being carried on and by the dedication of its competent staff and supporting personnel. I believe that the Bureau's research and resource programs are producing results that are commendable, whether measured by the usual standards of technological progress or by practical use and frequent application by industry of its findings.

I have found that my philosophy as to how the Bureau of Mines should function has the support of Secretary Udall, and, in fact, is similar in principle with the manner in which the Bureau has often been functioning. Changes, of course, will be made by me as time goes on and as new opportunities for achieving national goals become apparent, but as I see it at present such changes are likely to be in terms of emphasis rather than direction, and in terms of more frequent reappraisal and reprograming of activities.

As you know, the basic authority under which the Bureau was established, and still operates, specifically requires that we pursue a variety of inquiries into the technologic, scientific, and economic factors that affect the mineral industries. The inquiries are designed to develop facts and to identify our national needs, then to help seek out and encourage every means of assuring our American free enterprise system an adequate, dependable, and continuing supply of the mineral raw materials that are indispensable to our expanding economy and to our national defense.

Consequently, the Bureau endeavors to obtain and to keep itself continually knowledgeable of the facts relating to availability, movement, and demand for all mineral substances. It does not merely gather and collate statistics on production, consumption, stocks, prices, trade, and other economic aspects of mineral commodities, but interprets and analyzes the data in terms of population trends, national and regional economic growth, cost-price sensitivity, changing technology and a host of other factors including aspects of international trade that critically affect the United States. In this way, we attempt to identify future shortages or surpluses, and to anticipate needs and problems as far ahead as possible.

If recognized sufficiently in advance, many economic problems created by the ever-changing pattern of supply and demand for minerals can be minimized. Recently, for example, when imbalance occurred in the supply and demand for mercury (with an accompanying sharp increase in prices), a timely and comprehensive appraisal by the Bureau of the "Mercury Potentials of the United States" provided important knowledge of the probable impact on the domestic industry. This appraisal described the apparent mercury resources in the United States and provided a means of anticipating potential production rates at various price levels. Similar studies have been made by the Bureau on other commodities.

Such studies not only provide the reliable information on which industry may appraise incentives for commercial development, but are used also by Government to formulate policy and to frame appropriate legislative decisions.

Having identified a future national need, we must also determine whether there are opportunities to satisfy that need by expanding, augmenting, and developing our mineral resource base through science and technology.

If so, then we must examine and identify all practical research approaches. We must evaluate them costwise and decide which, if any, are appropriate, timely, and judicious to undertake. As we arrive at goals and estimated goals, I plan to present them to you for your approval.

It must be remembered, however, that research ordinarily must be undertaken well in advance of actual need. Experience has shown that unless costly, crash programs are dictated by emergencies, the time between the initiation of a new line of scientific investigation and the point where industry becomes interested enough to participate in the work or to adopt and implement some of the research findings may vary from 5 to 15 years or longer, but generally averages about 10 years.

Improvement of iron smelting techniques, for example, has long been an aim of Bureau of Mines researchers. Results obtained in an experimental blast furnace were published by the Bureau in 1923. Study of blast furnace technology has been almost continuous since that time. Not until 1949, however, when a new 60-inch hearth experimental furnace was erected at Bruceton, Pa., did the dividends of 35 years of research become tangible. Research on fuel in-

jection, oxygen enriched blast, increased blast rates, and effect of burden characteristics that has been conducted in the Bruceton furnace has received enthusiastic acceptance by the iron industry. Injection of natural gas and other fuels in the tuyeres of the blast furnace pioneered by the Bureau, has now been adopted by industrial producers in 10 States (Alabama, Colorado, California, Illinois, Michigan, New York, Ohio, Pennsylvania, Tennessee, and Texas). Reduction in cost for the production of pig iron, directly attributable to research by the Bureau of Mines, has been estimated to be $5 per ton. On the basis of 70 million tons annual production, this is a saving of about $350 million a year to the U.S. economy.

The lag between inception of an idea and commercial acceptance of research is well illustrated by two other examples of the Bureau's iron technology program. Almost 40 years ago Bureau engineers realized the potential importance of froth flotation as a method of improving the grade of iron ores. Only in recent years has flotation been used commercially to concentrate specular hematite ores and to remove silica, apatite, and other mineral impurities from iron minerals. Similarly, the advantages of preheating the scrap metal charges to electric steelmaking furnaces were published by the Bureau in 1956. Today, 10 years later, the technique is just beginning to gain commercial acceptance.

Sometimes, however, research results are adopted by industry much sooner than anticipated. A good example of this is the research started by the Bureau only 4 years ago which has resulted in the development of two related flotation techniques for recovery of fine mica (which is normally lost during industrial processing of domestic mineral deposits). Ground mica is a necessary component of roofing and siding materials, paints, and plastics. The processes developed by the Bureau have been enthusiastically accepted by indsutry. Four plants now in operation use the Bureau techniques and two others are under construction and are expected to be in production this year. The six plants—located in Alabama, California, and North Carolina will produce 61,000 tons of ground mica a year with a value of about $3,600,000. This represents about 50 percent of the entire U.S. ground mica production.

In our programs of research designed to expand and augment the Nation's mineral resource base, we frequently are fortunate enough to have the help and cooperation of others—private companies, industry, associations, State agencies, and other Federal bureaus and establishments. In fact, we seek such assistance and such cooperative effort whenever it is feasible to do so. We are planning to work very closely with the Geological Survey. We will look with them at new and underdeveloped areas of mineralization, and appraise them technically and economically—to see if advances in extractive techniques and processing methods will provide sufficient incentive for industrial development.

About 15 years ago we undertook a resource evaluation study of western phosphates with the Geological Survey. Our preliminary work on beneficiation of these ores led us to believe that the reserves were limited by technology and that intensive research on improved methods of upgrading the phosphate rock would be warranted.

Within the last year the Bureau has developed a method that shows promise of effecting economic recovery of phosphate from low-grade ores. One portion of the method was incorporated into a new plant in Idaho which began operations in December. Initial operations have been highly successful. Since the adopted procedure allows treatment of ores of lower quality than normally mined for phosphoric acid production, the company estimates that their workable reserves have been expanded threefold.

But, let me not give the impression that all of the Bureau's research is of a long-range nature. This is not so. Although, as I said before, we must frequently look far ahead because of the long leadtime between discovery and exploitation that is characteristic of the industry, the Bureau has the competence and the skills to handle promptly many technical problems of an emergency nature. Recently, when the silver shortage became so critical, we applied known scientific principles to devise a technique that uses inexpensive steel wool to recover pure silver metal from spent photographic film-fixer solution. This simple method shows promise of recovering some of the silver now wasted and may create significant new opportunities for small businesses.

Quite often, too, scientific data gathered for a specific purpose, becomes extremely useful in the handling of other problems. More than 15 years ago the Bureau started to develop information on the ash and sulfur content of various U.S. coals. The accumulated background of data is now the only authoritative

source of information concerning the types of sulfur in coal and the opportunities for its removal through the use of conventional coal cleaning methods. If this information had not been gathered over the past 15 years, reliable information on obtaining low sulfur fuels to reduce the sulfur dioxide air pollution problem could not be supplied.

The increasing concern which the Nation is displaying in air pollution is reflected in the Bureau's current budget estimates. Since nearly all air pollution emanates from minerals during their processing or from fossil fuels (coal, petroleum, and natural gas) during their processing or utilization, it is appropriate that the Bureau should utilize its background and its skills in meeting the present challenge.

The Bureau of Mines, with its unique research capabilities related to the minerals and fuel industries, has reprogramed over $1 million of its mineral activities to projects relating to air pollution. These range from the removal of sulfur from coal to modifications of the metallurgical processes which will reduce the amount of oxides of sulfur created during upgrading operations. Other projects relate to the removal of particulate matter from stack gases and to improved methods of preparing coal, so as to reduce both the ash and sulfur in the fuel before it is used.

Our concern with the fossil fuels is well known. We are continuously working to expand coal's markets through improvement in mining techniques, combustion efficiency, and in metallurgy, and we are still hopeful of eventual economic conversion of coal to liquid fuels. The Bureau has been following with keen interest the research method being tested by contractors of the Office of Coal Research for the production of liquid fuel. It is our belief that a more economical solution for the production of liquid fuel from coal needs to be sought. For these reasons it is urged that experimental work on new ideas and approaches be vigorously pursued. The Bureau's present very modest program on liquid fuels has this objective. We are working on a variety of projects, all of which are exploratory in nature, such as the production of hydrogen from coal catalytically, the addition of hydrogen to coal electrochemically, the use of plasmas, and radio frequency waves. All these projects are aimed at lowering the cost of producing liquid fuels from coal by new methods which will have broad applicability.

About three-fourths of the Nation's total energy supply is furnished by petroleum and natural gas. America will use around 4 billion barrels of oil and 20 billion cubic feet of natural gas in 1966. I am glad to be able to say that the Bureau has had a continuing role, since its earliest days, in the ability of this Nation to produce such enormous quantities of these fuels. In considering the future, the Bureau also has been looking at the oil shales in the Rocky Mountains, which apparently constitute the largest hydrocarbon deposit in the world. Information developed by the Bureau on the shale and the oil that can be produced from the shale is helping in furthering future commercial exploitation. The Bureau's current work on fracturing and retorting the shale in place will give further impetus to this industrial movement.

Our program of mining research is directed toward the broad problems of how to extract minerals from the earth economically and efficiently while at the same time avoiding the despoilation of the land or the waters that flow over it.

Our programs in coal, petroleum and natural gas, oil shale, metallurgy, and mining, all provide examples of pioneering areas in research and development, where the Bureau is out in front, laying the groundwork for future efficiencies and economies in the industries that provide us with essential minerals and fuels.

In our health and safety work, we are more concerned with problems of the present. Here we are striving to eliminate the hazards to life and limb of the men employed in our mines and mills and to prevent needless destruction of the property of the companies. Attaining this objective is especially difficult because mines are inherently dangerous, involving man's entry into environments which are not his normal habitat. Nevertheless, the rate of occurrence of accidents, including loss of life, lost time, occupational diseases, and property damage, can be and has been steadily reduced by a continuous intensive effort.

Increasing mechanization, the use of more powerful machines, and machines of new design require that health and safety research keep abreast and, to the fullest extent possible, anticipate the effects of these developments on the health and safety of those who work in and at the mines. We will need to continue our research, our inspection work, and our training programs on as high a level as practicable.

The benefits to be derived from sustained effort are exemplified by the progress that has been made by the Bureau in research and development work on a methane monitor. Recognizing the need for a simple, rugged device that would operate automatically to detect methane and thus overcome human failure to make proper tests for gas with the permissible equipment already available, the Bureau of Mines attempted to interest manufacturers in developing such a device. Lacking response to the Bureau's invitation to the manufacturers, the Bureau's Health and Safety Research and Testing Center at Pittsburgh was assigned the job of designing and developing a methane monitor that would sound an alarm automatically when the methane content of the mine atmosphere attained a certain percentage and would cut off the electric power from the machine at the working face when the methane content of the mine atmosphere approached dangerous percentages.

The Bureau's experimental work was started about 5 years ago and today 10 methane monitors designed and built by the Bureau of Mines are being field tested under actual operating conditions and with notable success. Five additional monitors are being assembled by the Bureau to satisfy the requests of mine operators for experimental use of these devices.

In view of such successful operation, two manufacturers of mine equipment have requested the Bureau of Mines for permission to manufacture and market a methane monitor similar to one designed and developed by the Bureau of Mines, and such permission has been granted. The same two manufacturers have developed their own methane monitors and plan to market them also.

We are confident that the coal mining industry will make general use of the methane monitor when it is available on the market, and we also believe that use of this device will go a long way toward eliminating gas explosions in the Nation's coal mines.

Through the rehabilitation of areas damaged by previous harmful mining practices, the Bureau is helping to stimulate the economic development of the Appalachian region. The objectives are to fill voids in abandoned coal mines and thereby prevent or alleviate surface subsistence and subsequent dangers to surface facilities and public safety. The rehabilitation of existing strip and surface mine areas to eliminate public hazards and possible sources of surface water contamination will do much to enhance local economic growth. Also, the Bureau will plan and execute projects for extinguishing underground and outcrop mine fires which threaten coal reserves and create hazards to public and private property and the public health and safety.

Under the Solid Waste Disposal Act, the Bureau will conduct an intensified research and development program seeking new and improved methods for utilizing or otherwise economically disposing of solid mineral wastes. The Bureau plans to demonstrate the technical feasibility and determine the economics of various elements of waste-reducing mineral production and utilization systems applicable to the current mineral production and use situation. The program contemplates technical and financial assistance to State and local governments to assist in the planning, development, and conduct of solid waste disposal programs. It is expected that two plants will be constructed to demonstrate economic methods for treating and purifying scrap from junked automobiles for feed to steelmaking processes. This program will not only further the conservation of our natural resources but will do much to alleviate unsightly aspects of our countryside.

The Bureau's helium program for 1967 will be a continuation of the program for 1966. The five Bureau helium plants will continue operations to produce an estimated 824 million cubic feet of helium of which 174 million cubic feet will be injected into the Cliffside storage field. The balance of 650 million cubic feet will be sold to supply current demands. In addition, the Bureau will acquire by purchase from private industry an estimated 3.9 billion cubic feet of helium which it will store in the Cliffside field for future use. The helium research prrogam will continue at about the same level in fiscal year 1967 as in fiscal year 1966. The objective of this work is to provide scientific information on the properties of helium and helium-bearing gases, so that maximum benefit and utilization can be derived from our limited helium resources.

The budget estimate for the Bureau of Mines for 1967 totals $57,313,000. This includes $31,466,000 for the conservation and development of mineral resources appropriation, which is $917,206 less than the adjusted appropriation for 1966; $9,390,000 for health and safety, a decrease of $209,000; $10,566,000 for Appalachian regional development programs which are being funded in 1966 from funds appropriated in 1965; $4,335,000 for an intensified research and development

program seeking new and improved methods for utilizing or otherwise economically disposing of solid mineral wastes as authorized under the Solid Waste Disposal Act.

In addition the Bureau is requesting $26 million of borrowing authority to carry out the helium conservation program. This is an increase of $10 million over the amount authorized in 1966. The amount of borrowing authority requested will be needed to supplement income from helium sales and unused borrowing authority from previous years to meet the Bureau's financial commitments under this program.

This completes my statement. I shall be pleased to discuss the estimates for specific items in greater detail as they come up in the course of the hearing.

CONSERVATION AND DEVELOPMENT OF MINERAL RESOURCES

JUSTIFICATION

Chairman HAYDEN. There will be placed in the record the justification statement for the budget estimate for fiscal year 1967 for conservation and development of mineral resources. This estimate amounts to $31,466,000, a reduction of $425,000 under the amount appropriated last year. However, there is to be submitted a supplemental estimate of $500,000 to cover increased pay costs because of the Federal salary increase of last October.

The justification will be placed in the record.

(The justification follows:)

Appropriation, 1965	$30,100,000	
Second supplemental appropriation, 1965	1,098,000	
Total appropriation, 1965		$31,198,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration		−7,119
Total available, 1965		31,190,881
Appropriation, 1966	$31,891,000	
Pay cost supplemental	500,000	
Total appropriation, 1966		32,391,000
Unobligated balance from prior years		300,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration		−7,794
Total available, 1966		32,683,206

Analysis by activities

SUMMARY OF INCREASES AND DECREASES, 1967

1. Research:		
Coal:		
To provide for increased pay costs for fiscal year 1966 positions	+$41,000	
Savings due to closure of Anthracite Research Laboratory	−100,000	
Savings due to closure of Seattle Coal Research Laboratory	−35,000	
Decrease in coal-fired gas turbine program	−120,000	
Program savings due to improved manpower utilization in analyzing and testing coal and coke	−20,000	
		−$234,000

Analysis by activities—Continued

SUMMARY OF INCREASES AND DECREASES, 1967—Continued

1. Research—Continued		
To provide for increased pay costs for fiscal year 1966 positions	+$20,000	
Reduction of programs pertaining to brine studies, research on high-molecular weight materials in petroleum; air pollution and fuels combustion research, studies of oil field fluids, study on barium sulfate scale, and liquid pollution control research	−255,000	
		−$235,000
Oil shale:		
To provide for increased pay costs for fiscal year 1966 positions	+12,000	
To provide for oil shale research preparation for in situ retorting	+255,000	
		+267,000
Metallurgy:		
To provide for increased pay costs of fiscal year 1966 positions	+85,000	
To provide for reimbursement to employees compensation fund	+68,000	
Reduction and elimination of programs pertaining to ore beneficiation, gamma irradiation, physical chemistry, and silver ore beneficiation projects	−302,000	
Program savings resulting from improved manpower utilization and cost reductions at Bureau metallurgy research centers and laboratories	−203,000	
		−352,000
Mining:		
To provide for increased pay costs for fiscal year 1966 positions	+34,000	
Savings due to elimination of low priority projects	−75,000	
		−41,000
Marine mineral mining: To provide for increased pay costs for fiscal year 1966 positions		+1,000
Explosives: To provide for increased pay costs for fiscal year 1966 positions		+3,000
2. Resource development:		
Statistics:		
To provide for increased pay costs for fiscal year 1966 positions	+15,000	
Programs savings due to reduced canvassing and automation of certain statistical operations	−51,000	
		−36,000
Economic analysis:		
To provide for increased pay costs for fiscal year 1966 positions	+9,000	
To extend capabilities to meet minimum current needs for better and essential analyses of economic aspects of minerals industry	+226,000	
		+235,000

Analysis by activities—Continued

SUMMARY OF INCREASE AND DECREASE, 1967—Continued

2. Resource development—Continued		
Bituminous coal:		
To provide for increased costs for fiscal year 1966 positions	+$11,000	
Program savings resulting from reduction of coal investigations in Alaska, completion of aspects of Western coal resource appraisals and the composition of coal ash ,and a reduction in scope of studies relating to carbonization and preparation of coals	−107,000	
		−$96,000
Anthracite:		
To provide for increased pay costs for fiscal year 1966 positions	+4,000	
Program savings resulting from temporary detail of personnel to activities conducted under the appropriation "Appalachian region mining area restoration"	−45,000	
		−41,000
Petroleum: To provide for increased pay costs for fiscal year 1966 positions		+4,000
Minerals:		
To provide for increased pay costs for fiscal year 1966 positions	+37,000	
Program savings resulting from completion of several studies and investigations and the curtailment of low priority work	−713,206	
		−676,206
International activities:		
To provide for increased pay costs for fiscal year 1966 positions	+4,000	
Program savings resulting from not filling certain positions vacated through retirements and a general increase in efficiency	−20,000	
		−16,000
Net decrease, 1967		−1,217,206
Budget estimate, 1967		31,406,000

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers [1]	Amount available
1. Research:					
(a) Coal	$6,468,311	$6,410,000	$114,000	.....	$6,524,000
(b) Petroleum	2,300,346	2,329,000	31,000	.....	2,360,000
(c) Oil shale	921,603	1,027,000	15,000	.....	1,042,000
(d) Metallurgy	9,891,365	10,319,000	157,000	−$3,000	10,473,000
(e) Mining	2,772,438	3,082,000	44,000	.....	3,126,000
(f) Marine mineral mining	132,442	231,000	3,000	.....	234,000
(g) Explosives	500,778	557,000	10,000	.....	567,000
2. Resource development:					
(a) Statistics	1,555,434	1,801,000	38,000	.....	1,839,000
(b) Economic analysis	223,077	226,000	5,000	.....	231,000
(c) Bituminous coal	965,852	978,000	11,000	.....	989,000
(d) Anthracite	420,656	400,000	7,000	.....	407,000
(e) Petroleum	568,831	576,000	12,000	.....	588,000
(f) Minerals	3,239,512	[2] 3,692,000	43,000	−4,794	[2] 3,730,206
(g) International activities	556,014	563,000	10,000	.....	573,000
Unobligated balance available, end of year	300,000	.....	.....	.....	.....
Unobligated balance lapsing	374,222	.....	.....	.....	.....
Total	31,190,881	[2] 32,191,000	500,000	−7,794	[2] 32,683,206

[1] Represents transfers to General Service Administration unless otherwise footnoted.
[2] Includes $300,000 carried over from prior year.

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Research:						
(a) Coal	$6,468,311	$6,524,000	$6,290,000	−$234,000	+$41,000	−$275,000
(b) Petroleum	2,300,346	2,360,000	2,125,000	−235,000	+20,000	−255,000
(c) Oil shale	921,603	1,042,000	1,309,000	+267,000	+12,000	+255,000
(d) Metallurgy	9,891,365	10,473,000	10,121,000	−352,000	+85,000	−437,000
(e) Mining	2,772,438	3,126,000	3,085,000	−41,000	+34,000	−75,000
(f) Marine mineral mining	132,442	234,000	235,000	+1,000	+1,000	
(g) Explosives	500,778	567,000	570,000	+3,000	+3,000	
2. Resource development:						
(a) Statistics	1,555,434	1,839,000	1,803,000	−36,000	+15,000	−51,000
(b) Economic analyses	223,077	231,000	466,000	+235,000	+9,000	+226,000
(c) Bituminous coal	965,852	989,000	893,000	−96,000	+11,000	−107,000
(d) Anthracite	420,656	407,000	366,000	−41,000	+4,000	−45,000
(e) Petroleum	568,831	588,000	592,000	+4,000	+4,000	
(f) Minerals	3,239,512	[2] 3,730,206	3,054,000	−676,206	+37,000	−713,206
(g) International activities	556,014	573,000	557,000	−16,000	+4,000	−20,000
Unobligated balance available, end of year	300,000					
Unobligated balance lapsing	374,222					
Total	31,190,881	[2] 32,683,206	31,466,000	−1,217,206	+280,000	−1,497,206

[1] To provide for increased pay costs for fiscal year 1966 positions.
[2] Includes $300,000 carried over from prior year.

1. Research

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Coal	$6,468,311	$6,524,000	$6,290,000	−$234,000	+$41,000	−$275,000
(b) Petroleum	2,300,346	2,360,000	2,125,000	−235,000	+20,000	−255,000
(c) Oil shale	921,603	1,042,000	1,309,000	+267,000	+12,000	+255,000
(d) Metallurgy	9,891,365	10,473,000	10,121,000	−352,000	+85,000	−437,000
(e) Mining	2,772,438	3,126,000	3,085,000	−41,000	+34,000	−75,000
(f) Marine mineral mining	132,442	234,000	235,000	+1,000	+1,000	
(g) Explosives	500,778	567,000	570,000	+3,000	+3,000	
Total	22,987,283	24,326,000	23,735,000	−591,000	+196,000	−787,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

(A) COAL

Fiscal year 1966, $6,524,000; fiscal year 1967, $6,290,000; decrease $234,000. The decrease consists of—

(1) An increase of $41,000 for increased pay costs.

(2) A decrease of $100,000 of program savings resulting from improved manpower utilization and cost reductions by the closure of the Anthracite Research Laboratory, Schuylkill Haven, Pa.

(3) A decrease of $35,000 of program savings resulting from improved manpower utilization and cost reductions by the closure of the Seattle Coal Research Laboratory, Seattle, Wash.

(4) A decrease of $120,000 in the coal-fired gas turbine program.

(5) A decrease of $20,000 of program savings in analyzing and testing coal and coke as a result of improved manpower utilization and cost reduction.

In fiscal year 1967, continued emphasis will be placed on those research projects that will lead to increased efficiency in preparing and utilizing coal and to expanded use of coal as a raw material for making gaseous and liquid fuels and chemicals by novel and unconventional processes. Reprograming of

certain coal research activities, totaling $650,000, will permit more intensive study into means for reducing atmospheric pollution resulting from the combustion of coal. A comprehensive research and development program will be undertaken to provide industry with economically feasible methods of preventing excessive pollution of the atmosphere when utilizing sulfur-containing coals. Success in the area will permit effective use of the Nation's vast solid fuel resources without serious depletion of our premium quality coals. The principal program elements for the coal research subactivity are as follows:

Conversion of coal to liquid and gaseous fuels.—Estimate 1966, $1,680,000; estimate 1967, $1,610,000; decrease $70,000.

Objectives

The national goal for coal conversion is to regain for coal its proportionate share of the Nation's vast energy markets. Though coal is our most abundant energy source, in recent decades it has not enjoyed an expanding share of the greatly increasing energy demands.

Vast tonnage of coal would be required in its conversion to petroleum and gaseous fuels. The Nation would be strengthened, militarily and economically, by bringing about self-sufficiency in supplying its needs for petroleum. The salutary effects on our coal mining regions would do much to bring prosperity to the impoverished and distressed communities.

The technologic aim of the program is to attain greater efficiency and lower investment and production costs and to devise and develop new processes, for the conversion of coal into petroleum type fuels, natural gas, and a low-heating-value gas substitute (producer gas).

The increased concern of atmospheric pollution brought about by stack-gas emissions from coal-burning powerplants has directed attention to possible producer gas-fired plants as a means of alleviating the situation. A clean, sulfur-free gas produced under pressure not only would have utility as an industrial gas but could increase powerplant efficiency and eliminate sulfur pollution problems.

Guiding considerations

The gas industry, through the American Gas Association, has been sponsoring further development of the steam-iron process pioneered by the Bureau and at the Institute of Gas Technology both hydrogenation and synthesis pipeline gas processes. Consolidation Coal Co. has been engaged in gasification of coal by a unique process generating its own required heat by internal reaction with added external materials, and in the conversion of coal to gasoline by a combination of processes entailing solvent extraction, hydrogenation, and carbonization. Hydrocarbon Research, Inc., is attempting to adapt a heavy oil hydrogenation process to coal. The latter studies are funded by the Office of Coal Research, Department of the Interior.

There has always been close liaison between the Bureau and the American Gas Association and the Institute of Gas Technology; Office of Coal Research projects are reviewed by the Bureau for feasibility and to avoid duplication; often cost and economic studies are made for Office of Coal Research by the Bureau. Though in some instances this work parallels Bureau projects, the approach is different and the results are mutually complementary and salutary.

Government supports this research as industry is reluctant to throw funds into research that is considered to be unfruitful for yet some time. It is not anticipated that industry's interest in coal conversion will be intense until it has reached the near economic stage. Realizing the not too distant need for synthetic gas from coal in segments of the country, the gas industry is supporting research in this field of work. Other industrial research has been directed toward economic but limited operation.

Program of work

Continuing programs, $1,405,000

Reactions of coal with electrically generated excited species will continue to be studied in laboratory-scale experiments to determine the feasibility of converting coal to fluid fuels and chemicals by these noval methods. Samples of coal will be subjected to high-energy, short-duration irradiation from laser sources to learn the nature of the products produced at high temperatures with virtually instantaneous cooling of the products of reaction. Gaseous reactions in a corona discharge will be investigated, and the effects of electrically augmenting gaseous reaction temperatures will be evaluated.

The prototype fixed-bed gasifier will be operated as a dry-ash producer at pressures to 80 pounds to determine its utility in this service, using untreated caking bituminous coals. In a small fixed-bed, slagging gasifier, the effect of additives to caking coals on gasifier operations will be investigated, and the development of a prototype slagging bottom unit for an air-blown producer will be pursued. Additional development on bench-scale will be conducted on fluidized pretreatment and catalyzed gasification; and, dependent on a favorable economic evaluation, the process will be piloted. A statistical evaluation will be made involving the properties of absorbents tested and their efficiency in the purification of synthesis gas and the search continued for still more efficient absorbents based on the statistical evaluation.

Flame-sprayed catalysts will be tested in the hot recycle gas process for the production of gasoline. For the production of high Btu gas, a prototype multitube, flame-sprayed Raney nickel catalyst reactor will be designed and operated for the evaluation of the process for potential industrial use. In the hydrogasification of coal, the two-stage process will be further investigated to obtain required design and enginering information for piloting the integrated process. Production of liquid fuels by the modified process and their refining into chemicals and petroleum substitutes will be investigated further. Investigations of coal and coal products at extreme pressures will be extended to include reactions other than with hydrogen and/or steam.

New programs, $205,000

New programs.—Investigations will be directed to the development of a slagging, pressure operated air blown producer for production of a low heating value industrial gas and to the adaptation of a Bureau hydrogasification process to the coproduction of pipeline gas and liquids.

Completed or reduced programs, $385,000

During fiscal year 1966, four projects are scheduled for completion with a total funding of $225,000. These include development of methods for pretreating caking coals, an evaluation of possible methods for producing hydrogen, reactions of coal in high temperature plasma, and a study of the kinetics of reactions of carbon with carbon dioxide. Projects continuing during fiscal year 1967 but at a lower level of funding than fiscal year 1966 are research on Raney nickel as a methanation catalyst and exploratory and orientation tests on slagging gasification of coking coal. On these studies a reduction of $160,000 in funding is planned.

Upgrading of coal and its products, transportation, and storage.—Estimate 1966, $1,460,000 estimate 1967, $1,435,000; decrease $25,000.

Objectives

Coal is our Nation's most abundant fossil fuel and must be viewed as a prime source of supply to fulfill the increasing energy demand of the country. The customers presently available to coal can in many instances convert to another energy source so that any reduction in the delivered cost per heat unit through improved quality, transportation or safe handling can result in an enhanced competitive position for coal. Likewise, in the metallurgical field, upgrading the chemical properties of the coal and improving the physical characteristics of the coke made therefrom, will permit many coals in large reserve to enter the highly lucrative steelmaking market.

Many of the Nation's coals that are in largest reserve are lower in rank. Upgrading these deposits to marketable quality would unlock an enormous virtually untapped energy source. In the same manner, a search, if successful, for markets that could use the special characteristics of anthracite would permit that depressed industry its rightful share of the energy market.

Much of the coal presently used to supply the ever-increasing electric utility market is high in sulfur when mined and generally high in sulfur after cleaning by conventional washing methods. Means must be found to continue and expand use of these coals in the utility market through the development of more efficient cleaning methods for sulfur reduction. The alternative would be the expensive treatment of the stack gases to prevent the discharge of large quantities of noxious gases to the atmosphere. This method would result in higher costs of operation per unit of electricity generated and would downgrade coal's competitive position in a market that is the main prop under the industry's economic structure.

Further quality improvement will be needed as coal becomes the raw material source for conversion into synthetic liquid and gaseous fuels as the supplies of the natural product become depleted.

With increasing emphasis being placed on the use of fossil fuels based upon their sulfur content and strong efforts being made to impose restrictive quality specifications on the uses of coal, present technology for sulfur reduction in coal must be improved and new technology developed. This will involve extensive study of the mode of occurrence of sulfur in American coals and a study of various coal-cleaning techniques specifically designed for sulfur rather than ash reduction.

A concerted effort will be made to develop an economic and technically feasible system for moving coal pneumatically. If successful, the present system of gas pipelines might become transportation vessels for the movement of large tonnages of coals to highly industrialized areas.

Guiding considerations

While industry, educational institutions, other Government agencies, and private research establishments occasionally undertake an isolated investigation in the area of upgrading coal, transportation, and storage, these are usually limited in scope. The Bureau efforts are complimentary to those of industry where such industrial activities exist.

The research is supported by Government funds to insure the wise utilization of a large, valuable natural resource. In addition, the economically depressed areas of the country are widespread in the coal-producing States of the East and expansion of coal markets through research will have an immediate and salutary effect on the economic structure of these areas.

Program of work

Continuing programs, $1,310,000

To provide improved methods for pulverizing lignite, with special emphasis on the growing use of lignite in pulverized-fuel installations for the generation of electric power, the grinding characteristics of a modified ring-roll pulverizer will be studied to evaluate power requirements and product yields when crushing natural and predried lignite, both with and without in-the-mill drying. In a continuing study to provide inexpensive and safe storage for lower rank coals that are particularly susceptible to self-heating, the heat transfer coefficients of lignite will be studied at variable compaction densities and moisture levels. In addition, heats of reaction during low-temperature oxidation of lignite will be measured. Development of an efficient lignite-fueled combustor for the pulse-jet system of thermal drying will continue. Work to date has indicated that this system of drying has marked cost advantages over conventional thermal processes.

To capitalize on the inherent advantages of using a dry process to clean coal, studies will be made using a suspension of magnetite in air as the separating medium. This is expected to achieve a more effective separation than is possible using air alone, as in conventional pneumatic cleaning. Evaluation of coal preparation equipment, using a suspension of magnetite in water as the separating medium, will continue in an effort to provide the coal operator with performance data that will permit him to select the cleaning method best suited to his individual needs. Several cleaning processes using dense-medium suspensions in combination with centrifugal action for fine-coal upgrading will be examined. Many operational problems would be eased if large-sized particles could be handled effectively in froth flotation units. Practice in this country has been to restrict the top size of the feed to flotation plants to about 28 mesh. Studies will be initiated to determine means by which effective cleaning might be possible up to ⅛-inch top size, including the various operational variables that affect froth flotation of coal.

To overcome the difficulty in separating pyritic sulfur from coal after liberation of the pyrite by crushing to a fine size, effective means for depressing the sulfur during the froth flotation of coal will be developed. If successful, the study will have important application to the preparation of high-sulfur coal for metallurgical and electric power utility use. In the latter case, the investigation will have important connotations to the problem of air pollution by the oxides of sulfur which result when coal is burned, especially in large commercial plants located in urban areas. A survey will be made of the forms of sulfur and of the size distribution of pyrites in typical American coals as an initial step in the development of improved mechanical means to remove pyrite from coal before the combustion process. Studies will continue on the treatment of coal to enhance the magnetic separation of pyrite.

Emphasis will be placed on the sulfur phase of development of a meter that will determine simultaneously the moisture, ash, and sulfur in a moving stream

of coal; for example, at coal preparation and powerplants. Work on the moisture and ash phases probably will be completed early in fiscal year 1967.

The entrained recycle gas, low-temperature carbonization process will be further investigated and an economic comparison made with other processes.

Results of tests in the pneumatic transport in lines up to 3 inches in diameter will be evaluated, and an economic estimate will be made; if favorable, the studies will be continued to demonstrate applicability of this method of conveyance commercially. Methods of recompressing the solids-laden gas and for separating the coal from the gas at the destination will be investigated.

Bench-scale tests will be made to determine the feasibility of increasing the yields of liquid products from coal carbonization using extremely high rates of heating and of a continuous carbonizing process in which inert material such as coke made from western coals by suitable blending with char and/or tar pitch prepared from the base coal will continue.

Washability characteristics of the important anthracite beds will be studied in an effort to upgrade these deposits to the quality specifications of special use markets. In a study of means for making an agglomerated fuel from anthracite as a substitute for coke from bituminous coal now required for reducing iron ores in blast furnaces, 300 tons of calcined anthracite briquettes made by the Bureau will be tested in its experimental pilot plant furnace.

Various carbonizing variable will be investigated for improving coke strength so as to meet the demands of the metallurgical industry for high-quality, uniform coke. Also, mechanism and kinetics studies will be made to obtain basic data needed for improved carbonization processes.

New programs, $125,000

Investigations will be directed toward new and more effective methods of coal cleaning with particular emphasis on sulfur reduction.

Completed or reduced programs, $355,000

During fiscal year 1966, five projects are scheduled for completion with a total funding of $145,000. These include X-ray method of ash determination, utilization studies of some western coals, continuous production of chemical coke, studies of coal stockpiling, and the development of a continuous meter for measuring the density of coal. Projects continuing during fiscal year 1967, but at a lower level of funding than fiscal year 1966, including nuclear methods for measurement of ash and moisture in coal, research investigations on anthracite, and carbonization studies of western coals. On these projects a reduction of $210,000 in fundings is planned.

Use of coal by electric utilities.—Estimate for 1966, $1,610,000; estimate for 1967, $1,740,000; increase, $130,000.

Objectives

To make the maximum use of our vast reserves of solid fossil fuel, it is imperative that we strive unceasingly to develop improved methods and equipment for utilization. The electric utility industry which consumes well over 50 percent of all the coal produced in the United States has grown from an infant born some 80 years ago to a giant ranked the largest in Nation and at a pace almost twice that of the overall economy. In the continental United States in 1964, coal produced 65 percent of all of the electricity generated at steam-powered electric utility plants. In 38 coal-consuming States, coal produced 85 percent of the steam-generated electricity. The projected coal requirements for electric power generating in the year 1980 is nearly 500 million tons—about double the amount used last year.

In view of this phenomenal growth rate and market for coal, it is important that the Federal Government in cooperation with industry work toward the conservation of this important natural resource, at the same time developing more efficient combustion methods applicable to the electric utility industry in order that the cost of electric power to the consumer can be further reduced. Effective methods for removing particulate matter as well as sulfur and nitrogen compounds from the flue gases to reduce atmospheric pollution must be among the primary objectives in this cooperative effort.

Guiding considerations

Research projects on the combustion of coal are selected on the basis of developing knowledge which will assist industry in utilizing the natural resource more efficiently and reducing atmospheric pollution, thereby conserving coal and providing cleaner air for our people to breathe and, at the same time, giving the consumer cheaper electric power.

Cooperation is close with industry, educational institutions, and other governmental agencies. Because of this, it is possible to avoid duplication in research and, at the same time, to conduct investigations which will be most beneficial in the conservation and development of coal resources.

Program of work

Continuing programs, $1,640,000

The development of the gas-lubricated, high-temperature, closed-cycle turbine for power generation will be continued. Sustained operation will be investigated under actual power generation to determine the effects of generator load on turbine operations at temperatures to 1,600° F. A small single-stage turbine will be operated at temperatures to 1,900° F. to evaluate blade construction materials. A coal-fired furnace will be operated to develop suitable means of heating the turbine fluid to the required high temperatures with coal. Solids suspensions will be investigated to obtain additional information with denser loading and at higher temperatures and pressure ratios. If operation can be attained at these high temperatures, increased turbine efficiency is possible.

The objective of the open cycle coal-burning gas turbine program is to develop the technology and equipment required for an operable and efficient unit with a service life of 50,000 to 100,000 hours. To attain this goal, research will be conducted to develop systems operating at pressure for feeding pulverizing coal, burning coal, and separating ash from the products of combustion.

In the magnetohydrodynamic program, work will be devoted to refining the operation of the high-temperature coal furnace and developing techniques for the maximum recovery of the alkali seed.

In an effort to reduce the dust load in exit combusion gases, a study will be conducted to determine the effect of pressure on the combustion of coal in a fixed bed.

Study will be made of manganese oxide as an absorbent for high temperature removal of sulfur oxides from flue gases. Investigation will be initiated on the effect of limestone and dolomite additives to coal on the formation of sulfur oxides in the flue gases.

A continuation is planned of the study of reactions in high-temperature flames by injecting selected compounds into a gas flame and analyzing deposits collected on a probe surface of controlled temperatures.

Development of the electrostatic precipitator to extend its range of operation to pressures and temperatures to 350 p.s.i. and 1,500° F. will continue to determine its utility in cleaning up combustion gases in a combined-cycle power system and synthesis gases in coal conversion processes.

The physical chemistry of the combustion of coal in a fluidized bed will be studied through measurement of temperatures and gas compositions within and over the bed under varying operating conditions in an effort to achieve improved combustion.

The investigation into the technical feasibility and market potential of fly ash utilization as a possible raw material source will continue.

In order to study the performance of the numerous auxiliaries that comprise a modern coal-burning powerplant, a laboratory unit will be installed. The unit will be designed and equipped so that furnace and burner design can be readily altered. Included also, will be a gas-cooling section with ports for gas sampling and insertion of deposit and corrosion probes at various gas-temperature levels.

Examination will be continued of the properties of lignite ashes of different composition, of boiler deposits and slags, and of mineral combinations in raw lignite.

New programs, $100,000

New programs for the forthcoming fiscal year include a study of the effect of the addition of dolomite to reduce sulfur dioxide emissions to the atmosphere, and an investigation of the effectiveness of manganese oxide as an absorbent for sulfur dioxide removal.

Completed or reduced programs, $220,000

In the current fiscal year, it is expected that work will be completed on the combustion of blends of anthracite and bituminous coal and the project dealing with the separation of ash by dielectrophoresis. These two projects were funded at $100,000 during fiscal year 1966. The work on the coal-burning gas turbine project will be reduced and redirected at a funding level of $120,000 below that of fiscal year 1966.

Chemicals from coal and special product uses.—Estimate 1966, $945,000; estimate 1967, $725,000; decrease $220,000.

Objectives

The national goal is to broaden the base of coal's use in order to meet ever increasing chemical demands now met in part by use of our vastly more limited known reserves of petroleum and natural gas. The objective of the program is to find new uses for coal as a source of chemicals and other specialty products thus realizing maximum economic utility from our most abundant natural fuel resource. Such research complements other efforts to expand present markets since most coal research is devoted to work on lowering the cost of mining and preparing coal for the market, and on improving and extending the efficient use of coal as a fuel for powerplant use, for making metallurgical coke, and for its conversion to liquid and gaseous fuels.

The chemical composition of coal makes it attractive as a source of coal chemicals and other special products because of its large content of carbon and hydrogen and a host of inorganic chemical elements having considerable industrial use. On the other hand, the refractory chemical nature of coal makes necessary the development of new and improved technology to open up the coal structure for processing applications. Mainly for this reason, research in the past on new and novel uses for coal has not led to many economic breakthroughs. However, with increasing knowledge of the basic chemical and physical nature of coal and developing new technology, the Bureau of Mines is devoting considerable effort in finding new uses for coal by this route.

Guiding consideration

In only isolated cases have industry, educational institutions, other Government agencies, and private research establishments made a concentrated effort in doing research for finding new chemical and special product uses of coal. The financial structure of the many small coal companies, for example, does not permit much effort in research for developing such types of products. Where such effort does exist, the Bureau's work is complimentary rather than conflicting.

The Bureau recommends that the Government should support research of this type for assuring maximum economic utility of our most abundant natural fuel resource. In addition, finding new and important large tonnage markets for coal will enhance the economic structure of the economically depressed coal-producing areas of our Nation.

Program of work

Continuing programs, $710,000

Lignite, oxidized lignites, and humic acids derived from lignite will continue to be evaluated as potential soil conditioners and plant nutrients. Field testing of these materials will be conducted if current bench-scale tests warrant.

Tars produced from coals of different ranks by various low temperature carbonization procedures will be assayed to determine the optimum conditions for producing valuable chemicals. Development of upgrading processes for low-temperature tar will be continued. Emphasis will be placed on upgrading of tars produced from eastern bituminous coal. Treatment or processing of carbonization vapors before condensation will be included.

Direct production of carbon black from coal or as a byproduct from a process for producing hydrogen cyanide will continue to be investigated for evaluation of the product and for optimization of the process.

Chars and carbons tailored for speciality uses, such as metallurgical use and purification of water, will be produced. Residual carbons from various processes under development as well as coal will be further tested for purification of water.

Electrochemical reduction and catalytic dehydrogenation of coal and other novel reactions of coal will be investigated to develop potentially useful processes for making chemicals of economic importance from coal.

New programs, $15,000

Direct production of carbon black from coal or as a byproduct of a process for producing hydrogen cyanide from coal will be investigated for evaluation of the product for commercial use and for optimization of the process. Carbon black from coal offers the potential of a large tonnage market for coal for this purpose.

Completed or reduced programs, $285,000

During fiscal year 1966, one project on production of alcohols from low-temperature tar is scheduled for completion with a total funding of $150,000. Projects continuing during fiscal year 1967, but at a lower level of funding than fiscal year 1966, include lignite and leonardite as a soil conditioner and fertilizer,

low-temperature tar characterization, chars and coals to purify water, production of hydrogen cyanide from coal, and catalytic dehydrogenation of coal. On these projects a reduction of $135,000 in funding is planned.

Basic research.—Estimate 1966, $384,000; estimate 1967, $310,000; decrease $74,000.

Objectives

Experience in every phase of economy has shown that development of new industries and improvements in existing ones are based on scientific research, often representing many years of effort. Likewise, fundamental research on coal and its products is essential to the development of our Nation's coal resources to their highest potential. On the other hand, too little effort in research results eventually in a lack of data and of ideas on which to base new technological advances.

In its basic research program, the Bureau seeks to plug existing gaps in our fundamental knowledge about coal, its origin, physical structure, and chemical nature to aid in the development of wise and efficient extraction, upgrading, and utilization procedures.

Modern analytical tools employing X-ray and neutron diffraction and electron microscopy will be used to provide further insight into the physical makeup of coal. Various spectrometric techniques will be employed to follow the reactions of coal and identify its products. New tools and techniques will be investigated to determine their applicability to coal research.

Study of the pore structure of coal and the rates of absorption and desorption of gases on coal will help to explain the manner in which methane is contained in coal and aid in developing effective means for controlling the emission of this gas during mining operations.

Guiding considerations

Fundamental studies of coal are conducted at several universities and other facilities both here and abroad. These research efforts tend to complement rather than duplicate one another. Coordination is achieved by frequent contracts at national and international meetings and by direct communication among the researchers themselves. Recently, a Bureau researcher returned from a 1-year tour of duty in a foreign coal research laboratory.

Program of work

Continuing programs, $310,000

Fundamental studies of the physical and chemical nature of coal and reactions of coal including microbiological studies will continue using the most up-to-date physicochemical tools and techniques to provide data on which to base sound upgrading and utilization practices. Computers will be used when feasible to enable more efficient interpretation of the data.

Rates of absorption and desorption and equilibrium concentrations of methane will be determined at pressures up to about 10 atmospheres on samples of coals from gassy and nongassy mines to provide data essential for the development of effective methods for draining dangerous concentrations of this gas from coalbeds prior to extraction.

Completed or reduced programs, $70,000

No programs were completed; however, funding for four programs will be reduced a total of $70,000 from the funding level of fiscal year 1966.

Miscellaneous research.—Estimate 1966, $445,000; estimate 1967, $470,000; increase $25,000.

Objectives

Cost estimation and process evaluation services are provided the research segments of the Bureau, to serve as a guide in planning further research. Additionally, a coal analysis laboratory is maintained to service the Bureau's research needs. This laboratory seeks continuously to obtain increased accuracy and efficiency in relatively routine analyses of coals and cokes and to develop new methods of analysis. A further important mission of the laboratory is to furnish analytical services and technical advice to Government agencies to assist them in their coal purchasing programs.

Guiding considerations

The Bureau annually analyzes coals from hundreds of mines that wish to sell coal to the Federal Government. While these analyses are made primarily to

guide Government agencies in making their coal purchases, they are published each year and serve as a basis for the orderly flow of coal from producer to private consumer also. Additionally, these annual coal analysis reports provide an important source of information for use in evaluating the Nation's vast coal resources.

Program of work

Cost studies and evaluation of processes will be continued as a guide in research and development work.

Mainly in cooperation with national and international standardizing bodies, research will continue on developing new and better methods for analyzing and testing coal and coke that will provide basic information needed for improved utilization of these fuels.

For coal purchases at military and civilian installations of the Federal Government burning a total of 5 million tons per year, analytical tests will be made on a continuing basis to assure that the coals meet contract specifications.

(B) PETROLEUM

The estimate for 1967 is $2,125,000, a decrease of $235,000 below 1966. The decrease consists of—

(1) A decrease of $255,000 for projects that will be completed or recessed including studies of oilfield brines, nuclear-energy applications in gas production, high-molecular-weight compounds in petroleum, prevention of barium sulfate scale formation in producing wells, and studies of permeability.

(2) An increase of $20,000 for increased pay costs.

Objectives

As with all minerals and fossil fuels, the Department of the Interior, through the Bureau of Mines, fosters, by all proper means, the best and fullest use of our energy resources for as long as they are needed and are available, in the interests of the country, the economy, and our national security. This includes the present wise and efficient use of our oil and gas and the provision through research and technology for more or better energy resources for the future, all within the framework of a strong and growing domestic industry, in a clean and healthful environment. The major objectives are:

1. *Increasing resources base.*—The oil industry to date has discovered 350 billion barrels of oil in the United States and has and will produce 100 billion barrels from this resource base. Present technology cannot now be used to produce the other 250 billion barrels, worth over $600 billion, economically. There are additional trillions of cubic feet of natural gas also discovered but not amenable to economic exploitation. Bureau research is directed to increasing significantly the amounts of oil and gas that can be produced from these known deposits.

2. *Fostering more efficient utilization of petroleum and natural gas.*—Domestic demand for petroleum products now exceeds 4 billion barrels per year and the annual production of natural gas approaches 20 trillion cubic feet. Any increase in the efficient utilization of these resources takes on increasing economic significance as the demands increase year by year. Bureau research is directed to providing the fundamental data needed by the refining and petrochemical industries to increase efficiencies in processing, to decrease operating costs, and to improve the quality of products.

3. *Developing new uses for petroleum and natural gas.*—The major markets for oil and natural gas will continue to be in the transportation field and to satisfy energy demands. Nonenergy uses include asphalt production, synthetic rubber, and petrochemicals, totaling 350 million barrels per year. Bureau research is directed to providing fundamental data needed by industry in developing new uses and new products from oil and gas.

4. *Improving the environment.*—Automotive engine exhausts and stack effluents from energy plants using petroleum fuels are major contributors to the country's growing air-pollution problems. Waste oils continue to add to the pollution of our lakes, streams, and water supplies, and such oils in some instances are dumped on our land surfaces. Bureau research, in cooperation with the Public Health Service, is devoted to developing factual information on which to base an attack on these problems, all to the end that we can maintain a clean and healthful environment.

Guiding considerations

Research problems are selected that are of importance to industry and to Government and that will contribute to conservation. Some research is done that can be applied by the 20,000 small companies or individuals who are financially unable to exert any research effort of their own to demonstrate efficient production and conservation practices. Development of basic information which has economic value but no competitive significance is another research area.

Through cooperative efforts with industry associations, educational institutions, and State and Federal agencies, Bureau research projects are selected that will not duplicate valid efforts of others but will fulfill a definite need in the total petroleum energy activity.

Program of work

Petroleum production is complicated by the fact that no one production procedure can be applied universally to all petroleum reservoirs. Production practices have to be varied with the depth and thickness of the deposits, the pressures and temperatures of the reservoirs, and the physical and chemical properties of the reservoir rocks and fluids. Petroleum processing likewise is a complex operation that is based on the varying characteristics of the crude oils to be processed, the amount and nature of the deleterious materials in the crude oils, and the market demands to be satisfied by the refiner in specific geographic locations and over the year's changing seasons. Over 300 refiners operate in all sections of the United States, and produce over 3,000 products for consumers, albeit 10 major products satisfy most of the demands.

The Bureau's oil-production program has as its objective the application of improved production procedures and the development of new procedures for increasing the ultimate recovery of oil. Examples of research projects in progress include use of injected liquid explosive to improve hydraulic fracturing of formations, the application of thermal methods, such as steam injection and the use of underground combustion, to other than heavy-oil reservoirs where they now are being used successfully; and the evaluation of specific petroleum reservoirs to determine the production procedure most applicable for the greatest ultimate recovery of oil. In the development of new production procedures, an outstanding example of research in progress is the possible application of acoustic, electric, and magnetic energy to improve the flow of petroleum through the reservoir rock.

Research on processing and utilization of petroleum and natural gas provides the industry with analyses of crude oils and natural gas, both domestic and foreign, in order to improve processing operations, provides thermodynamic data on hydrocarbons and related organic materials, such as sulfur and nitrogen compounds, in order that plant design and operation can be optimized, and develops analytical techniques and methods needed to assess and improve the quality of products. In the field of air pollution, the Bureau has the most capable staff and the most modern equipment for studying, sampling, and analyzing automotive fuels and the exhaust emissions of these fuels from engines, and the subsequent reactions of exhausts in the atmosphere.

A brief decription of each program element of the petroleum research program follows:

Fluid injection to increase production.—Estimate 1966, $611,000; estimate 1967, $536,000; decrease $75,000.

Engineering analyses of selected reservoirs in the Appalachian area will continue to determine their susceptibility to various methods of recovery such as waterflooding, solvent injection, underground combustion, and steam injection. Thermal recovery problems in the west coast, midcontinent, and Appalachian areas are also under study. Related studies on subsurface fracturing of rock formations with chemical explosives to improve flow of fluids underground will continue.

Critical properties of reservoir rocks and hydrocarbon fluids that determine oil and gas recovery.—Estimate 1966, $630,000; estimate 1967, $548,000; decrease $82,000.

Many factors are involved in moving oil, gas, and associated water through the pores in underground formations. Studies to determine which properties control and govern maximum productivity and correlation of these properties will continue. These studies involve determinations of complex properties of rocks, oils, and waters, and computer calculations of flow of fluids through rock pores of varying sizes.

Application of new technology to oil and gas production.—Estimate 1966, $299,000; estimate 1967, $290,000; decrease $9,000.

Laboratory tests will continue on the application of acoustic, electric, and magnetic energy in solving production problems. Newer techniques of analysis will be adapted and applied to reservoir rocks and fluids. Reservoir rocks near the well bore in gas reservoirs will be subjected to intense heat to alter the physical properties of the rock and increase deliverability of gas. Application of new techniques to underground gas-storage problems will continue.

Characteristics of crude oils, products, and hydrocarbons.—Estimate 1966, $820,000; estimate 1967, $751,000; decrease $69,000.

Some 300 crude oils will be analyzed by the Bureau of Mines routine analysis method, including 20 oils from fields in Africa and Australia. Analytical studies will be continued on the characteristics and availability of distillate fuels for the Air Force. Data on petroleum products marketed in the United States will be obtained in cooperation with the American Petroleum Institute. Laboratory monitoring of fuels accepted by the Navy under their new specifications will be continued. Research will continue on the application of radioactivity to the chemistry of petroleum and its products. Work will continue on the separation and identification of sulfur compounds in petroleum and on the types of nitrogen compounds present in crude oils. Newly developed chromatographic techniques for asphalt characterization will be applied to asphalts prepared from six different crude oils. Thermodynamics research will continue its established, long-range research program on hydrocarbons, fluorcarbons, sulfur and nitrogen compounds, and organic derivatives of the lighter elements.

New programs, $83,000

New programs for the coming year include a study of mechanics of steam injection in California; increased effort on thermal recovery applications to petroleum and natural gas reservoirs in the midcontinent area; laboratory and field studies of limestone reservoirs in the Rocky Mountain area; and increasing application of computers to define the complex variables that determine reservoir behavior.

Completed or reduced programs, $334,000

During fiscal year 1966, nine projects costing $156,000 are scheduled for completion. These projects include computer studies of relative permeability; permeability variations due to water injection; water, gas, and nitrogen injection to increase oil recovery; plugging of reservoirs by suspended particles; nonradioactive gas tracers for use in storage operations, decline performance of California reservoirs, and a reservoir study of the Cut Bank oilfield in Montana.

Programs scheduled to be recessed at the end of the fiscal year amount to $178,000 in expenditures. Projects included are studies of oilfield brines, nuclear energy applications in gas production, high-molecular-weight compounds in petroleum, prevention of barium sulfate scale formation in producing wells, methods of disposing of industrial waste fluids underground, fuels combustion research, and exploratory studies of the relationship of oilfield fluids and stratigraphy.

(c) OIL SHALE

The estimate for 1967 is $1,309,000, an increase of $267,000 over 1966. The increase consists of:

(1) An increase of $255,000 is principally for the selection of a suitable location for a field test of in situ retorting.

(2) An increase of $12,000 is for increased pay costs.

Need for increase

The requested increase is principally for the selection of a suitable location for a field test of in situ retorting. Work will include the interpretation of available geologic data, drilling and coring, logging, core analyses, and data evaluation. However, work will be continued on background research applicable to in situ retorting of oil shale, including the feasibility of retorting the random-sized blocks expected after nuclear explosive fracturing, the convertibility to useful products of carbon residues left from retorting oil shale in place, and the comparative efficiency of various methods of fracturing oil shale to permit in situ retorting, such as electrical, chemical, hydraulic, and nuclear fracturing.

Objectives

Oil shale in the Rocky Mountain area is the largest hydrocarbon deposit in the world. This vast deposit represents a resource that has a great potential importance to the Nation's future economic growth and security.

Most of the oil shale deposits are on public lands under jurisdiction of the Department of the Interior. The Department, therefore, is engaged in a program to insure orderly development and conservation of this vast resource. To achieve these objectives, the Bureau provides engineering and scientific information needed by Government to prepare a logical oil shale policy. This information is also used by industry in efforts to economically recover oil from shale.

The Bureau's research program can be broadly classified into three phases directed toward development of new technology and improvements in existing technology as follows:

(1) To characterize oil shales evaluations are made of the oil yields of representative samples, the physical and thermal properties of the shale, and the types of organic and mineral compounds present. This research is aimed at defining the extent and characteristics of the Nation's oil shale resources as a guide to policy decisions and eventual development of this resource.

(2) The chemistry of the organic material in the oil shale and the oil produced from the shale is studied with advanced analytical techniques that provide data about the constitution of kerogen (the solid organic substance in oil shale) and the composition of shale oil products. Other studies provide basic information about shale oil as a source of chemicals, the stability of shale oil products, and the potential of shale oil as a base for a petrochemical industry.

(3) Methods for converting kerogen to shale oil and refining shale oil to yield usable products are studied, with current primary effort on in situ (underground) retorting. If successful, in situ retorting will eliminate the need to mine and crush the shale as in conventional operations (a major cost in obtaining shale oil) and will eliminate the problem of spent shale disposal. Laboratory studies include methods of creating flow capacity in shale (such as fracturing with high-voltage electricity), igniting the shale, and determining the combustion characteristics for raw and spent shale. Fracturing with a nuclear explosion with subsequent retorting also is being studied. Bureau observers at the Anvil Points facility near Rifle, Colo., are collecting and evaluating the retorting research being conducted by six oil companies.

Guiding considerations

The petroleum industry has a modest research and development program in oil shale. No total data are available on the funds for industrial oil shale research as a percentage of the industry's current total petroleum research effort, estimated to be about $325 million annually. However, it is probable that the industry's oil shale research and development effort is no more than $3 million annually, or about 1 percent of the annual industrial petroleum research and development effort. Retorting research, costing $1 million annually, is being conducted by the Colorado School of Mines Research Foundation, supported by six oil companies, at the Bureau of Mines facility near Rifle, Colo. Another industry combine, the Colony Development Corp., is engaged in experimental mining and retorting work in the same area after a reported initial capital investment of $3 million. Several companies are conducting field experiments on in situ retorting, all supplemented by some laboratory research. However, as essentially all industry research is of an applied and proprietary nature, very few data are available, either in the technical literature or on a confidential basis to Government agencies.

Under the existing circumstances, Bureau of Mines oil shale research does not conflict in any way with that of industry. Bureau research parallels industry research in some instances as, for example, the work on in situ retorting; in other instances, such as research on reactions of shale oil components and the constitution of kerogen, work is not conducted by industry and the results thereof are widely utilized by industry.

The Bureau's oil shale research program is appropriately financed by Federal, rather than industry, funds because competence in the various areas of oil shale research is required to permit authoritative advice to other Federal agencies, including policymaking ones, and to provide basic scientific data needed to complement data from industry research, in the interests of developing an oil shale industry, thereby adding a great potential resource to our hydrocarbon reserves.

Program work

Research proposed for fiscal year 1967 includes continuation of work on the characteristics of oil shales, the constitution of kerogen, characterization of oil shale and shale oil products, reactions of oil shale components, and significant

factors affecting the conversion of kerogen in oil shale to shale oil, including the parameters applicable to in situ retorting or conversion. Observation also will be continued of the research operations at the Rifle, Colo., facility, and research will be continued, cooperatively with the Atomic Energy Commission, on the feasibility of using nuclear explosives for fracturing deep, thick oil shale deposits to permit in situ retorting.

Fundamental studies will continue of the physical, chemical, and thermal properties of the organic material in oil shale. Similar studies will characterize specific components of the shale oil. Studies will also be conducted to describe the reactions that occur when oil shale is heated (retorted). The cokelike residue that remains after the oil shale is retorted will be burned to characterize its thermal properties. Crude shale oil as a source of chemicals will continue to be evaluated. These studies will employ a number of analytical techniques such as mass, absorption, and nuclear magnetic resonance spectroscopy.

(D) METALLURGY

The estimate for 1967 is $10,121,000, a decrease of $352,000 below 1966. The decrease consists of—

(1) A decrease of $302,000 is due to reduction and elimination of programs pertaining to ore beneficiation, gamma irradiation, physical chemistry, and silver ore beneficiation projects.

(2) A decrease of $203,000 of program savings resulting from improved manpower utilization and cost reductions at Bureau metallurgy research centers and laboratories.

(3) An increase of $68,000 to provide funds to reimburse the employees' compensation fund for payments made on account of the injury or death of employees under the jurisdiction of the Burea of Mines.

(4) An increase of $85,000 for increased pay costs.

Approximately $1 million, released by the conclusion or recessing of about 15 percent of current projects, will be redistributed to bolster continuing projects with increased emphasis on antipollution of land, water, and air and to initiate new important projects. Of the total funds available for redistribution, about $500,000 will be used to augment air pollution investigations and slightly less than $200,000 will be employed to augment land pollution and waste abatement research. About $400,000 will be reassigned to initiate projects in other important areas of the overall program.

The entire metallurgy research program summarized in three sections ("Minerals processing," "Minerals utilization," and "Basic research") is directed toward clearly defined objectives and is coordinated closely with investigations of other divisions of the Bureau, other Federal agencies, and private industries.

Minerals processing.—Estimate for 1966, $5,900,000; estimate for 1967, $5,841,000; decrease, $59,000.

Objectives

A healthy economy in the United States depends upon the assurance of an adequate and dependable supply of minerals raw materials at the lowest cost consistent with national security and the welfare of friendly nations. The goal of the minerals processing program of the Bureau of Mines is to provide such assurance by extending the domestic resources base and by encouraging wise and nonwasting use of currently available ores.

The minerals industry has been undergoing significant changes both in technology and in sources of raw materials. The rapid rate of population growth coupled with higher per capita consumption of many minerals and metals has resulted in drasticaly increased demands. Depletion or exhaustion of many high-grade domestic deposits has increased dependence on foreign mineral sources, a trend that will continue until significant advances are made in processing technology that will allow economic exploitation of low-grade domestic mineral deposits. Achievement of the Bureau's research objectives would insure the Nation a continuing supply of raw materials for present and future needs.

Technically, the processing program has three closely related aims: (1) To make available new domestic mineral reserves by devising methods that will enable economic production of metals and minerals from deposits now impractical to treat; (2) to conserve resources by modifying current metallurgical procedures or by developing alternate methods of treatment that will improve recoveries of metals from presently used ores; and (3) to minimize air, water, and land pollution by development of more effective methods for treating and dis-

posing of metallic scrap and the solid, liquid, and gaseous wastes from mineral and chemical processing plants. Investigations incorporate application of recent research and technologic advances to the complex problems of inorganic materials treatment.

Guiding considerations

Problems selected for research, by the Bureau are those of significance to the Nation's minerals position; they are generally of a long-range or high-risk nature. Duplication with industrial research is avoided since industry, of necessity, must limit its investigative efforts to those areas that will assure immediate financial returns. When research programs reach the point that short-term results are promising, cooperative research with industry is encouraged and conducted to obtain application and engineering data.

Program of work

Continuing programs, $4,825,000

Research will be continued to improve recovery of copper and byproducts from low-grade copper ores, to recover metal and mineral values from saline water, to extend phosphate treatment methods, to develop economic processes for recovery of alumina from nonbauxite ores, and to improve methods for concentration and smelting of iron ores. Investigations on the treatment of nonferrous metal scrap will be continued, together with studies to minimize waste from phosphate washer plants and to effect recovery of valuable constituents from titanium chlorination plant residues. Minor effort will be devoted to separation of biotite and muscovite micas, recovery of silver from extremly low-grade ores, recovery of titanium and iron from titaniferous magnetites, and conclusion of bench-scale evaluation of rubidium recovery techniques.

New programs, $1,016,000

Projects to be initiated in 1967 include research directed toward improved gold extraction from refractory ores, separation of soda and potash feldspars and separation of dolomite to produce useable magnesium and calcium carbonates, and electrolysis of aluminum chloride.

Gold production is principally a byproduct of the smelting of lead, zinc, and copper ores, and fluctuates with the demands for these metals. Therefore, any appreciable augmentation of the diminishing gold supplies can best be achieved by developing economic methods for treating marginal and refractory ores.

Potash feldspar is an essential ingredient in manufacture of high-quality glass and certain ceramics. The pure mineral, however, generally occurs in combination with soda feldspar which finds only a limited utility. Development of a satisfactory method for separating the two varieties of feldspars will greatly augment our supply of the more valuable potash feldspar.

The mineral dolomite is used in one method of producing magnesium metal, but deposits of high-grade dolomite are limited, as the dolomite generally is contaminated with varying amounts of calcium carbonate limestone. Development of a method for treating dolomite-limestone rock to separate the dolomite and calcium carbonate would yield two marketable products: one suitable for magnesium production and the other for cement manufacture.

Development of an aluminum chloride electrolysis process would permit cost savings through lower operating temperatures, less corrosive conditions, and a nonconsumable anode; all factors which tend to be problems associated with the current industrial process.

Completed and reduced programs, $1,603,000

Research to develop methods for recovery of beryllium from low-grade domestic ores was completed during fiscal year 1966; the technical feasibility of beneficiation and extraction methods were estabilshed. Also completed was a program to electrowin molybdenum and tungsten directly from ores; the results of this investigation have been well documented in technical publications and patents. Research to extract alumina from ferruginous bauxite has been recessed, but information gained from the project will be applied to treatment of alumina red muds under the solid waste program. A project to establish the mechanism and cause of red dust formation in the oxygen steelmaking process has been completed. Seventeen projects were deleted from the program to allow reorientation to more pressing problems. Emphasis on several other projects was decreased slightly, consistent with work plans for 1967.

Mineral utilization.—Estimate for 1966, $2,206,000; estimate for 1967, $2,052,000; decrease, $154,000.

Objectives

The Bureau's minerals utilization program is designed to extend the contribution of the minerals industry and the national economy by creation of metal- or mineral-base materials with desirable or unusual properties, determination of new uses for minerals which are abundant, and discovery or synthesis of substitutes for those minerals which are relatively scarce. A major portion of the program is directed toward meeting the urgent and increasing need for materials and metals suitable for use at high temperatures, corrosive environments, and other adverse conditions encountered in nuclear energy, missile, and space applications, as well as in chemical and metallurgical inudstrial applications.

Technical emphasis is given to the problems of developing alloys and composites, shaping and fabricating promising materials, and determining application parameters.

Guiding considerations

Through careful planning, utilizing the best advice available from industry, educational institutions, and State and Federal agencies, Bureau research projects are selected which will not duplicate valid efforts of others but which fulfill definite needs in the total national materials research effort. Close cooperation with the Atomic Energy Commission and the Department of Defense aids in the choice of projects for Bureau research. Special emphasis is given to development of alloys for extreme temperature applications, synthesis of inorganic fiberous minerals, and development of improved methods to shape and fabricate refractory metals and ceramics.

Program of work

Continuing programs, $1,954,000

Research will be continued on methods for melting, casting, and fabricating refractory metals and alloys; creation of new metal-nonmetal composites for high-temperature, high-strength applications; forming and uniting ceramics; development of high-temperature solders; improvement of zinc-base alloys; and synthesis of absestiform minerals. Lesser effort will be directed to preparation of superconducting alloys and application of coatings for thermal and corrosion protection.

New programs, $98,000

One project will be initiated to investigate the properties and usefulness of dispersion-hardened copper. Another new project will be directed to determination of the effectiveness of ultrafine alumina as an agent or catalytic support for removal of sulfur from combustion gases.

There has been an increasing need in space and defense applications for metals possessing high electrical and thermal conductivity properties combined with high strength and creep resistance at elevated temperatures. Dispersioned-hardened copper alloys may provide the necessary characteristics to meet the specifications desired.

Alumina powder has already exhibited a capability of removing sulfur dioxide from the air. The development of ultrafine material and its subsequent fabrication into appropriate shapes would improve its usefulness for such an application.

Completed or reduced programs, $264,000

Recessed projects include development of ceramic membranes for electric energy cells, evaluation of tungsten-cobalt alloys, research on manganese copper damping alloys, and synthesis of micaceous minerals.

Basic research.—Estimate 1966, $2,345,000; estimate 1967, $2,138,000; decrease, $207,000.

Objectives

Essential to the entire Bureau metallurgy research effort and of importance to the entire minerals industry is an underlying basic research program to supply accurate correlated data of a lasting nature concerning properties and reactions of metals and inorganic compounds to serve as basic guidelines for process development, minerals utilization, and envoronmental improvement. Included is research to develop improved methods and techniques for analyzing and determining rates and mechanisms of reactions.

Guiding considerations

The metallurgy basic research program comprises selected studies to yield background information or data for which there is an established requirement or demand. Pure research, wherein neither goals of the studies nor methods of achieving them are established, is considered the purview of universities, and is not undertaken as a part of this program.

Program of work

Continuing programs, $2,008,000

Continuing research includes establishing accurate thermodynamic properties of inorganic materials, correlation of physical, chemical, and electrical properties of ceramic oxides, determination of the mechanisms and rates of metallurgical reactions, measurement of vapor pressures and determination of molecular composition of the vapor, research in the fundamentals of flotation, and development of improved chemical analysis methods.

New programs, $130,000

A study of the effect of surface alteration upon mineral recovery will be started in 1967. An investigation will be initiated to measure the effects of ultrahigh temperatures and pressures on minerals and metals. An improved means of analyzing low-grade silver ores will be sought.

Basic research related to developing techniques for changing the surface properties of minerals and in turn alter their response to minerals beneficiation processing can lead to expanding the availability of many valuable metals from low-grade domestic mineral deposits.

The application of ultrahigh temperature and pressures on metals and minerals has led to the formation of synthetic diamonds. Further investigations involving these extreme conditions can very well open the door to a host of compounds that have not been considered before.

Improvements in analysis of silver in low-grade ores and metallurgical products will contribute greatly to our ability to identify new domestic silver resources as well as aid in the development of more efficient extraction technologies.

Completed or reduced programs, $355,000

Research to determine the effect of gamma radiation on mineral properties and on inorganic reactions was discontinued. Physical chemistry studies on refractory metal halides and on reduction rates of iron minerals was reduced to conform with realinement of program emphasis.

Employee compensation payments.—Estimate 1966, $22,000; estimate 1967, $90,000; increase, $68,000.

The increase of $90,000 is to provide funds to reimburse the employee compensation fund for payments made on account of the injury or death of employees under the jurisdiction of the Bureau of Mines as required in section 209 of Public Law 86-767.

(E) MINING

The estimate for 1967 is $3,085,000, a decrease of $41,000 below 1966. The decrease consists of—

(1) A decrease of $75,000 is due to the elimination of low-priority projects.

(2) An increase of $34,000 for increased pay costs.

Objectives

An ever-increasing quantity of mineral raw materials is one of the basic requirements for support of an expanding population at even present-day standards and for an advancing technology indispensable to national survival. Moreover, due to a rapid increase in world competition for mineral products, this augmented supply will have to come from domestic sources that will continue to become less accessible and lower in grade. In order to extract the needed quantity of minerals economically and at the same time preserve the national interest in the conservation of minerals and other values of the land in and under which they occur, completely new mining systems must be developed. The objective of the mining research program is to advance domestic scientific mining capabilities sufficiently; so that an effective development of typical new and competitive mining systems, that are operationally compatible with the national mineral and landscape conservation needs of the public, may be started in 1970.

The factors of size, shape, quality, depth, and physical characteristics vary widely for mineral deposits and determine the difficulty of mining and the phys-

ical restrictions which limit the mine system design. Separation and removal of the desired mineral from its natural environment almost always involves a complex series of interrelated acts which may be grouped into subsystems.

Bureau mining research is focused on producing new and improved subsystems to meet the physical and economic requirements of the total mining systems necessary to attain the national goals for mineral production and also the full land resources use. The needed advances in technology of the mining subsystems can come only through studies to develop a better understanding of the nature of the pertinent materials, principally rock and rock masses, the energy mechanisms involved, and the interactions of the two. The goal of these studies is to formulate and establish the subsystems predictive equations that accurately express the physical laws and principles involved in the development of technologically new and improved mine systems.

Guiding considerations

The mining research which is conducted in Bureau laboratories and in operating mines in cooperation with mining companies, is planned and primarily directed toward development of knowledges that best fulfill the need to develop the mining systems that conserve the mineral and other land resources of public and national interest. Hence, research projects are not necessarily selected on the basis of their possibility of developing technological advances that will on either a short- or long-term basis affect the profit structure of the mining industry. Conservation of mineral and other environmental resources is the paramount consideration in the Bureau research program. Hence, preference is given to those research tasks that contribute to this paramount consideration. The mining industry does derive benefits from such projects especially since the derivation of valid predictive equations is dependent on correlation of data obtained from related research that is more directly oriented toward the operational cost structure of the mining industry.

Because mining companies are working with nonrenewable resources, the long-term incentive to consider resource conservation is lacking, and mine operators ordinarily support research only to the extent necessary to meet imposed regulations. Their primary consideration, in designing a mining system, is profit. When this is the major design requirement, the resulting system is likely to be wasteful in terms of minerals and land environmental values and therefore not compatible with the long-term public interest. Bureau research is therefore primarily directed to fill this neglected need to develop the largely automated, high-speed mining systems that will be needed to economically produce the required minerals and at the same time preserve the public interest in the other values of the environment.

The Bureau actively encourages educational institutions, private companies and other Government agencies to cooperatively or singly undertake work on mining research projects that fulfill definite needs in the total mine systems development. When work so undertaken duplicates Bureau research efforts, the Bureau immediately recesses its effort in the area of research.

Program of work

Mining research is a single, and essentially continuing, comprehensive program. The estimate for 1967 is $41,000 below the amount available in 1966. Program changes to accommodate this small budgetary decrease are to be effected by technical reorientation of research work at the project level or work segments of the principal research elements of the program. A brief narrative description of the nature of the work for each of the elements of the mining research program follows:

Ground control.—Estimate 1966, $1,442,000; estimate 1967, $1,368,000; decrease, $74,000.

Control, stabilization, and support of the ground around the voids created in gaining access to and removing ore from a deposit is an element not only fundamental to any mining operation but also critical in its influence on surface damage, environmental contamination, productivity, and total recovery of minerals. Thus, development of improved ground control subsystems is important to protect several facets of the public interest.

Studies of artificial support of mine openings again will be directed in fiscal year 1967 to developing the potential of concrete, rock bolts, and other materials for ground support, determining basic criteria for distributed load support systems, and improving the support characteristics of hydraulic backfill, the waste rock hydraulically emplaced to refill and prevent collapse of underground open-

ings, reduce destructive surface subsidence, and provide for hidden, underground disposal of solid waste.

Various stresses present in rock at outcrop and underground sites throughout the country will be measured and correlated with interpretations of stress-induced structural deformation data to provide a means of predicting the character of stresses that may be encountered and the ground support systems necessary to withstand these expected stresses. Other studies contributing to the knowledge of ground stress involve establishing by laboratory and in situ methods the relationships of fractures and jointing to shear and strength of rocks and the effects of these and other rock inhomogenities on the stability of mine pillars and openings. A corollary study that also will be continued is concerned with rockbursts, now adversely affecting operations in deep silver-producing and other mines in Idaho and in the future having an increasingly deleterious effect on mineral production in other areas as mines become deeper. Further development of instruments for measuring rock stresses deep within the earth from deep vertical boreholes is planned.

Laboratory and field investigations of rock microseismic noises and the propagation velocity of pulsed sonic noises in rock along with a laboratory study of attenuation of sonic waves in rock by stress changes and the character and spacing of natural fractures will be directed toward developing a reliable method of predicting rock failures and the in situ strength and minability of rock and ore.

Research on rock mechanics and geologic structure and related applied engineering studies in underground coal mines will be continued toward developing underground coal mining systems that are competitive costwise with surface mining methods. In addition to both longwall and room-and-pillar mining investigations in flat and inclined coal seams a complementary engineering study of self-advancing and other types of articial support for pitching seams will be carried on. Ground deformations resulting from pillar robbing in coal and metal mines will be studied further.

Design hypotheses for placement and configuration of the openings in block-caving mines continue to be developed from ground control and rock mechanics studies in block-caving mines in Arizona, Colorado, Pennsylvania, and Michigan. Applied studies will test these hypotheses through full-scale experiments in mines under the differing rock and operating conditions as they are encountered.

The practicability of having steeper slopes in open-pit mining in order to reduce the amount of waste rock mined to gain access to the ore will be studied in the full-scale pit slope stability test being continued in fiscal year 1967 with test excavation work to steepen the walls of an abandoned open-pit copper mine to conform to slope angles established previously by research cooperatively conducted by a private mining company and the Bureau. Corollary studies will be directed toward measurement and computation of the geometry, magnitude, and orientation of naturally occurring and mining-induced stress in actual pit mine slopes and toward laboratory development and field testing of devices for automatic warning of imminent slope failure.

Rock disintegration.—Estimate 1966, $777,000; estimate 1967, $832,000; increase, $55,000.

Breaking rock is a basic step and often the most costly element in mining operations. The method used influences the damage to nearby surface and underground structures from ground shock waves and airblasts and directly affects choices and efficiency for the other elements of the mining system, for example, the stabilization, control, and support of ground. Hence, even small advances in the technology of rock breaking can result in significant improvements in the economy and safety of mining operations.

In 1966 consolidation of two widely separated units doing blasting research effected, through closer coordination of work, a reduction in the number of studies and a more efficient utilization of the research capabilities of scientific personnel.

Knowledge of the manner in which rocks may be broken with explosives will be advanced in fiscal year 1967 by continuing the investigations of seismic effect of underground blasting, model techniques for studying blasting phenomena, and the relation of geologic structure to blasting. Work, supported in part by the Army Research Office, will be continued on developing a drillability index for predicting the penetration rate and cost for drilling blastholes with percussive drills at any mine or construction job. The role of friction in the mechanical fragmentation of rocks and the effect of stress on rock properties and on microstructure will again be studied.

Research will be continued on developing faster, more efficient methods of breaking rock by applying energy from sources not ordinarily used in current mining practice. Projects deal with thermal shock, the application of the effect itself, and methods of rapid heat delivery such as dielectric and induction heating; electrohydraulic explosive effects; chemical weakening of intercrystalline bonds; and basic studies of energy transfer and the rock failure mechanisms related to steady stream and pulsed high-pressure water jets on minerals other than coal.

Materials handling.—Estimate 1966, $103,000; estimate 1967, $147,000; increase, $44,000.

In all mining operations, the loading and transfer of ore, waste, materials, and supplies is a major cost item. Up to fiscal year 1966, research in this element of the Bureau's mining research was limited to studies of hydraulic pipeline transportation of coarse coal. Early in fiscal year 1966, this study was reoriented and extended to other minerals and rocks and will be continued in fiscal year 1967. In addition there will be increased effort on the recently started studies that are directed toward improving existing materials handling practices or introducing new methods by developing and applying pertinent knowledge of the properties of fragmented materials and the basic and applied physical principles governing particulate and bulk flow.

Environmental control.—Estimate 1966, $500,000; estimate 1967, $438,000; decrease, $62,000.

This element of the mining operation involves control of a number of factors including mine water, and composition, temperature, and humidity of the mine atmosphere.

Beginning in fiscal year 1967, responsibility for all studies concerned with this element are to be concentrated at the Pittsburgh Mining Research Center thus giving a closer coordination of the related studies on mine hydrology and acid drainage from mines.

Development and application of a laboratory electrical resistive (analog) method of simulating physical factors affecting distribution and flow of water into a mine will be continued as an approach to designing mine water control measures with fewer expensive, time-consuming field measurements needed to provide requisite data. Related studies will be directed toward developing concepts of distribution, movement, and character of water in rocks enclosing mineral deposits; determining effect of stress on permeability of rocks; and developing improved means of controlling water flow into mines.

Engineering field studies to demonstrate and evaluate presently known methods of abating pollution from acid mine drainage will continue to be conducted cooperatively with the Department of Health, Education, and Welfare, the Bureau of Mines, the Geological Survey, and the Bureau of Sport Fisheries and Wildlife. Complementary to and supporting the cooperative work are Bureau of Mines studies concerned with determining the mechanism of acid formation in mines, controlling the acid drainage from active mines, and developing improved methods of sealing abandoned mines.

Studies to relate the physical properties of coal and the structural features of coalbeds to the presence and emission of methane and thus serve as a basis for predicting conditions to be encountered in mining will be continued in the research on drainage of methane from coalbeds in advance of mining. In addition, the research again will include applied engineering trials of coalbed degasification techniques. These methane control studies will be coordinated with those of the health and safety group concerned with methane monitoring and float dust control.

Mine systems.—Estimate 1966, $304,000; estimate 1967, $300,000; decrease, $4,000.

Designing a total mining system is a complex problem. Declining ore grades, greater depths of operation, and the need to guarantee meeting the national interest in maximum utilization and conservation of all subsurface and surface resources have made precise engineering evaluation of mineral deposits and design of complex mining operations of paramount importance. Hence, mine systems design is a most important element of the research program, for only through development of capabilities to design technologically advanced mining systems can the fruits of scientific and applied technological research be realized and the overall national interests be served.

Principal emphasis in fiscal year 1967 will be on further development of a specialized mine systems design, analysis, and evaluation unit composed of a

small number of the most competent mining personnel in the Bureau. This group will, through the use of statistical mathematics and high-speed computers, assemble, evaluate, and apply the most advanced technological criteria for the four subsystems discussed above to the engineering and design of economical mining systems. Sustaining the mine systems design group will be the corollary analysis and evaluation research studies to develop empirical mathematical models of various mining subsystems and to insure the compatibility of these component subsystems when combined to predict the most applicable mining method for a given mineral deposit and physical or economic situation. The models will be tested on actual and simulated deposits of different minerals such as coal, copper, molybdenum, silver, and oil shale, but their use will not be limited to these commodities. A sampling evaluation of an eastern coal deposit that supplies coal to an important segment of the steelmaking industry will be continued by statistical analysis.

New programs, $267,000

Work on two new ground control projects will be directed toward (1) a laboratory study of the effects of uniaxial stress on mine pillars, and (2) a development of a computerized method to establish the stable angle of a pit slope based on the measured spatial orientation of planar rock structures.

Two applied research studies concerned with the minability of various rocks and minerals and the development of rock fragmentation subsystems will be initiated in 1967. Our new environmental control project will be started. It involves an applied study directed toward the development of mine water control subsystems. Increased efforts will be undertaken on eight projects dealing with studies on explosive, thermophysical, chemical, and electrohydraulic rock fragmentation.

Two new mine systems projects are scheduled for 1967. Both projects involve studies directed to statistical analysis and evaluation of minable coal deposits. Increased effort will be placed on studies directed toward improving material handling practices.

Completed or reduced programs, $406,000

On ground control research the Bureau will complete work on development of a lightweight, high capacity, hydraulic mine prop and a field study of orientation of planar rock structures in 75 example rock slopes. Work will be recessed on four projects involving laboratory studies of stresses in open-pit walls, and in the rocks in walls of inclined mine openings, the time-stress deformation of rocks and a laboratory and field study of ground control as affected by layers of clay in the roof and floor of mine openings.

Four rock disintegration projects will be completed in 1966. Two are applied studies concerned with hydraulic breaking of coal and explosive cratering of rocks. Two are basic studies directed to measurement of effect of environment and anisotropism on the physical properties of rocks. Effort on five projects concerned with fundamental studies of thermal, dielectric, and mechanical fragmentation of rocks were slightly reduced.

In environmental control research effort on five of the eight continuing projects will be reduced. Work on one project (grouting control of mine waters) was recessed in mid-1966 and replaced by a project directed toward the development of an analog method to simulate the flow of water into mine openings. Reductions effected in the environmental control work are to be redirected to the starting of new projects and to critically needed expansion of effort on the materials handling element of the mining research program.

Three mine systems projects will be completed in 1966 and work on one project will be discontinued. The project to be discontinued is concerned with a statistical evaluation study of low-grade ore (chiefly silver) deposits. The three projects to be completed involve the statistical determination of the reliability of using various types of sampling data in establishing the minability of various types of ore bodies.

(F) MARINE MINERAL MINING

The estimate for 1967 is $235,000, an increase of $1,000 over 1966. This increase is for pay costs.

Objectives

The marine minerals program is directed toward the national goal of expanding the economic minerals resources base, to provide for future industrial needs for increased amounts of minerals which land deposits, at some future date, because of depletion, may not be able to economically supply.

The program is directed toward devising systems for the economic development and mining of mineral substances occurring on and in the ocean floor sediments and underlying rocks. It is largely an applied engineering program of adapting known principles and technologies to the marine environment with the goal of demonstrating the feasibility of extracting minerals from seabed deposits.

Guiding considerations

The program is designed to encourage and assist in the development of a U.S. industry-owned-and-operated marine mining industry and to develop the Government in-house capability necessary to provide sound advice to the Department of the Interior on policy with respect to ocean mineral leasing and regulation of ocean mining operations. The project program contemplates a cooperative venture joining the skills, knowledges, and resources of private, educational, and Government organizations in a variety of working relationships that promise to achieve the goal of an economic marine mineral production.

Program of work

The program consists of four projects with effort to be more or less equally distributed on the four projects. The projects are—

(1) Definition of mining conditions: With emphasis in 1967 on the Pacific coast, continue to collect the necessary data to permit a valid assessment of how the marine environment, location, and character of mineral deposits and other marine features may affect the design or limit operation of a mining system.

(2) Equipment development: Develop the tools and equipment necessary to delineate, evaluate, and economically exploit marine mineral deposits with initial emphasis on exploitation of shoreline deposits.

(3) Ship fitting: With assistance and advice of industrial cooperators and oceanographic scientists and engineers of USGS, U.S.C. & G.S., Navy and oceanographic institutions develop a detail plan for modifying the AN to meet the requirements of the marine minerals program.

(4) Instrumentation: Develop instrumentation for use in delineation and characterization of marine mineral deposits and for the control of mining operations. Primary emphasis in 1967 is to be on a neutron-activation device for the in situ qualitative or semiquantitative analysis of sea bottom minerals. This work is presently funded by the AEC. A minor effort will be directed toward evaluation of presently available flowmeters and pipeline pulp density measuring devices as a first step in determining necessary modification for marine use.

(G) EXPLOSIVES

The estimate for 1967 is $570,000, an increase of $3,000 over 1966. This increase is for pay costs.

Objectives

The primary goal of the Bureau of Mines research on explosives is to provide industry and Government with cheaper, more efficient, and less hazardous products for carrying out blasting operations. As the only Federal agency authorized by Congress to investigate commercial explosives, the Bureau is providing industry and other governmental organizations with authoritative information on the safe utilization of over 1½ billion pounds per year of these potentially hazardous materials. The rapidly expanding economy of the Nation has resulted in an increase in the use of commercial explosives of approximately 10 percent per year over the last 5 or 6 years. It is now estimated that the recent (since 1955) technologic breakthrough in sensitized ammonium nitrate blasting agents is saving American industry between $100 and $150 million per year in the cost of explosives alone.

The goal of the Bureau's work in explosion prevention is to assist chemical, petrochemical, and petroleum industries in preventing the multimillion dollar losses of natural resources which presently result from unwanted fires and explosions. Research on the flammability characteristics of potentially hazardous materials is providing the tools whereby industry and other Government agencies can, and are, making definite progress in the field of explosion prevention. While no dollar value can be placed on the saving of natural resources, the technical information being produced is applicable to wide areas of industry which are subject to fire and explosion hazards.

The most important goal in explosives and explosions research is to obtain technologic data which will characterize the hazards inherent in the production, handling, and use of explosives and potentially hazardous materials. In general, reasonable safety can be obtained with these materials provided there is sufficient information available to outline the conditions necessary for proper handling. Likewise, adequate safety information will normally make it possible to produce and use products which would otherwise be restricted in use, if not forbidden. Through research of this nature, it is generally possible to provide safeguards which will protect both the public and the industrial worker against the disastrous consequences of uncontrolled explosions. Primary emphasis is placed on supplying the needs of the mining industry, but the program is designed to attain a better and more precise understanding of the chemical and physical factors involved when explosives, fuels, or chemical products react in, or with, their environment. The information obtained as a result of these studies can usually be applied to the control of fire and explosion hazards wherever conditions similar to those investigated may occur regardless of the type or location of an operation wherein such conditions exist.

Guiding considerations

Careful attention is given to see that the Bureau's work on explosives and explosions does not in any way overlap or conflict with work being supported by industry. Because of the highly specialized nature of our work, the general industry and most government installations do not have facilities to perform safety research of the nature performed in our laboratories. Additionally, Bureau work is always available to the public and small business organizations which could never afford to perform such research.

The Bureau's work on explosives and explosions is of primary assistance to many other Federal agencies as well as State and local governments. At the request of various agencies, staff scientists participate in the investigation of accidents involving explosives and explosive materials as well as providing advice on a wide range of subjects.

The Bureau is actively cooperating with the Defense Department, NASA, AEC, FAA, and other agencies in accordance with the provisions of the Economy Act. Through these means, the expertise of Bureau scientists is being utilized in the solution of fire and explosion problems common to the Federal Government.

Program of work

Continuing programs, $545,000

In 1967 continued efforts will be made to increase the safety of explosives to be used in hazardous locations such as coal mines and gassy noncoal mines. The hazards associated with new explosives systems such as the sensitized, ammonium nitrate slurries and some of the potentially more hazardous chemical systems, will be investigated. Related studies on new and improved methods of delineating the safety characteristics of explosive or potentially explosive systems will be continued.

Explosion research is designed to provide information which will assist in the prevention of unwanted fires and explosions. These investigations include studies on: Initiation of detonation in solid explosives by a detonating gas; hazards associated with the incomplete (slow) mixing of flammable gases with air; aerodynamics of formation of clouds of coal dust in air; combustion characteristics of flammable dusts in air or in air-flammable gas mixtures; and the initiation of explosions by electric sparks.

New programs, $25,000

Long-range studies on the initiation of combustion or detonation by electrical sources have led to two new projects on this subject. To develop information applicable to the prevention of fires and explosions initiated by electrical sources, we will start investigations on the probability of ignition by various electrical sources, and on the time and space characteristics of electric sparks in regard to their incendivity. The projects are directly relatable to the hazards encountered in the use of electrical equipment in atmospheres containing combustible gases.

Completed or reduced programs, $47,000

Three research projects will be completed during fiscal year 1966. These include: (1) The development of a high energy detonating cord which will

initiate high explosive charges but will not ignite flammable gas-air mixtures which are often encountered in gassy coal mines; (2) the direct initiation of detonations in flammable gas-air mixtures by electric sparks. Approximately $47,000 will be spent on these three projects during fiscal year 1966. A part of these funds will be used to initiate the new projects described and the remainder will be used to accelerate high priority, continuing projects.

2. Resource development

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Statistics	$1,555,434	$1,839,000	$1,803,000	−$36,000	+$15,000	−$51,000
(b) Economic analysis	223,077	231,000	466,000	+235,000	+9,000	+226,000
(c) Bituminous coal	965,852	989,000	893,000	−96,000	+11,000	−107,000
(d) Anthracite	420,656	407,000	366,000	−41,000	+4,000	−45,000
(e) Petroleum	568,831	588,000	592,000	+4,000	+4,000	
(f) Minerals	3,239,512	3,730,000	3,054,000	−676,000	+37,000	−713,000
(g) International activities	556,014	573,000	557,000	−16,000	+4,000	−20,000
Total	7,529,376	8,357,000	7,731,000	−626,000	+84,000	−710,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

(A) STATISTICS

The estimate for 1967 is $1,803,000, a decrease of $36,000 below 1966. The decrease consists of—

(1) An increase of $15,000 for increased pay costs.

(2) A decrease of $51,000 due to program savings resulting from reduced canvassing and automation of certain statistical operations.

Objectives

The goals of this statistical program are to provide the essential minerals source data required by Government and industry for analytical and planning purposes for the manifold aspects of the mineral sector of the economy. Reliance is placed on this basic statistical information by a broad spectrum of consumers ranging from international organizations through Federal, State, and local governments, industry groups, financial houses, and educational institutions to individual researchers in economics and technology. The information is used for many purposes: national defense planning, regional and State economic development plans, economic forecasting and the like.

An additional goal is to provide statistical data for many interdepartmental projects such as the control of air and water pollution, waste metal accumulation and utilization. Such projects are either coordinated or directed by the Bureau because of professional competency in the field of mineral economics and technology and because of ready availability of relevant statistical data.

Program of work

The work program of the Division of Statistics continued to center about the responsibility for collecting, processing, and publishing production and consumption data on domestic minerals, metals, and fuels. The statistical function is partially conducted and primarily coordinated in Washington, but it is also an integral part of the activities of the eight area offices of the Bureau of Mines. No new work will be undertaken, but the emphasis will be placed on improving and modernizing the canvassing and collection of statistical information.

Currently, there is an added objective to automate the mineral commodity surveys. The Bureau of Mines shares the customary aims of other Government agencies that collect, process, report, and analyze statistical information through the use of modern automation equipment and survey design. Also, improved survey systems designs with ADP adaptation will provide for maximum compatibility with other data processing systems both within the Bureau and with other Government agencies. Industry groups, such as the petroleum industry, have already developed automated statistical systems that may eventually result in simplified reporting methods when the Bureaus' statistical methods have reached a comparable level of development. The possibilities available through

automation are therefore significant in terms of the potential for reduction of reporting burden on the respondent and eventual reduction of personnel needs in the agency, paralleled by more expeditious issuance of published data in accordance with the authorized functions of the Bureau of Mines.

(B) ECONOMIC ANALYSIS

The estimate for 1967 is $466,000, an increase of $235,000 over 1966. The increase consists of—

(1) An increase of $9,000 for increased pay costs.

(2) An increase of $226,000 to extend capabilities to meet the minimum current needs for better and essential analyses of the economic aspects of the minerals industry.

Need for increase

The increase in program level proposed for fiscal year 1967 will be used to develop two essential components of a system of economic analysis of the mineral industries. This system will permit the Department and the mineral industry to make better decisions by providing better answers to such questions as: What will be needed tomorrow? Will we have it? What is the best way to get it? What will be the side effects of alternate policies?

One component to be developed will give insight into the effect that growth of a mineral industry has on growth of the general economy. Historical growth relationships between minerals and the economy will be analyzed on a regional and a national basis, relating cause and effect quantitatively.

The other component will reveal quantitatively how general economy demand for individual minerals is translated into supply. It will reveal what incentives develop, what prices do, what effects legal restrictions have, what the time-lag is.

These new components and the components already in process of development will be integrated into a workable analytical system and an initial application of this system to Bureau research program decisionmaking will be made.

Objectives

The continuing objective of the economic analysis program is to provide better analytical tools for decisionmaking in the minerals field. An integrated system of economic analysis will permit better decisions and result in substantial improvements in efficiency in Federal, State, and industry operations and programs.

Program of work

The continuing program will be devoted to general staff support and to three research projects related to the major objective of developing an integrated system for mineral industry economic analysis.

Staff support includes the use of economic tools and interpretations to aid policy formulation, to assist in mineral resource program development, and to make decisions with regard to the actions and negotiations under GATT and other international organizations.

Revelation of deficiencies in the basic data on the mineral industries is a byproduct of these analyses. Since the acquisition of such data is a function of the mineral resource development program, this byproduct as well as the analyses become ingredients of action program formulation.

The research projects relate to the analysis system, and in particular to the ability to make commodity forecasts and to measure the economic impact of forecast changes. One of the projects will be the continuing work of preparation of the forecasts themselves, and research on forecasting techniques. Another will be an interindustry flow table for the 11 Western States that will help pinpoint the direct and indirect impacts of each industry's demands on the mineral industry. The third research project will be the construction of regional energy balances. These will show in terms of individual fuels the interindustry, intersector flows supplementing the overall interindustry table.

(C) BITUMINOUS COAL

The estimate for 1967 is $893,000, a decrease of $96,000 below 1966. The decrease consists of—

(1) An increase of $11,000 for increased pay costs.

(2) A decrease of $107,000 due to program savings resulting from a reduction of coal investigations in Alaska, completion of aspects of western coal

resource appraisals and the composition of coal ash, and a reduction in scope of studies relating to carbonization and preparation of coals.

Objectives

The primary objective of the bituminous coal resources program is to assure the Nation of an adequate, low-cost energy supply by helping the coal industry to maximize its share of the expanding energy market, and to improve the economic environment of coal mining areas which have regressed because of shifting patterns of energy demand.

Program of work

Many factors influence the effective employment of this source of energy. Major negative effects include: Growing nuclear power capabilities, trends toward more stringent air pollution regulations particularly with regard to sulfur, skepticism on the part of major foreign markets as to the long-range availability of U.S. supplies at stable prices, protectionist policies of foreign countries, and the absence of adequate information on contiguous coal resources adequate to guarantee supply to large consumers—like utilities. On the positive side, other factors favor improvements in the long-term coal picture, such as: Continued improvement in mining productivity, favorable consideration of coal as compared to other fuels for electric power generation, growth in the unit and integral train concept, design and construction of supercarriers and loading facilities, and continued interest in development of a common energy policy in Europe.

The Bureau of Mines program is national in scope, with investigative projects conducted both in Washington and in area field offices. It includes the appraisal of technical and economic data pertaining to important phases of the coal and related industries, i.e., reserves, recovery, mining, preparation, distribution, and utilization. Economic and engineering studies are being made of factors that influence the economic availability of coal and coal products for both domestic and foreign markets including coking coals for the steel industry and steam coals for electric power generation.

Data pertaining to trends and effects of mechanization, methods, and other facets of coal production, and to distribution and utilization are being assembled and analyzed for guidance and publication. Emphasis is being given to air pollution problems and regulations, especially as they pertain to the sulfur content of coal reserves, by areas, and of coal used by electric utilities and other major consumers. Special studies are underway to indicate the cost differences in substituting lower sulfur coals for higher sulfur coals and other fuels, and for the production of sulfuric acid from stack gases at large coal-burning plants.

A fuel economy service is provided to Federal agencies which, through coal analyses and boiler and water testing, saves approximately $3 million annually by reducing fuel and maintenance costs at Federal heating and power plants.

Intensive activity is being devoted to the Government's program for expanding U.S. coal exports to increase credits to our international balance of payments and to increase coal production and improve conditions in coal mining areas, including appraisal of changing energy requirements and availabilities abroad, of both formal and informal barriers to trade, and trends in transportation costs at home, transocean, and abroad as they affect the delivered price of U.S. coal which, economically and on a quality basis, can compete effectively with indigenous coals and other energy sources in most principal energy-consuming countries. The overall program will contribute essential information to the Government, business and industry for administrative and operational guidance and will continue to serve as a practical guide to technological and economic research on coal.

(D) ANTHRACITE

The estimate for 1967 is $366,000, a decrease of $41,000 below 1966. The decrease consists of—

(1) An increase of $4,000 for increased pay costs.

(2) A decrease of $45,000 due to program savings resulting from a temporary detail of personnel to activities conducted under the appropriation "Appalachian region mining area restoration."

Objectives

The primary objectives of the anthracite resource program for 1967 include measures to improve the economy and environment of the anthracite-producing region, the conservation and development of anthracite as an important segment

of the Nation's energy base, the protection of underground mineworkers, and the control, or alleviation, of conditions related to mining that adversely affect the public interest.

Program of work

Specifically, in the field of environmental development, the Bureau will continue to cooperate with the Commonwealth of Pennsylvania on projects designed to control or drain water from anthracite formations to prevent mine flooding and stream pollution; and seal and fill voids in abandoned coal mines to prevent, or diminish, the effects of subsidence upon surface improvements and public safety. The program will also include the direction and supervision of work concerned with the control, or extinguishment, of underground and outcrop mine fires to halt further destruction of reserves and the production of noxious fumes and gases injurious to public health. This subactivity will also continue to develop economic and engineering data needed to improve anthracite's competitive position as a fuel and as a source of carbon in both foreign and domestic markets in order to stimulate the economy of the region.

To insure the achievement of the major objectives of the anthracite program, continued study will be made of surface and subsurface conditions in order to evaluate subsidence hazards in heavily populated areas. The program will also include studies of available resource data needed to evaluate the feasibility of recovering remaining anthracite reserves, and to find solutions to the mining and mine water problems that are inherent under the unique topographic and geologic conditions found in the anthracite region of Pennsylvania. As a corollary effort, mine maps will be studied and placed on microfilm, and the feasibility of collecting acid mine water for treatment purposes will also be investigated. Statistical, engineering, and other data will be furnished to other Federal agencies, the Commonwealth, the anthracite industry, and the public.

The Anthracite Mine Water Control Act of July 15, 1955 (Public Law 162), as amended by the act of October 15, 1962 (Public Law 87–818), provides for the control and drainage of water in anthracite formations and for the filling of voids in abandoned coal mines when in the interest of public health and safety. Conservation projects undertaken under this legislation include surface drainage works designed to prevent water from entering and flooding mines, and the installation of pumping plants to control water pools in abandoned mines for the preservation of active operations. Surface drainage projects also assist in combating stream pollution by preventing surface waters from becoming contaminated by contact with acid forming coal formations and subsequent discharge to surface streams. Public health and safety projects are designed to prevent subsidence of surface areas, thereby eliminating public hazards and preserving surface structures; and close acid-drainage openings by filling voids in abandoned mines, slopes, shafts, and dangerous abandoned anthracite mine stripping areas.

The physical environment of the anthracite region is adversely affected by surface and subsurface conditions caused by past mining. Residual problems include subsidence caused by failure of underground pillars, flooding in abandoned mines, and underground and surface fires in inactive mines.

A recent study of subsurface conditions under a heavily populated area in the northern anthracite field will be expanded to cover additional areas. The value of this study, which includes a compilation of mine maps arranged in stratigraphic sequence together with pertinent technological data, has been demonstrated on numerous occasions when the Bureau was requested to evaluate subsurface conditions in relation to subsidence potentials and the incipient hazards therefrom to heavily populated urban areas, bridges and highways, flood control facilities, public buildings, and private residences. The study will include resource data necessary for the future development of available anthracite reserves, and for solutions to mining problems related to their recovery.

With the abandonment of anthracite mines, acid mine water pools have overflowed and contaminated streams in the region, thus hampering the area's economic development. The comprehensive study now underway has developed valuable data in this field and will be continued to determine where surface water enter through broken strata to the mine workings, where they become acidic. The study seeks to determine the feasibility of collecting acid mine water from overflow points, and the possibility of directing these overflows to one or more central treatment locations.

Anthracite sampling will be continued to make analyses available to Government purchasing agencies on the quality of coal produced at various preparation

plants in the anthracite area. In addition to the regular sampling of breakers for domestic fuel purchase and use by the Federal Government, analyses were made for the U.S. Army in regard to exports of anthracite to the Army installations in Europe. This program is expected to continue in fiscal year 1967.

Studies will continue in order to determine the future demand for anthracite in space heating and industrial markets of the United States, and the capacity of the industry to meet future demands. These data will be correlated with demand in the export markets and requirements by Government agencies and the Armed Forces in Europe. Data on anthracite preparation plant capacity and current and potential capacities of run-of-mine coal producers will be included.

Economic and statistical data on anthracite production, consumption, distribution, stocks, deliveries, and other relevant anthracite information will continue to be published on a weekly, monthly, and annual basis.

(E) PETROLEUM

The estimate for 1967 is $592,000, an increase of $4,000 over 1966. This increase is for increased pay costs.

Objectives

The continuing objective of the petroleum resources program is to aid Government and industry in assuring an adequate supply of petroleum, natural gas, and natural gas liquids for the Nation's economic growth and security by providing technical and economic data needed for policy determinations and planning.

Program of work

The program is nationwide in scope and significance. It is conducted by personnel in the headquarters office, plus a limited field organization whose combined efforts help the Bureau of Mines to appraise, develop, and publish information pertinent to the petroleum and natural gas resources of the Nation. No other organization within Government has the technical competence needed to provide this information.

In fiscal year 1967 the program includes several continuing functions required by the Bureau and the Department in the fulfillment of their responsibilities relating to petroleum, to natural gas, and to oil shale resources. Included are the following:

Preparing forecasts of petroleum supply and demand for use of State regulatory agencies, the Oil Import Administration, and the industry.

Providing staff support concerning these resources to the Secretariat, the Office of Oil and Gas, the Oil Import Administration, and to other Government agencies.

Analyzing and publishing data which relate to the production, processing, transportation of petroleum and its products and to natural gas and natural gas liquids.

Development of new and marginal petroleum resources and preventing waste in the recovery and utilization of known resources is one of the broad goals of the petroleum resources program. To achieve this goal, continued emphasis is placed on projects that will expand our knowledge of petroleum resources and will lead to increased recoveries of known reserves.

An engineering and economic study will be made of petroleum reservoirs which are either semidepleted now or have been partly abandoned. Over two-thirds, or approximately 400,000 of the 588,000 producing oil wells in the United States are classified as strippers, i.e., wells that produce less than 10 barrels a day. Twenty percent of our domestic production is obtained from these wells, but very little information is available as to the production that can be expected in the future.

The study is designed to: (1) Estimate reserves contained in reservoirs; (2) define areas where secondary recovery projects should be initiated; (3) determine and illustrate the methods of recovery that would be applicable; and (4) prevent early abandonment of wells with a resulting loss of possible crude oil reserves that could be of economic benefit to the producing area as well as to assist in meeting the Nation's energy requirements.

(F) MINERALS

The estimate for 1967 is $3,054,000, a decrease of $676,206 below 1966. The decrease consists of—

(1) An increase of $37,000 for increased pay costs.
(2) A decrease of $713,206 due to program savings resulting from completion of several studies and investigations and the curtailment of low priority work.

Objectives

A continuing and permanent objective of this work is the identification and assessment of the problems that arise through society's dependence on minerals and the cost of meeting this need, both in measurable production effort and intangible environmental effects. In addition, this activity shares with the research activities the work of laying out alternative solutions to mineral problems, selecting those most promising and then carrying out extensive investigation of the practicality of those solutions. Specifically, attention is directed to the maintenance of an adequate, continuing, and dependable supply of mineral raw materials to satisfy national defense needs and growing demands for minerals and metals resulting from an ever larger population with ever greater per capita consumption, and to offset the gradual but persistent depletion of higher grade and more readily accessible and more easily processed mineral reserves.

Program of work

To carry out these objectives, the 1967 program embodies two broad areas of activity: (*a*) A fact-finding operation designed to keep the Government and appropriate private interests currently aware and knowledgeable of the facts relating to availability, movement, and demand for mineral raw materials, and (*b*) an investigative and developmental operation designed to insure and promote effective utilization of available mineral resources, seeking ways to meet a continuously but always increasing need for mineral raw materials.

Close association with the products of the subactivities entitled "Statistics (A)," and "Economic Analysis (B)," permits a continuous appraisal of the impact of changes in mineral supply and demand patterns, and alternative ways of meeting such changes, on the economy and national security.

An important part of the resource development program is assigned to selected projects designed to delineate particular mineral resources with emphasis on economically submarginal deposits of minerals in short supply. The program of work in 1967 anticipates a concerted effort on the following subjects:

Studies will be started to determine the availability of antimony, molybdenum, and vanadium under various economic conditions and will include anticipated supplies and demands, means of alleviating possible shortages, and orderly disposal of possible surpluses.

In compliance with the Wilderness Act (Public Law 88–577) and in cooperation with the Geological Survey, the Bureau will continue to appraise the mineral potential of primitive areas and any other lands that may be proposed officially for inclusion in the wilderness system.

A national study will be initiated of the conflicts in land use between the mineral industries and others to seek possibilities of reconciliations of interests, and to assess the economic impact when increased mineral costs or loss of potential deposits are involved.

Selected mineral resources of the Appalachian region will be investigated with emphasis on those areas that offer the greatest potential for furthering local economic development, employment, and prosperity through expansion of mineral production and establishment of new mineral-based industries.

The appraisal of the Nation's silver resources, begun in fiscal year 1966, will be expanded to encompass factors relating to production of silver from idle mines productive in the past and from silver-bearing deposits that have a productive potential under present economic and technologic conditions.

Economic, and technologic changes, that occurred in the past 10- to 15-year period to convert submarginal resources to minable ore reserves will be defined for several mining operations, and the effects of technologic changes on the collection, preparation flow, and utilization of ferrous scrap will be analyzed.

Cooperative arrangements with 13 States under which clays and nonmetallic mineral resources are appraised will be continued and extended. This joint effort has been successful in encouraging new commercial enterprises based upon the exploitation of local resources and the development of new markets.

In Alaska economic-engineering investigations will continue to seek instances where new mineral based industries might be shown to be feasible.

(G) INTERNATIONAL ACTIVITIES

The estimate for 1967 is $537,000, a decrease of $16,000 below 1966. The decrease consists of—

(1) An increase of $4,000 for increased pay costs.

(2) A decrease of $20,000 due to program savings that will result from not filling certain positions vacated through retirements and a general increase in efficiency.

Objectives

The mission of the international activities program in the Bureau of Mines is to promote domestic mineral security and to strengthen the domestic mineral economy.

Program of work

The mission is carried forward by alerting the U.S. Government and industry to international development and activities that affect short- and long-term domestic security and operations. Therefore, the international program is designed to provide informed and expert advice on foreign resources, the state of technologic art, characteristics of world markets, international trade, and the economic and geopolitical aspects of world supply and demand for minerals that critically affect the United States.

The U.S. mineral and fuel industries are international in scope. Direct-investment income from foreign operations of these industries is equivalent to about one-third of their contribution to national income from domestic operations. These industries now have almost $18 billion invested abroad and are integrated with the mineral and fuel industries of many free foreign nations.

Over 50 percent of U.S. national income from our total foreign investment is generated by mineral and fuel industries.

The United States imports about 30 strategic minerals at rates ranging from 30 to 100 percent of annual requirements. The United States also exports a number of mineral commodities in significant quantities.

Experience demonstrates that factors affecting the international minerals and fuels economy change, often suddenly and drastically. There is a growing need for rapid and accurate appraisal of the impact of such changes on the U.S. domestic mineral resource posture. Alternate courses of action, each appraised as to effect, must be available to those making decisions, whether acting for the U.S. Government or private industry.

The program of the Bureau of Mines is designed to—

Improve surveillance and reporting of mineral and fuel developments on a worldwide basis.

Develop and apply improved methods for more accurate appraisal of the economic behavior of foreign mineral economies and international commodity industries as they relate to U.S. security needs and economic expansion requirements.

Evolve development priorities for foreign resource potentials and facilitate participation of domestic mineral and fuel industries on the basis of these priorities.

Provide information and suggest strategies for negotiating the reduction of barriers to trade in mineral and fuel commodities and associated products.

Evaluate the impact of new mineral technology abroad on domestic research efforts to avoid wasteful duplication and expedite achievement.

The work program is unique in its scope and made possible by a small but highly skilled and competent group of professional personnel with experience in the foreign field. Although domestic mining companies are knowledgeable in the commodities of direct concern to them, this knowledge often does not extend to other minerals or regions, nor is it available to the public. Other Government agencies have interests in minerals and fuels but only in limited and specific aspects. No other organization has the contacts, skills, and background necessary to achieve the analytical coverage of the minerals and fuels economy of a foreign country or region.

Other institutions, in and out of Government, normally depend on this unit for the basic information needed in their research and analysis. None has the unique combination of access to mineral reporting by the U.S. Foreign Service and the competence of specially trained and experienced personnel to analyze the information.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
PROGRAM AND FINANCING				
Total obligations	$30,516,659	$32,683,206	$31,466,000	−$1,217,206
Unobligated balance available, start of year		−300,000		+300,000
Transfer to "Operating expenses, Public Buildings Service," General Services Administration	7,119	7,794		−7,794
Unobligated balance available, end of year	300,000			
Unobligated balance lapsing	374,222			
Appropriation	31,198,000	32,391,000	31,466,000	−925,000
OBLIGATIONS BY OBJECTS				
11 Personnel compensation	22,630,470	23,430,000	22,890,000	−540,000
12 Personnel benefits	1,696,546	1,780,000	1,750,000	−30,000
21 Travel and transportation of persons	544,672	565,000	515,000	−50,000
22 Transportation of things	113,012	150,000	140,000	−10,000
23 Rent, communications, and utilities	1,071,126	1,200,206	1,100,000	−100,206
24 Printing and reproduction	374,809	427,000	410,000	−17,000
25 Other services	756,218	1,475,000	1,005,000	−470,000
26 Supplies and materials	1,488,140	1,850,000	1,850,000	
31 Equipment	1,738,866	1,700,000	1,700,000	
32 Lands and structures	101,803	106,000	106,000	
42 Insurance claims and indemnities	2,672	2,000	2,000	
Subtotal	30,518,334	32,685,206	31,468,000	−1,217,206
95 Deduct charges for quarters and subsistence	1,675	2,000	2,000	
Total obligations	30,516,659	32,683,206	31,466,000	−1,217,206

EFFECT OF APPALACHIAN PROGRAMS ON REGULAR PROGRAMS

Chairman HAYDEN. How, if at all, has provision for funding the Appalachia program affected the regular program nationwide, including Appalachia?

Mr. HIBBARD. The only effect I know on the Appalachia program with respect to the regular program has to do with some of the development activities in the anthracite area. We have been able to save, I believe, $45,000 in our anthracite development program, because this program could be fitted under the Appalachia Act.

MATCHING FUNDS IN APPALACHIA PROGRAM

In addition, with respect to some of the activities concerned with mine fires and with strip mining and subsidence, since the Appalachia Act provides for 75 percent Federal participation, it has been to the advantage of the States to put as many of their projects under the Appalachia bill as possible—otherwise they would have to pay 50 percent. So there has been increased activity in that respect.

May I ask Mr. Zinner, the Assistant Director, to elaborate on that?

Chairman HAYDEN. Yes.

COAL RESEARCH

Mr. ZINNER. Dr. Hibbard has quite correctly described the situation in regard to mine fires. In a sense, the research work that the Bureau of Mines does on coal generally has an effect on Appalachia, since it is a major resource in the area. While it is difficult to assign any specific percentage to that function, almost everything we do in regard to coal research is to the benefit of the Appalachian area.

Chairman HAYDEN. Nationwide also?

Mr. ZINNER. That is correct.

COMPLETED OR REDUCED PROGRAMS

Chairman HAYDEN. Throughout your budget justifications, I note indications of completed or reduced programs. I wonder if you would please touch on some of these for the committee, indicating the reasons why you have reduced the emphasis on some of the programs and have cut others completely? I realize that you probably have finished work on some of them. However, I am interested in knowing whether it has been necessary for you to reduce some of the regular programs because sufficient funds were not approved.

Mr. HIBBARD. The budget, as you know, is an austere-type budget appropriate to the times in which we are living today. As a result we have had to limit our projects to the availability of funds. In the area of research, for example, we have been able to reduce our coal research by about $120,000, which amount is being taken from the study of the coal-burning gas turbine. We believe we can supplement this research by participation from industry and, while we have reduced the budget, we believe we can replace these funds from our industry participation and therefore continue the program.

In the area of petroleum, for example, there are certain programs which have been completed with respect to permeability studies, with respect to plugging of reservoirs, and the gas buggy project that has to be postponed. We believe this is appropriate to the times.

In the area of metallurgy, again we have completed certain projects successfully. For example, there is a project on recovery of nickel and cadmium from used batteries, which has been completed and was not replaced.

In the area of mining, we have some projects which are completed on open pit studies.

In the area of resource development, there were certain savings which have resulted from automatic data processing and which have permitted us to reduce our budget.

In the area of anthricite, as I mentioned, we were able to use some funds from the Appalachia program to supplement the activity. In the bituminous coal area, we completed some studies of western coal, of carbonization and some studies of coal ash and fly ash, which we will not replace.

In the minerals area, there were seven major studies which we completed and which we did not replace. Again, I could list one or two of these. We had a waste metal study, which we completed but did not replace. We had a copper leaching study which we completed but did not replace. We had an iron resources study which we completed but did not replace. All in all, these reductions amounted to roughly a million and a half dollars, approximately half in conservation and half in development.

OIL SHALE RESEARCH PROGRAM

Chairman HAYDEN. Regarding your funding of oil shale research for which you ask $1,309,000, a program increase of $255,000 over last year, would you please discuss the need for the increase?

Mr. HIBBARD. Yes, sir. We believe that the opportunities in oil shale are most promising. One possibility is connected with the so-called in situ retorting. This is a process by which the oil shale is

fractured in place in the ground and the limits of the fracture are sealed. Then the retorting of the combustion takes place right in the ground without having to mine or handle large amounts of shale.

The progress in this direction in the past year or so has been very promising. There are several techniques which look as though they should be followed through. One involves fracturing the oil shale by electric discharge. The problem of retorting in place is connected with the maintenance of combustion in the ground and the sources of supply of oxygen.

There are some studies to be made on flame propagation and, since this appeared to be very promising, and as far as we knew was not being pursued by others, we felt we should carry this out, particularly since the Federal Government has such a large reserve in oil shale.

Metallurgy Research—Budget Decreases

Chairman Hayden. With respect to metallurgy research, you are proposing decreases totaling $505,000. I will appreciate your being specific concerning these decreases, one of which pertains to ore beneficiation, gamma irradiation, physical chemistry, and silver ore beneficiation projects; and others concern cost reductions at metallurgy research centers and laboratories.

Mr. Hibbard. With respect to the projects themselves, these were of relatively low priority. One rarely has enough money to do everything one would like to do, and we felt it less important to do some of the work on gamma irradiation and physical chemistry, which is really basic and long-range research. The silver ore beneficiation project was postponed because we were at a place where we should await further resource development work from our other activities before continuing the research.

Mr. Rosenbaum here will speak with respect to the research project.

Mr. Rosenbaum. I think that pretty well covers the research project.

Mr. Hibbard. Manpower utilization and cost reductions are carryovers from last year's closing of the Norris Research Center, and Tucson Research Center, and other savings we anticipated.

Augmenting Sources of Silver Supply

Chairman Hayden. One of your new programs under mineral processing is aimed at augmenting gold supplies. What are you trying to do to increase the supplies of silver?

Mr. Hibbard. We have a program in fiscal year 1966 which is an appraisal of the Nation's silver resources. This is a survey to identify factors relative to the production of silver from mines and from utilization of silver-bearing materials which are critical to the economic and technological process. Therefore, if we could identify from this survey the bottlenecks relative to the technology of silver, we believe that we could suggest a research program aimed at relieving the tight silver situation.

The other aspect of our silver program has been the recovery of silver from photographic solutions by the use of steel wool. If you take a spent photographic solution and immerse a piece of steel wool in it, the silver will precipitate out on the steel wool. We believe this is a technically feasible way of recovering the silver in these photographic solutions but the economics have not yet been determined.

PROCESSING OF JUNK AUTOMOBILES TO RECOVER STEEL

Chairman HAYDEN. What have you been able to accomplish in the past year in connection with making automobile bodies more suitable for reprocessing into steel?

Mr. HIBBARD. This program has been carried out at two locations, one in Albany, Oreg., and one at the Twin Cities Research Center in Minneapolis. There are two processes promising enough to justify demonstration plants. The one process being carried out at Twin Cities involves the chopping up of automobile bodies, and roasting the pieces at low temperatures with a nonmagnetic form of taconite. By this roasting process—a low-temperature process—the mixture is reduced to a magnetic iron ore which can be processed. You may remember the nonmagnetic taconites are useful now, because they cannot be handled by conventional processing methods. This technique not only utilizes the iron in the automobile body, but also makes the taconite useful to steel companies. This technique has been appraised and is now ready. In our 1967 proposal we have money for the design of such a pilot plant.

SLOPE REGULATION AT KIMBLEY OPEN-PIT MINE, ELY, NEV.

Chairman HAYDEN. I am interested in your work on making possible the use of steeper slopes in open-pit mining. I observe that in the coming year you are going to work on an open-pit copper mine, several of which are operating in Arizona.

Would you tell the committee where you propose to do this work next year, and what progress you are making in determining that steeper slopes can be used?

Mr. HIBBARD. This will be done at Ely, Nev., at the Kimbley open-pit mine of Kennecott Copper. This is the result of some studies of rock mechanics, ground stability, and ground control. We have developed techniques for measuring some stresses in the ground, and we have developed some mathematical mechanical models for understanding the stability of the ground. We believe on the basis of this research that we can regulate the maximum slope under which the ground at the edge of the pit will remain stable.

We believe that if the slope angle can be increased in this particular mine, we will be able to open up an additional amount of ore. I believe it is 15 years of additional reserves and as many as 350,000 tons of copper.

Senator BIBLE. Is this the Ruth pit?

Mr. HIBBARD. That is correct.

Senator BIBLE. How far along are those studies?

Mr. ROSENBAUM. Those studies are reaching the stage where large-scale testing of the planned methods are going to be undertaken next year. Kennecott proposes to spend $800,000 next year of their funds. In addition, they contributed $70,000 to support our field engineering research in this project.

Senator BIBLE. When will the project be completed, if it stays on target?

Mr. ROSENBAUM. Sometime in 1968.

EXTENSION OF LIFE OF PIT

Senator BIBLE. That is year after next. If what you anticipate proves out to be correct, then you say that by new methods of open-pit mining you will be able to extend the life of this operation for some 15 years; is that the objective?

Mr. ROSENBAUM. That would be the objective; yes.

Mr. HIBBARD. That is their estimate.

Senator BIBLE. Kennecott's estimate?

Mr. ROSENBAUM. This is the target they hope to achieve if the studies are successful.

Senator BIBLE. The prospect of extending the life of the pit another 15 years?

Mr. ROSENBAUM. That is correct.

Senator BIBLE. You expect to complete those in 1968?

Mr. ROSENBAUM. Yes, sir.

COOPERATION BETWEEN GEOLOGICAL SURVEY AND BUREAU OF MINES PROGRAMS

Senator MUNDT. Yesterday, we listened to the Geological Survey people. They told about a new process by which they had discovered a new gold mine in Nevada. Now you are talking about a new process which you are working on on a copper mine. How do you divide the job assignment between the Geological Survey and the Bureau of Mines? It sounds as though you are dealing with the same thing.

Mr. HIBBARD. Dr. Pecora and I work closely together. We discuss these things between us to make sure we are working together. In general, in many of these studies, the responsibility is with the Geological Survey and in others the responsibilities are with the Bureau. The Geological Survey studies the earth to determine the location and extent of the mineral deposits. Our work follows more or less in series. We call it our one-two punch. At that stage of the game, if the deposit appears to have an economic potential, the information is made available to the public and industry will presumably take over.

If there is some question about the deposit, the information is turned over the Bureau and we do resource development. This is a more detailed sampling and appraisal of the size and the character of the deposit. At that stage of the game we may undertake in addition some research which would be aimed at making the deposit an attractive one to industry. So, in a sense, we are in a series. The Survey is the bird dog that points out the deposit and our job is to come along and characterize it and make it attractive for industry to move in.

EXPLORATORY CONTRACTS WITH MINERS

Senator MUNDT. Do you have any exploratory contracts with miners like the Geological Survey has?

Mr. HIBBARD. No, sir.

Senator MUNDT. The exploratory is largely in the Survey, and the way the exploratory information is utilized is your department?

Mr. HIBBARD. Yes.

Mr. ROSENBAUM. The economic aspect is the concern of the Bureau of Mines.

MARINE MINERAL MINING PROGRAM

Chairman HAYDEN. For marine mineral mining in 1967 you propose the same amount as was available last year. Would you discuss for the committee the marine minerals program being carried on, indicating locations where the work is done and the specific goals which you have.

Mr. HIBBARD. The marine mineral mining program started several years ago and is based at Tiburon, Calif., near San Francsico. During the first several years, with the funding available, a substantial part of our efforts was directed toward the development of a marine facility. We took over some boats from the Navy and the Army, a T-boat and net tender, and these were rehabilitated and outfitted. We had to develop special equipment. Then we started a study aimed at identifying conditions under which marine mining must be carried out, and we began development of some hardware, including an air-lift, an explosive corer and a dredge.

These were really just the initial stages of getting our feet wet. Subsequent to this we have made a cruise off the Washington-Oregon-California coast with one of our research vessels, trying out the equipment and picking up samples as we went along.

PROMISE OF MARINE MINING

This area of research to me is an extremely exciting and promising one. I believe in the long run there are going to be extensive mineral resources obtained from the ocean and under the ocean. Therefore, we have recently had a reappraisal of our program and we are beginning to undertake the second stage of this activity which will be aimed at looking for the more valuable metals including gold and silver.

COOPERATION OF PRIVATE INDUSTRY

In all these activities there has been cooperative work with three companies. The companies involved are International Minerals & Chemical Corp., Lockheed, and Merritt-Chapman-Scott. In a recent appraisal of our program we have also developed a cooperative approach to the whole problem with the Geological Survey. To refresh your memory, the Geological Survey is going to do the minerals exploration in the ocean and point out the promising areas to us. We will follow through with mining developments.

HEALTH AND SAFETY ACTIVITIES

Chairman HAYDEN. There will be placed in the record the statement in justification of the budget estimate of $9,390,000 for health and safety activities in fiscal year 1967.

(The justification follows:)

Appropriation, 1965	$9,300,000	
Second supplemental appropriation, 1965	237,000	
Total appropriation, 1965		$9,537,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration		—903
Total available, 1965		9,536,097

Appropriation, 1966	$9,507,000	
Pay cost supplemental	92,000	
Total available, 1966		$9,599,000

SUMMARY OF INCREASES AND DECREASES, 1967

Inspections, investigations, and rescue work: To provide for increased pay costs for fiscal year 1966 positions		+66,000
Control of fires in coal deposits: Decrease due to Appalachian Regional Development Act of 1965 which includes funds for control of fires		−108,000
Health and safety research:		
To provide for increased pay costs for fiscal year 1966 positions	+$13,000	
Nonrecurring costs of equipment for roof-control research	−130,000	
Nonrecurring item due to phasing out of methane detection and monitoring research	−50,000	−167,000
Net decrease, 1967		−209,000
Budget estimate, 1967		9,390,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers [1]	Amount available
1. Inspections, investigations, and rescue work	$6,844,749	$7,029,000	$158,000	----------	$7,187,000
2. Control of fires in coal deposits	401,697	408,000	−97,000	----------	311,000
3. Health and safety research	2,023,579	2,070,000	31,000	----------	2,101,000
Unobligated balance lapsing	266,072	----------	----------	----------	----------
Total	9,536,097	9,507,000	92,000	----------	9,599,000

[1] Represents transfers to General Services Administration unless otherwise footnoted.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Inspections, investigations, and rescue work	$6,844,749	$7,187,000	$7,253,000	+$66,000	+$66,000	----------
2. Control of fires in coal deposits	401,697	311,000	203,000	−108,000	----------	−$108,000
3. Health and safety research	2,023,579	2,101,000	1,934,000	−167,000	+13,000	−180,000
Unobligated balance lapsing	266,072	----------	----------	----------	----------	----------
Total	9,536,097	9,599,000	9,390,000	−209,000	+79,000	−288,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. Inspections, investigations, and rescue work

Inspections, investigations, and rescue work:	
Fiscal year 1965, amount available	$6,844,749
Fiscal year 1966, amount available	7,187,000
Fiscal year, estimate	7,253,000
Increase (+) 1967 compared with 1966	+66,000
Pay cost [1]	+66,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $7,253,000, an increase of $66,000 over 1966. This increase is for pay costs.

Objectives

A major national goal of the Bureau of Mines is to eliminate accidents in the mineral extractive industries of the United States, thus conserving and extending the resources both human and material. More specifically, these programs include: (1) Prevention of accidents and injuries mainly in the mineral-extractive industries, including coal-, metal-, and nonmetallic mining, quarrying, metallurgical, petroleum, and natural gas; (2) development of safe working standards to protect the lives and health of mineral-industry employees and prevent the loss of property; and (3) improve the economy and efficiency of the mineral-extractive industries by eliminating or minimizing hazards and avoiding costly accidents involving property, personal injuries, or loss of mineral resources.

The ultimate or theoretical aim of all health and safety programs is to eliminate all conditions and practices that cause accidents, injuries, or impairment of health. This ideal target is unlikely to be reached because many occupations in the mineral-extractive industries, especially those in underground mining operations, are inherently hazardous. Underground mine employees are subjected to environmental hazards which are not faced by workers in most other industries. Despite the obstacles, it is vital to our society that we strive effectively to reach the ultimate goal.

The dissemination of information on mining methods, devices, and conditions which contribute to safety, health, efficiency, economy, and reduction of waste of resources is vital to achieving the national goals. Most of the information is technical in nature. Scientific and engineering reports are compiled and published. In many cases, it is necessary to make specialized training available to miners and supervisors so that the technologic principles involved will be understood and employed properly. In addition, Bureau of Mines inspectors and engineers are required to use every opportunity tactfully to educate in the course of all their duties.

Program of work.—In coal mine inspection activities emphasis will be placed on careful inspections to detect unsafe conditions and practices in coal mines and to encourage improvement in working methods. Special emphasis will be placed on elimination of disaster hazards and on roof and haulage hazards, the latter two of which, together, cause approximately two-thirds of the fatal injuries that occur annually in the Nation's coal mines, and on electrical installations, which are the principal sources of mine fires and explosions. Cooperation with State agencies, mine operators and workmen, and other groups will be continued and improved, where possible. The prime objective will be to maintain the downward trend in disabling injuries and to improve working conditions in coal mines.

Continued emphasis will be placed on safety education of mineral-industry workmen and their supervisors to stimulate safety consciousness among them. To bring the classroom to the mine for safety-educational instruction, especially the small mine "off the beaten path," the four mobile training and demonstration units purchased during fiscal year 1965 and outfitted especially for this purpose will be utilized and evaluated for future program planning. It is believed that this innovation, instituted on a trial basis, will fill a real need because some mines, usually most small mines, do not have satisfactory facilities available on the surface for conducting training classes. Therefore, to a large extent, the employees of small mines have been deprived of the opportunity of obtaining up-to-date instruction in accident prevention. The use of mobile classrooms should have a marked favorable effect on the accident and injury record, particularly of the smaller mines.

Established methods for disseminating accident-prevention education in the mineral industries (coal and noncoal) for workmen and supervisors will be continued by classroom and on-the-job instruction, lecture demonstrations, films and visual aids, and instruction in first aid and mine rescue procedures. New techniques in teaching accident prevention to stimulate company-sponsored training have been instituted to broaden the base of accident prevention educational training.

Service to the mining industry through improved ventilation and dust control and roof control techniques is a continuing activity germane to the general overall objective of preventing loss of life, disabling injury, and impairment of health of workmen, particularly those engaged in underground mining operations.

Safety inspection of mines, tunnels, and plants; investigations of serious

accidents and fires; and determinations of mining hazards to be eliminated or minimized will be continued and coordinated with the safety educational program. Revision of standards and preparation of manuscripts on mine safety and injury-cause data, based on findings of inspections and investigations, will aim toward prompt release of information to interested persons.

Mine inspections

COAL MINES (PUBLIC LAW 552, 82D CONG.)

	Calendar years		
	1964 actual	1965 estimate	1966 estimate
Number of active mines	9,374	9,400	9,500
Individual mines inspected	7,104	8,000	8,000
Total regular inspections	11,432	12,500	12,500

MINES OTHER THAN COAL UNDER GOVERNMENT LEASE (SECRETARY'S ORDER 1940)

	Fiscal years		
	1964 actual	1965 actual	1966 estimate
Number of mines inspected	89	88	90
Total regular inspections	151	160	160

Safety education

Type of program:	*Number persons trained, fiscal year 1965*
First-aid classes	27,292
Mine-rescue classes	1,639
Metal and nonmetal mine accident-prevention classes	4,513
Coal mine accident-prevention classes	4,486
Petroleum-gas accident-prevention classes	175

Exhibits, demonstrations, safety meetings, contests, and lectures

	Attendance, fiscal year 1965
"Magic of Fire" demonstrations	45,600
"Hazards of Static Electricity" demonstrations	17,300
Other safety demonstrated lectures	16,500
First-aid and mine-rescue contests	10,700
Safety meetings	105,000
Screenings of safety motion pictures	126,000

2. Control of fires in coal deposits

Control of fires in coal deposits:	
Fiscal year 1965 amount available	$401,697
Fiscal year 1966 amount available	311,000
Fiscal year 1967 estimate	203,000
Decrease, 1967 compared with 1966	−108,000
Pay cost[1]	
Program	−108,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $203,000, a decrease of $108,000 below 1966. This decrease is the result of the Appalachian Regional Development Act of 1965 which includes funds and authority for the control of fires of this type in the Appalachian area.

Objectives

The purpose of this program has been to stop the destructive action of uncontrolled fires in inactive coal deposits that have caused the loss of valuable coal reserves, damaged or destroyed surface property, and endangered the lives and health of persons and livestock nearby. Very important side effects of many of these fires involve the addition of pollutants to the air and the unsightly condition of the fire area.

Program of work.—This program embraces investigating and recording all fires in inactive coal deposits that are known to Bureau personnel or have been reported to the Bureau by reliable sources. The Bureau determines the order of urgency of combating such fires within the limit of appropriated funds. Before undertaking any fire-control project, Bureau engineers determine the extent, decide on the proper method of control, and estimate the cost. The actual work of controlling fires is done by private contractors. Specifications for each fire control project are drawn up by the Bureau, invitations to bidders are published, and contracts are awarded to the lowest responsive bidders. Bureau personnel supervise each fire-control project; and before Federal funds are disbursed, certification by qualified Bureau personnel is required to attest that all work is completed in accordance with contract specifications.

The control of fires in inactive coal deposits will be continued in fiscal year 1967. Projects will be initiated in the order of urgency and the availability of funds. The objectives are to prevent losses of valuable natural resources and to prevent loss of life or impairment of health of persons and livestock near such fires.

3. Health and safety research

Health and safety research:	
Fiscal year 1965 amount available	$2,023,579
Fiscal year 1966 amount available	2,101,000
Fiscal year 1967 estimate	1,934,000
Decrease, 1967 compared with 1966:	
Total	−167,000
Pay cost [1]	+13,000
Program	−180,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $1,934,000, a decrease of $180,000 below 1966. The decrease consists of:

(1) A decrease of $130,000 due to nonrecurring costs of equipment for roof-control research.

(2) A decrease of $50,000 due to phasing out of methane detection and monitoring research.

(3) An increase of $13,000 for increased pay costs.

Objectives

Unsafe conditions, practices, or equipment in the mineral-extractive industries are frequently responsible for accidents and disasters which cause death, injury, loss of earning power, property damage, and destruction of mineral resources. Research is designed to provide knowledge and skills necessary to help the mine owners and miners alike achieve a working environment which is safe, healthful, productive, and profitable to all concerned. This, it is felt, is what one should expect if the United States is to achieve all the attributes of a Great Society.

The development of scientific and engineering knowledge and skills, as well as the introduction of ways of applying them to mining technology to elminate accidents and property loss is made more complex because of the ever-advancing technology of mining. The problem and goal is to stay abreast of all new developments in minerals extraction, to evaluate them and anticipate the health and safety problems which will come from the adoption of the developments, and to be prepared with solutions so that new hazards will not be introduced

and only discovered as the result of increased deaths, injuries, or financial losses.

Program of work.—Products of Bureau of Mines research are now being used successfully and advantageously throughout the mining industry. In addition, basic information developed by the Bureau's scientists and engineers has been utilized by industrial concerns, manufacturers, and mining companies in improved equipment and mining methods.

Health and safety research does not represent commodity problems for which ultimate solutions are easily attainable. Changing technology, new knowledges developed in the United States and other countries, more precise instruments, and alert industries, demand continuous and intensified research directed to ward the solution of health and safety problems.

The broad general goal, therefore, will not change greatly from present or past goals. Problem areas of responsibility will remain those of roof control, ventilation, mine fires and explosions, environmental health, personal protection, and safe equipment. Specific projects in these areas will probably change significantly as times goes on.

With the increased technology in mine mechanization, the hazards of explosions and fires have greatly increased, due in a large measure to the rapid generation of fine-coal dust at working faces. Such dust readily becomes airborne and the problem of counteracting it has greatly increased. Research to combat the fine-coal, float-dust hazard will be continued by reappraising current rock-dusting standards; determining float-dust characteristics; exploring new methods for collecting, inhibiting, or otherwise limiting deposition of fine-coal dust; and modifying present means of dust control or by developing new ways to effectively reduce the fine-coal, float-dust explosion hazard.

Research to perfect a novel and effective device to prevent coal-mine explosions is currently in progress at the Bureau's Experimental Coal Mine. The program calls for the development of a means of quenching methane explosions in their incipient stage before the flaming gases can build up appreciable pressure and propagate the explosion. Limited trials using a solar cell as a sensor, liquid carbon dioxide for dispersion, and a potassium salt for flame inhibition have been successful.

The use of encapsulated hydraulic-load cells will be continued to study pressure changes in mine roofs and pillars in the investigation of the causes of "bumps" and pillar bursts and establish engineering data beneficial to mine-extraction methods. Results obtained have indicated the effectiveness of hydraulic-load cells for numerous applications. Testing will be continued on roof bolts and accessories to improve minimum standards of roof bolting. Studies will continue on the use of resin-bonding chemicals to improve roof-bolt anchorages in soft strata. Failures due to roof-bolting practices and components will be studied to determine causes and make recommendations to correct them.

Ventilation research and investigations will be augmented to keep abreast of modern mine-ventilation requirements. The health and safety of mine workmen depend largely on an adequate volume of clean air to breathe and ways to dilute, render harmless, and carry off the explosive or noxious gasses that may be liberated or generated in mining operations. In some gassy coal mines operations can be carried on only with close attention to ventilation because of the large volumes of methane liberated. In some deep metal mines high rock temperatures complicate the ventilation problem by requiring air conditioning and cooling to maintain the comfort, health, and productivity of the workmen. The use of underground diesel-powered equipment calls for close attention of the skilled ventilation engineer. The mining industry has long looked to the Bureau of Mines for guidance and assistance with its more difficult ventilation problems.

Prompt detection of methane, particularly in coal mines, has been as difficult to achieve as to carry methane away harmlessly as it is liberated from the coalbed or contiguous rock strata. The problem of timely detection by officials and mine workmen has been intensified, especially in ultragassy mines, by the demands of mechanized mining because in such mines high productivity usually is accompanied by a high rate of methane liberation. Recent gas ignitions and explosions have demonstrated that mine employees cannot be depended upon to test for methane at frequent enough intervals to assure prompt detection of dangerous accumulations. The Bureau has conducted research to develop a suitable device for automatic methane detection and monitoring, and prototype units are now undergoing field tests in mines under actual mining condi-

tions. Commercial production and utilization of methane monitors will be encouraged.

Test work leading to Bureau of Mines approval of equipment will be continued and directed toward both improvements in previously approved equipment as well as new developments. Demand for the testing and approval of underground electric- and diesel-powered equipment, lighting and shot-firing devices, gas detectors, drill-dust collectors, respirators, and self-contained breathing devices requires greater productive effort of Bureau personnel to provide this important service upon which the mineral industries depend for unbiased evaluation of the safety of such equipment.

Research will be conducted to determine the performance characteristics of diesel-powered equipment operating at elevated pressures.

Environmental research studies dealing with dust physics, sampling and analysis procedures for determining worker exposure rates in mines, the behavior pattern of dust in ventilation air streams, and the effectiveness of dust abatement methods, will be accelerated.

Research will be directed toward improving electrical and diesel-powered equipment to counteract health hazards of the mineral industries; establishing a more scientific basis for roof control, including prevention of "bumps" or rock bursts; improving mine ventilation generally; aiding the mining industries in solving difficult ventilation problems; and preventing dust explosions and mine fires by applying new concepts on dust binding, rock dusting, and controlling float-dust transport.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$9,270,025	$9,599,000	$9,390,000	−$209,000
Transferred to "Operating expenses, Public Buildings Service," General Services Administration	903			
Unobligated balance lapsing	266,072			
Appropriation	9,537,000	9,599,000	9,390,000	−209,000
Obligations by objects:				
11 Personnel compensation	7,027,157	7,450,000	7,350,000	−100,000
12 Personnel benefits	507,884	537,000	531,000	−6,000
21 Travel and transportation of persons	315,255	315,000	310,000	−5,000
22 Transportation of things	28,522	31,000	31,000	
23 Rent, communications, and utilities	128,176	140,000	139,000	−1,000
24 Printing and reproduction	35,970	50,000	45,000	−5,000
25 Other services	406,166	350,000	300,000	−50,000
26 Supplies and materials	344,038	351,000	343,000	−8,000
31 Equipment	405,302	375,000	341,000	−34,000
32 Lands and structures	68,133			
42 Insurance claims and indemnities	2,882			
Total obligations	9,270,025	9,599,000	9,390,000	−209,000

CONTROL OF MINE FIRES IN COAL DEPOSITS

Chairman HAYDEN. Would you please explain to the committee where the $209,000 reduction from last year's estimate will be made, and indicate whether there will be an adverse effect on the health and safety program.

Mr. HIBBARD. Yes, sir; these reductions are, in fact, concerned with two areas. One is with the control of mine fires in coal deposits. In this case, we are requesting $108,000 less than in 1966. This is the result of the Appalachian Regional Development Act. Under that act, the mine fires in Appalachia can be handled with a 75-percent participation by the Federal Government and 25 percent by State.

Under our other act, it is a 50–50 relationship, and therefore the State prefers to handle these fires under the Appalachia Act. Therefore we need less money here.

RESEARCH ON HEALTH AND SAFETY

The other part is a decrease of $180,000 in our program research on health and safety. This is concerned with nonrecurring purchases in fiscal year 1966, particularly in connection with the development of our methane monitors. These decreases have no effect on the effectiveness of our health and safety program.

Mr. Memmott is Deputy Director, and Mr. Westfield is our Assistant Director of Health and Safety.

Would you like to add something?

Mr. MEMMOTT. I agree.

Mr. WESTFIELD. No, sir. That is correct, and I don't think I could add anything.

PHASING OUT METHANE DETECTION AND MONITORING RESEARCH

Chairman HAYDEN. Also, you indicate that you are phasing out methane detection and monitoring research. Have you completed work on that, and what results have you achieved?

Mr. HIBBARD. I am very glad you asked that question, because I am very proud of our methane monitor. This is a development of our health and safety research, measuring automatically the methane gas in the atmosphere in the location where mining is being carried out. This is done through a platinum resistant wire, where the resistance of the wire is a function of measurement of the methane. It can identify the methane above a hazardous amount and automatically sets off a signal device in the form of a light or bell, and can, in fact, be connected to the mining equipment in the area and turn the equipment off.

I believe this is a very fine development. We have 10 such methane monitors now being tried out in various places. Two of these are in the Dutch Creek mine in Colorado, where we have had some problems in the past. These have worked very successfully. We believe this will save us a lot of grief in the future and, in fact, there are two companies now in the process of manufacturing these monitors on a commercial basis. We hope we can get monitors in every gas-producing mine in this country.

METAL MINE SAFETY BILL—RIGHT OF ENTRY AND INSPECTION

Chairman HAYDEN. I understand that hearings are scheduled on a metal mine safety bill which would give the Bureau of Mines the right of entry and inspection; is that correct?

Mr. HIBBARD. Yes, sir.

Chairman HAYDEN. That is pending in the House?

Mr. HIBBARD. In the Senate.

Mr. MEMMOTT. It has passed the House, and is now before the Senate Labor Committee.

DEPARTMENT OF THE INTERIOR AS DEFENDANT IN TEXAS GULF SULPHUR POTASH MINE, MOAB, UTAH

Chairman HAYDEN. Please explain in detail how the Department of the Interior got itself into a position to stand trial for an $8 million lawsuit, along with Texas Gulf Sulphur, which was the result of a mine explosion at the Texas Gulf Sulphur potash mine in Moab, Utah, on August 27, 1963.

Mr. HIBBARD. I pass this question to Assistant Director Westfield.

Mr. WESTFIELD. In the State of Utah when they had the disaster at Moab, Utah, the dependents of the men killed, through their attorneys, sued Texas Gulf Sulphur, who is the operator of the mine, and the Federal Government.

In parts of this, the property was on public domain; therefore it came under the jurisdiction of the U.S. Geological Survey and the Bureau of Mines. In the Department of Interior, in handling and inspection of mines on public domain, the U.S. Geological Survey is in charge of the leasing of these lands. They have the jurisdiction and the enforcement powers, but because of the know-how of the Bureau of Mines in health and safety, the Secretary of the Interior delegated to the Bureau of Mines the authority to make safety inspections of the mines and then submit the reports to the interested parties which would be the companies operating these properties and the U.S. Geological Survey.

The U.S. Geological Survey has the enforcement powers. The contention of the dependents was that the Federal Government had been lax or negligent and had caused the explosion. This was never taken to trial. The courts were convened, but Texas Gulf and their insurance companies made a settlement before the case went to trial. The case was dropped against the Federal Government at that time.

Chairman HAYDEN. How much did they get?

Mr. WESTFIELD. Texas Gulf—my memory is they got $1,312,000, the widows.

Mr. HIBBARD. Would you like a complete statement in the record about this?

Chairman HAYDEN. I think it is important. Put that in the record.

Mr. MEMMOTT. We will insert for the record.

MINE EXPLOSION DISASTER AT CANE CREEK MINE, MOAB, UTAH

A methane gas explosion occurred in the Cane Creek potash mine about 4:40 p.m. Tuesday, August 27, 1963. The explosion and the gases produced by it killed 18 of the 25 men underground at the time. All the victims were employees of Harrison International, Inc., of Miami, Fla. This firm had a contract from the Texas Gulf Sulphur Co. for sinking of the mine shaft and driving development openings through waste rock to the potash ore body. Engineering and maintenance of some equipment was provided by Texas Gulf Sulphur Co. which would eventually undertake the mining operations.

The Cane Creek mine is situated in Grand County, Utah, about 20 miles southeast of Moab. At the time of the disaster the mine was being developed on Government leases Nos. U–0486 and U–013167. The lease lands on which the shaft was located had been selected by the State November 7, 1961, and clear-listed to the State of Utah on May 3, 1963. The remaining lands involved in these leases were under State selection application (Dawson Act—Public Law 86–786, 86th Cong., September 14, 1960.) Since the disaster, Federal jurisdiction over the leases ended on May 12, 1964, when they were transferred in entirety to the State. Prior to May 12, 1964, operating and safety regulations of the Code of Federal Regulations, title 30, part 231, were administered by the Secretary of the Interior through the Geological Survey and the Bureau of Mines. Secretary's Order 1940, dated April 4, 1944, delegated to the Bureau of Mines the responsibility for conducting safety inspections of all Government-lease mining operations with the Geological Survey maintaining its responsibility for enforcing safety regulations.

A joint Geological Survey-Bureau of Mines memorandum of understanding dated June 29, 1944, approved by the Secretary of the Interior on June 30, 1944, established the procedures under which both Bureaus cooperated to accomplish

the purpose of the Secretary's order. This memorandum of understanding was amended on May 22, 1964, by the Secretary as a result of a joint recommendation of May 8, 1964, from the Directors of both Bureaus.

The Bureau of Mines conducted regular inspections of the Cane Greek mine on November 28–29, 1961, when the shaft was at a depth of 840 feet; on November 5–7, 1963; and on February 11–12, 1964. In addition, the Bureau of Mines conducted an investigation of the explosion disaster and of four separate fatal accidents to personnel employed by contractors at the property prior to the explosion. Reports of the findings and recommendations of all these Bureau of Mines inspections and investigations were distributed to the Geological Survey, the Industrial Commission of Utah, the contractor concerned, and to the Texas Gulf Sulphur Co.

Early during shaft-sinking operations crude oil was encountered and, on July 31, 1963, four men were burned when combustible gas was ignited in one of the development drifts. These two occurences were not reported to the Bureau of Mines.

Following the disaster of August 27, 1963, the surviving heirs of the victims filed civil complaints for damages totaling nearly $8.5 million against the Texas Gulf Sulphur Co. and the United States. The United States was charged with neglect to properly inspect the mine and failure to carry out supervision over safety at the operation. The Government attempted to obtain voluntary dismissal of the charges and opposed proposals to participate with the codefendant in negotiations with the plaintiffs. On November 29, 1965, following settlement in the amount of $1,312,000 by the Texas Gulf Sulphur Co., all suits were dismissed at no expense to the Government.

GENERAL ADMINISTRATION EXPENSES

JUSTIFICATION

Chairman HAYDEN. There will be placed in the record the justification of your budget estimate for general administrative expenses in the amount of $1,556,000, an increase of $5,000 over the amount appropriated to you last year, including a proposed supplemental appropriation for pay increases.

(The justification follows:)

Appropriation, 1965	$1,410,000	
2d supplemental appropriation	59,000	
Total available, 1965		$1,469,000
Appropriation, 1966	1,529,000	
Pay cost supplemental	22,000	
Total available, 1966		1,551,000

SUMMARY OF INCREASES AND DECREASES, 1967

To provide for increased pay costs for fiscal year 1966 positions	+$24,000	
Decrease to be accomplished by improved efficiency in operations	−19,000	
Net increase, 1967		+5,000
Budget estimate, 1967		1,556,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers [1]	Amount available
General administrative expenses	$1,444,256	$1,529,000	$22,000		$1,551,000
Unobligated balance lapsing	24,744				
Total	1,469,000	1,529,000	22,000		1,551,000

[1] Represents transfers to General Services Administration unless otherwise footnoted.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
General administrative expenses	$1,444,256	$1,551,000	$1,556,000	+$5,000	+$24,000	−$19,000
Unobligated balance lapsing	24,744					
Total	1,469,000	1,551,000	1,556,000	+5,000	+24,000	−19,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

General administrative expenses:

Fiscal year 1965 amount available	$1,444,256
Fiscal year 1966 amount available	1,551,000
Fiscal year 1967 estimate	1,556,000
Increase (+) or decrease (−), 1967 compared with 1966	+5,000
Pay cost [1]	+24,000
Program	−19,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $1,556,000, an increase of $5,000 over 1966. The increase consists of:

(1) A decrease of $19,000 due to program savings resulting from improved efficiency in operations.

(2) An increase of $24,000 for increased pay costs.

Program of work.—The estimate for the "General administrative expenses" appropriation provides for the immediate Office of the Director, the administrative functions in the Washington office, and certain key officials in the eastern and western administrative offices. All other expenses generally classified as administrative, required to carry on the activities of the technical staffs, will be charged to program funds.

The Office of the Director provides executive direction in conducting programs designed to conserve and develop mineral resources and to promote safety and healthful working conditions in the mineral industries.

The administrative functions, headed by an Assistant Director, Administration, advises the Director on all administrative management matters; and supervises and coordinates all administrative activities including budget, finance, procurement and supply, personnel administration, management analysis, internal security, internal audit, employee safety, data processing, printing and publications, and related general business functions of the Bureau. The program objective of administration is to provide these services in the most expeditious and efficient manner possible. Every effort of administration is directed toward this objective.

An improvement we expect to achieve in our program objective is the conversion of certain administrative functions from manual to automated methods. This program was initiated in fiscal year 1965. Payroll conversion should be com-

pleted by the end of fiscal year 1966. Automation of administrative functions will enable the Bureau to process its administrative work more efficiently in terms of time, money, and manpower, and to provide more timely data and more accurate and complete information than is possible by manual methods.

The Bureau's proposed 1967 administrative program totals $3,426,000 of which $1,556,000 is requested under the "General administrative expenses" appropriation.

Following is a comparison of the program (obligations):

	1965	1966	1967
"General administrative expenses" appropriation	$1,444,257	$1,551,000	$1,556,000
Share of participating program activities	1,790,758	1,860,000	1,870,000
Total, administrative program	3,235,015	3,411,000	3,426,000

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
PROGRAM AND FINANCING				
Total obligations	$1,444,256	$1,551,000	$1,556,000	+$5,000
Unobligated balance lapsing	24,744			
Appropriation	1,469,000	1,551,000	1,556,000	+5,000
OBLIGATION BY OBJECTS				
11 Personnel compensation	1,194,702	1,309,000	1,299,000	−10,000
12 Personnel benefits	87,043	98,000	97,000	−1,000
21 Travel and transportation of persons	38,309	38,000	35,000	−3,000
22 Transportation of things	2,286	5,000	8,000	+3,000
23 Rent, communications, and utilities	9,327	14,000	20,000	+6,000
24 Printing and reproduction	17,980	18,000	18,000	
25 Other services	55,740	33,000	43,000	+10,000
26 Supplies and materials	21,095	21,000	21,000	
31 Equipment	17,678	15,000	15,000	
32 Lands and structures	96			
Total obligations	1,444,256	1,551,000	1,556,000	+5,000

PAYROLL AUTOMATION—INCREASED PAY COSTS

Chairman HAYDEN. What comment do you have on this estimate?

Mr. HIBBARD. May I refer this to Assistant Director Rampacek?

Mr. RAMPACEK. We are asking for a $5,000 increase in our estimate for fiscal year 1967 over 1966; $24,000 is for increased pay costs, but we are subtracting from that $19,000 which we have effected through a saving by automating our payroll in Denver. This is a reduction of three people in our entire organization payroll.

ADMINISTRATIVE FUNCTIONS FUNDED FROM PROGRAM FUNDS

Chairman HAYDEN. Your justification statement indicates that participating program activities will share in general administrative expenses to the extent of $1,870,000. Will you place in the record a breakdown of this activity?

Mr. HIBBARD. Yes, sir.

(The breakdown follows:)

	Estimate 1967
Eastern administrative office	$494,000
Western administrative office	468,000
Field installations:	
Albany, Oreg	96,000
Bartlesville, Okla	100,000
Pittsburgh, Pa	145,000
College Park, Md	85,000
Grand Forks, N. Dak	37,000
Juneau, Alaska	34,000
Laramie, Wyo	68,000
Minneapolis, Minn	74,000
Morgantown, W. Va	76,000
Reno, Nev	65,000
Rolla, Mo	39,000
Salt Lake City, Utah	60,000
Tuscaloosa, Ala	29,000
Total	1,870,000

APPALACHIAN REGION MINING AREA RESTORATION

JUSTIFICATION

Chairman HAYDEN. Your activity under section 205 of the Appalachian Regional Development Act of 1965 requires an appropriation of $10,566,000. The justification for this estimate will be printed in the record.

(The justification follows:)

Supplemental appropriation, 1965		$16,000,000
Unobligated balance available, start of 1966	$15,991,101	
Less unobligated balance, end of 1966	−6,991,000	
Unobligated balance available, 1966		9,000,101
Unobligated balance available, start of fiscal year 1967		6,991,000

SUMMARY OF INCREASE, 1967

Subsidence, caving, and mine fire control:		
To provide for continuation of projects for the sealing and filling of voids in abandoned coal mines	$4,000,000	
To provide for continuation of extinguishment and control of underground and outcrop fires	5,000,000	
		9,000,000
Strip and surface mine area restoration: To provide for the conduct of additional projects for the reclamation and rehabilitation of strip and surface mine areas		1,566,000
Total available for obligation, 1967		17,557,000
Less unobligated balance, start of 1967		−6,991,000
Budget estimate, 1967		10,566,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Subsidence, caving, and mine fire control		$8,000,000	$12,793,000	+$4,793,000		+$4,793,000
2. Strip and surface mine area restoration	$8,899	1,000,101	4,764,000	+3,763,899		+3,763,899
Unobligated balance available, start of year		−15,991,101	−6,991,000	+9,000,101		+9,000,101
Unobligated balance available, end of year	15,991,101	6,991,000		−6,991,000		−6,991,000
Total	16,000,000		10,566,000	+10,566,000		+10,566,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. SUBSIDENCE, CAVING, AND MINE FIRE CONTROL

The estimate for 1967 is $9 million, exclusive of $3,793,000 in carryover funds. The estimate consists of:

(*a*) $4 million for continuation of projects for the sealing and filling of voids in abandoned coal mines.

(*b*) $5 million for continuation of extinguishment and control of underground and outcrop fires.

Objective

The principal objective of the Appalachian mining area restoration program is to further the economic development of the region by developing and executing a program for rehabilitating areas presently damaged by deleterious mining practices.

Program of work

The program of work authorized by Public Law 89–4 calls for projects to fill underground voids in abandoned coal mines by selective backfilling techniques to prevent or alleviate surface subsidence in order to project the public health and safety; and to plan and execute projects for the control and extinguishment of underground and outcrop mine fires.

Sealing and filling of voids.—The sum of $4 million is requested to enable the Bureau of Mines to continue the conduct of projects for the sealing and filling of voids in abandoned coal mines in the region as authorized under section 205(a)(1) of the act. Projects are designed to prevent the occurrence of surface subsidence in heavily populated areas where action is imperative to prevent or arrest continuing property damage with its attendant heavy public and private economic loss, personal hardship, and hazard to the public health and safety. The work will entail the introduction of crushed and sized mine refuse, obtained at no cost to the Federal Government, into the mine voids to reinforce existing coal pillars and provide support to the surface land. An additional public benefit will result through the removal of unsightly mine refuse dumps which presently afford the incipient hazard of possible ignition with consequent pollution of the surrounding atmosphere by smoke, fumes, and noxious gases. The estimate includes funds for contributions to the States and for engineering and administration costs of the project work.

Control of underground mine fires.—The sum of $5 million is requested to enable the Bureau of Mines to continue the planning and execution of projects for the extinguishment and control of underground and outcrop mine fires in the region in accordance with the provisions of section 205(a)(2) of the act. Projects carried out under this authority will be designed for the control of fires in inactive deposits which threaten the loss of large areas of valuable coal reserves and, in many instances, endanger surface properties and the public health and safety. The work will entail various operations including, but not limited to, surface excavation, trenching and backfilling, surface and underground seals, and filling of underground voids with incombustible material introduced from the surface. The estimate includes funds for contractual services, engineering, and administration of the project work.

2. STRIP AND SURFACE MINE AREA RESTORATION

The estimate for 1967 is $1,566,000, exclusive of $3,198,000 in carryover funds. The estimate will provide for the conduct of additional projects for the reclamation and rehabilitation of strip and surface mine areas in Appalachia.

Program of work

The mining area restoration program for Appalachia administered by the Bureau of Mines, for which funds are requested for fiscal year 1967, provides for the Federal share of restoration of areas in the region damaged by past mining practices. The act of March 9, 1965 (Public Law 89-4), authorizes projects directed to strip and surface mine area restoration.

Strip and surface mine restoration.—The sum of $1,566,000 is requested to enable the Bureau to continue the conduct of projects for the reclamation and rehabilitation of strip and surface mined areas in the region as authorized under section 205(a)(1) of the act. Projects will be undertaken on public land in those areas where the greatest hazard exists to the public health and safety, where the project will aid greatly in the resolution of stream pollution problems, and where project benefits will enhance the economic growth of a community. The creation of recreational facilities will be given serious consideration in evaluating projects. The estimate includes funds for contributions to the States and for the engineering and administration of the project work.

Evaluation study.—Funds appropriated in fiscal year 1965 will be used in 1966 and 1967 to carry out a strip and surface mine area evaluation study on a nationwide basis with the cooperation of Federal, State, and local governments and the Appalachian Regional Commission.

There are approximately 18,000 active open-pit mines in the United States, including coal, metal, nonmetal, stone, quarries, and sand and gravel pits. We do not know the number of open cuts that have been abandoned, the number that have been reclaimed in some manner, nor the acreage involved. For the purpose of this study, precise and far more comprehensive data than we now have must be obtained on past mining operations and the areas occupied by spoil and tailing piles, acreages involved in current mining, and, if possible, on plans for future mining.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or desrease (−)
Program and financing:				
Total obligations	$8,899	$9,000,101	$17,557,000	+$8,556,899
Unobligated balance available, start of year		−15,991,101	−6,991,000	+9,000,101
Unobligated balance available, end of year	15,991,101	6,991,000		−6,991,000
Appropriation	16,000,000		10,566,000	+10,556,000
Obligation by objects:				
11 Personnel compensation	1,425	621,000	377,000	−244,000
12 Personnel benefits	104	45,000	28,000	−17,000
21 Travel and transportaton of persons		65,000	30,000	−35,000
22 Transportation of things		25,000	25,000	
23 Rent, communications, and utilities		100,000	100,000	
24 Printing and reproduction		15,000	20,000	+5,000
25 Other services	681	4,148,000	9,788,000	+5,640,000
26 Supplies and materials		120,101	124,000	+3,899
31 Equipment	6,689	61,000	65,000	+4,000
41 Grants, subsidies, and contributions		3,800,000	7,000,000	+3,200,000
Total obligations	8,899	9,000,101	17,557,000	+8,556,899

SUBSIDENCE, CAVING AND MINE FIRE CONTROL

Chairman HAYDEN. For subsidence, caving and mine fire control you request $9 million, in addition to about $3,800,000 available from prior appropriations. Do you do any of this type of work in the Appalachian area outside of this appropriation? If so, how much?

Mr. ZINNER. Everything done is under this appropriation. One minor exception is described under health and safety. As the Director

explained, the reduction in the fire control work under health and safety results from the more favorable contribution provisions of the Appalachian Act.

In the program we are talking about here the total effort in Appalachia will be under this appropriation. There are no other funds.

APPALACHIAN FUNDS PROGRESS

Chairman HAYDEN. Would you please discuss for the committee the progress which you have made with the $8 million previously made available for this purpose?

Mr. ZINNER. In the 1965 Supplemental Act, $16 million was appropriated to the Bureau of Mines to provide for the mine fire control, subsidence and surface rehabilitation activities specified under the Appalachia Act and that money was carried forward in 1966. All projects in any of the categories result from submissions to the Department from the Appalachian Regional Commission. We have received from the Commission seven projects in the subsidence category and eight projects in the mine fire category. All of these projects will be under contract during the current fiscal year. In addition to these, we have received a number of tentative projects in both categories which are the basis for the estimate in 1967.

APPALACHIA STATE GOVERNMENT PARTICIPATION

Chairman HAYDEN. To what extent is there participation by the State government in this work?

Mr. ZINNER. Each project involves State cooperation, at least to the extent of 25 percent of the total cost.

Chairman HAYDEN. Am I correct in assuming that $9 million is really an intensification of your regularly conducted program?

Mr. ZINNER. It is an extension of the work presently going on under the current Appalachia appropriation.

STRIP AND SURFACE MINE AREA RESTORATION

Chairman HAYDEN. With regard to the activity looking to strip and surface mine area restoration, how do you propose to go about this work?

Mr. ZINNER. There are two facets to the strip mining part of the Appalachia bill, the first is a comprehensive study of strip mine practices and related aspects spelled out in detail in the act. Section 205(c) of the act required this study. It is a joint effort with the agencies that have any concern whatsoever with the effects of strip mining or the restoration of such lands. The purpose of the study is to find out just what exactly is the magnitude of this problem, what parts of it demand immediate attention, what would be the cost and what further legislation might be necessary to cope with the problem.

The act further requires that this be a national study. While authorized under the Appalachian Act, it is specified that the study be made nationally. The act also requires that on the first of July of the current year, that is 1966, the Secretary of Interior is to file an interim report with the Appalachian Regional Commission in which the findings to that date will be described, and any proposed legislation

that might be considered necessary to cope with the problem will be recommended.

A year later, that is, July 1, 1967, the Secretary is obliged to report to the Congress on the results of the whole study. In addition, the act provided for some demonstration projects to start right away, but only on publicly owned land.

There is not a great deal of publicly owned land in Applachia with a strip-mine problem, but a number of projects are probably being looked at and at least one will be underway this fiscal year. We expect several to be underway next fiscal year.

STATE PARTICIPATION IN RESTORATION

Chairman HAYDEN. To what extent is there State or local participation?

Mr. ZINNER. As I said earlier, there is at least a 25-percent contribution from the State or local government in every one of the projects undertaken.

Chairman HAYDEN. How much have you expended of the amount appropriated for this purpose in the Second Supplemental Appropriation Act of 1965?

Mr. ZINNER. This has to be an educated estimate, because the major encumbrances under this program remain to be made between now and the first of July. We expect something around $3 million will probably carry over, so that means less than $1 million probably will be encumbered this fiscal year.

SOLID WASTE DISPOSAL ACT

JUSTIFICATION

Chairman HAYDEN. For activities of the Bureau of Mines under the Solid Waste Disposal Act, it is requested that $4,335,000 be appropriated. The prior appropriation was $1,400,000. The justification for the new estimate will be placed in the record.

(The justification follows:)

Appropriation, 1965		0
Supplemental appropriation, 1966		$1,400,000

SUMMARY OF INCREASES AND DECREASES, 1967

Demonstration grants: To demonstrate the technical feasibility and determine the economics of various elements of "waste reducing" mineral production and utilization systems		+800,000
Research, training, and technical services:		
To develop engineering data and contract for design, construction, and operation of demonstration plants for utilization of automobile scrap	+$2,035,000	
To provide for continuation on a full-year basis of case studies on waste disposal	+100,000	
		+2,135,000
Net increase, 1967		+2,935,000
Budget estimate, 1967		4,335,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers [1]	Amount available
1. Demonstration grants					
2. Research, training, and technical services		$1,400,000			$1,400,000
Total		1,400,000			1,400,000

[1] Represents transfers to General Services Administration unless otherwise footnoted.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Demonstration grants			$800,000	$800,000		$800,000
2. Research, training, and technical services		$1,400,000	3,535,000	2,135,000		2,135,000
Total		1,400,000	4,335,000	2,935,000		2,935,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. Demonstration grants:

Fiscal year 1965 amount available	
Fiscal year 1966 amount available	
Fiscal year 1967 estimate	$800,000
Increase or decrease (−), 1967 compared with 1966	800,000
Pay cost [1]	
Program	800,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $800,000. The main objective of this program is to demonstrate the technical feasibility and to determine the economics of various elements of "waste-reducing" mineral production and utilization systems applicable to the present mineral production and use situation. The training grant program is aimed at developing competent trained personnel to combat the increasing problems of environmental pollution.

Program of work

Optimum process development for all projects discussed under processing and utilization depends upon the availability of related process data such as thermodynamic properties, reaction rates, and slag viscosity data on waste materials and processing reagents. Research grants will be made as appropriate to State organizations, universities, and municipalities who show a capability for the rapid development of essential and accurate basic information to expedite the overall solid waste materials research and development program. Additionally, demonstration grants will be used to test processes which show promise on a laboratory scale.

Objectives of initial projects will be to demonstrate the technical feasibility and related economic parameters for processes or schemes which warrant full-scale testing to prove commercial feasibility. Wherever possible the underlying purpose will be to promote optimum utilization of all source waste materials. The use of scrap auto metal for the reduction of low-tenor iron-bearing minerals is such a process in which the iron in both the ore and the scrap is salvaged. A similar project would demonstrate the use of melted auto scrap together with other metal scrap materials for the production of quality grade

foundry and mill alloys concurrently with the testing of the mechanical properties of such alloys. The nature of other demonstrations would be determined by the character of suggestions and proposals submitted by participating State and interstate agencies and qualified research institutions.

Universities will be given grants for appropriate graduate study projects to encourage high-caliber scientists and engineers to enter the field of environmental pollution prevention.

If research and training grants for projects of high quality are insufficient to utilize the total funds appropriated for this program, the remainder will be used to augment the related solid waste research and demonstration plant programs.

2. Research, training, and technical services:

Fiscal year 1965 amount available	
Fiscal year 1966 amount available	$1,400,000
Fiscal year 1967 estimate	3,535,000
Increase or decrease 1967 compared with 1966	2,135,000
Pay cost [1]	
Program	2,135,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

The estimate for 1967 is $3,535,000, an increase of $2,135,000 over 1966. The increase consists of:

(1) An increase of $100,000 is to provide for continuation on a full-year basis of case studies on waste disposal.

(2) An increase of $2,035,000 is to develop engineering data and contract for design, construction, and operation of demonstration plants for utilization of automobile scrap.

Need for increase

The increase of $100,000 will be used to continue an intensive appraisal of mineral waste disposal practices to determine what future actions might be most effective in minimizing the offensive aspects of the problem.

The requested increase of $2,035,000 plus about $600,000 of the base will be used to develop engineering data and to contract for design, construction, and operation of demonstration plants for utilization of automobile scrap as an outgrowth of the programs initiated in 1966. The remaining $700,000 of the base will be used for both contract and in-house research and development programs involving utilization and disposal of solid mineral wastes other than scrap automobiles.

Problem appraisal.—Estimate 1966, $100,000; estimate 1967, $200,000; increase, $100,000.

Program of work

Mining, mineral processing, and refining of any mineral substance are processes conducted simply for the purpose of separating a usable product from an accompanying useless substance. Normally, the latter is discarded by the least costly means in the interest of economy. Thus, the mineral-based industries contribute a large part of the waste products that, in some instances, accumulate in a manner inconsistent with the public interest and welfare. Because waste disposal problems and practices vary widely, the extent to which such practices might be improved through technology, persuasion, or legislation demands a nationwide appraisal.

During fiscal years 1966 and 1967 a series of case studies will be made throughout the principal mineral producing and processing districts of the country to establish the magnitude and nature of the problem, identify the problems that demand a priority of attention, and appraise waste disposal practices as to their effectiveness. Specific attention will be directed to real costs where acceptable practices are established, and to probable costs where they are not. A report of the findings together with appropriate recommendations will be submitted.

Processing and utilization.—Estimate 1966, $1,300,000; estimate 1967, $3,335,000; increase, $2,035,000.

Program of work

The Bureau of Mines has been actively working on solid waste disposal problems as related to mineral conservation by addressing itself to many problems for which there appeared to be some promise for practicable solutions. The basic concepts in the assembly of solid waste disposal research programs have now been altered and all areas have been reexamined in the light of new and growing civic and governmental concern about the pollution aspects of mineral

wastes. Current social demands have introduced new factors which affect and associate both economic and technical considerations more profoundly than ever before. The time has come when the extent of the penalty for improper disposal of low-value materials might be greater than the cost of utilization or disposal by nontraditional methods. Even subsidizing, as an incentive measure for salvage and disposal operations, merits consideration. Such a climate in the salvage and processing industries will weigh heavily upon the general readiness to convert existing processes and accept new innovations in salvage and disposal practices.

The areas selected for concerted investigations during the early stages of this program are those for which preliminary research has indicated promising results, and those involving elimination or utilization of specific waste products which contribute most directly to the growing social and economic problems of accumulating waste.

Solid waste material problems which fall in the processing and utilization category are grouped in general areas according to origin, including: (1) Scrap automobiles; (2) crushing and grinding dusts, flotation tailings, slimes, and solutions generated in physical nonchemical processing operations for the separation of valuable mineral fractions from associated low-value materials; (3) ashes, junk, and demolished items resulting from the consumption or obsolescence of mineral or metal goods; (4) slags, skimmings, drosses, and fumes generated in pyrometallurgical operations for the recovery of metals in metallic form; (5) sludges, spent liquors, and residues generated in chemical and electrochemical processes for extracting or refining metals and minerals; (6) grindings, sweepings, and rejects generated in the manufacture of metal and mineral goods; and (7) overburden and submarginal ores from the removal of minerals from the earth.

The work plan for fiscal 1967 basically is a logical extension of the program started in 1966. The following areas of research and development will be emphasized:

Scrap metal demonstration plants, $2,600,000.—Two plants are to be constructed to demonstrate methods of making use of scrap automobiles under the provisions of the Solid Waste Disposal Act of 1966.

The technical objectives of both plants will be to effect the removal of impurity constituents from the bulk scrap in order to produce marketable products. Both plants will be based on technology that has been developed in Bureau laboratories, but scale-up data needed for technological and economic appraisals are lacking. Because of this, and because of the inherent complexities and urgency of the program, an interwoven work plan has been devised that allows meshing of necessary continued laboratory research, unit operation pilot testing, and engineering plant design as a prelude to actual construction and operation of the demonstration plants.

It is expected that by mid-1967 initial construction will be started on a plant to demonstrate an economic integrated method for treating and purifying automobile scrap for feed to steelmaking processes. Also, late in 1967, it is anticipated that engineering design studies will be complete and a contract negotiated for the construction of a plant to demonstrate, on a commercial scale, a process for reduction of low-grade taconite ore with ferrous metal scrap for the ultimate production of blast furnace feed.

Utilization of process solid wastes, $300,000.—This project, organized and initiated in 1966, will be directed toward determination of physical and chemical properties of selected types of plant solid wastes and to pioneering research to find new uses for the waste components as basic materials for the construction and agricultural industries. Typical objectives include production of competent insulating materials, concrete aggregate, tile, block, drain pipe, and fertilizer fillers. Promising processes will be examined on a larger scale to determine definitive data under the research grant program.

Utilization of incinerator wastes, $260,000.—This project is designed to develop and demonstrate new, practicable methods for recovering and processing noncombustible materials, including scrap metals, resulting from incineration of community waste. It is anticipated that continuous small-scale in-house investigations and appropriate contract research will have progressed sufficiently by the end of 1967 that negotiations for an engneering design study can be started, with the ultimate aim of constructing and operating a demonstration plant in 1968.

Recovery of alumina from red muds, $175,000.—Work will be continued to develop practicable methods for extracting alumina, iron, soda, and other values

such as titanium from the red mud residues generated in the production of alumina from bauxite. Investigations will incorporate high-temperature flame techniques concurrently with acid and caustic leaching methods applicable to all types of red mud generated.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
PROGRAM AND FINANCING				
Total obligations (appropriation)		$1,400,000	$4,335,000	+$2,935,000
OBLIGATION BY OBJECTS				
11 Personnel compensation		281,000	725,000	+444,000
12 Personnel benefits		21,000	51,000	+30,000
21 Travel and transportation of persons		50,000	30,000	−20,000
22 Transportation of things		15,000	30,000	+15,000
23 Rent, communications, and utilities		40,000	75,000	+35,000
24 Printing and reproduction		5,000	25,000	+20,000
25 Other services		818,000	3,174,000	+2,356,000
26 Supplies and materials		90,000	125,000	+35,000
31 Equipment		80,000	100,000	+20,000
Total obligations		1,400,000	4,335,000	+2,935,000

TRAINING AND DEMONSTRATION GRANTS

Chairman HAYDEN. $800,000 is requested for training grants. Would you please distinguish between this type of grant and demonstration grants to which reference also is made in this particular part of your justification?

Mr. HIBBARD. The training grants for $800,000 are grants which will be made to universities, nonprofit institutions, to do studies which are pertinent to the solution for waste disposal problems.

The demonstration program, which is in fact the larger of the two, is included in the $3,535,000, for the purpose of doing research, making design studies, and the initial start of the building of two demonstration plants, one to be concerned with the roasting of the chopped-up automobile bodies with the nonmagnetic taconite, the other to be coupled with the removal of solder and other impurities as well.

Chairman HAYDEN. How much do you allocate to each of these types of grants?

Mr. HIBBARD. The demonstration plant item is $2.6 million for fiscal year 1967.

Mr. ROSEBAUM. Of this $1.6 million is for design and initiation of construction.

Mr. HIBBARD. $1.6 million is for the design and the initiation of construction. The training grant is for $800,000.

RESEARCH AND TECHNICAL SERVICES

Chairman HAYDEN. For research and technical demonstration services you indicate a need for $3,535,000, in addition to the $1,400,000 which was appropriated in fiscal year 1966. Would you please outline for the committee the use which you made of the $1,400,000 and tell us what you accomplished with it?

Mr. HIBBARD. The $1.4 million available in fiscal year 1966 has supported research at Albany, Oreg., and Minneapolis, Minn., which has

led to further development of these two processes that we believe are now ready for demonstration plants.

In addition, there were some research projects which are still underway, and concerned with the removal of impurities from the melted steel. One of the problems was the high copper content which results in the steel when simply melting automobile bodies. The people manufacturing steel do not like to use this high-copper material; in fact they claim they can't and one of the critical problems is to find a technical way to remove the copper from the scrap. This is one of the projects we are working on.

Utilization of Automobile Scrap

Chairman Hayden. I note that over $2 million of this estimate is to develop engineering data and contract for design, construction, and operation of demonstration plants for utilization of automobile scrap. Late last fall I noticed a news story in the New York Herald Tribune which said that the New Jersey Highway Department had what they thought would be an answer to the roadside automobile graveyard blight. It was indicated that a $3 million plant was to be established in Jersey City to convert a junked automobile into shredded high-quality steel scrap in about 15 seconds.

What do you know about this process? And is it worthwhile and workable?

Proler Shredding Plants

Mr. Hibbard. We have looked into this matter. The particular type of plant involved is a Proler type device which actually shreds the automobile into small pieces and compacts it. This material is sold as scrap. As far as we can determine, there are Proler shredding plants in operation at Los Angeles, Houston, and Chicago. The New Jersey Highway Department tells us that there is not such a plant being built today in New Jersey but they have considered this a possible solution to their scrap automobile problem. This plant would have a capacity of a thousand scrap cars per day and would thus help, but not solve their scrap problem.

We don't know exactly what their long-range plans are. We don't know when or whether this plant will be in place, but we know they are considering it.

Criteria for Location of Demonstration Plants

Chairman Hayden. What criteria were established to determine the location of these demonstration plants?

Mr. Hibbard. The criteria are severalfold. In the first place these plants must be at locations where scrap automobiles are available, and one of the things we have done in this survey is find out where the scrap automobiles are located.

Second, they must be located where the taconites are also available. I guess those are the two main matters.

Mr. Rosenbaum. Those are the two main ones. Another objective is to test the end product as to suitability by potential users.

Mr. Hibbard. They should be located somewhere near where steel is manufactured.

Chairman HAYDEN. Do you have any further comment which you care to make on this particular budget item?

Mr. HIBBARD. No, sir.

HELIUM FUND PROGRAM

BUDGET REQUEST

Chairman HAYDEN. There will be placed in the record the material submitted in support of the request for $26 million in borrowing authority for the helium fund. This is an increase of $10 million over the amount of borrowing authority permitted last year.

(The justification follows:)

Estimated income, 1966:	
Operations	$26,590,000
Borrowing authority	16,000,000
Estimated income, 1967:	
Operations	25,641,000
Borrowing authority	26,000,000

Financial summary

	Actual, 1965	Estimate, 1966	Estimate, 1967
Income and expenses (funded):			
Income:			
Sale of helium to Government agencies	$16,230,000	$16,400,000	$16,450,000
Sale of helium to non-Federal consumers	6,236,000	7,350,000	6,300,000
Other income	2,783,000	2,840,000	2,891,000
Total income	25,249,000	26,590,000	25,641,000
Expenses:			
Manufacturing expenses	4,794,000	4,568,000	4,649,000
Administrative and other expenses	1,140,000	1,156,000	1,047,000
Research	641,000	668,000	698,000
Total expenses	6,575,000	6,392,000	6,394,000
Net income (funded)	18,674,000	20,198,000	19,247,000
Unobligated balance brought forward: Borrowing authority	19,638,000	13,774,000	3,921,000
Borrowing authority (new)	14,000,000	16,000,000	26,000,000
Changes in selected resources	+390,000	−77,000	−60,000
Total funds available	52,702,000	49,895,000	49,108,000
Capital outlay:			
Crude helium for underground storage	38,281,000	44,688,000	44,930,000
Land, structures, and equipment	647,000	1,286,000	3,950,000
Total capital outlay	38,928,000	45,974,000	48,880,000
Unobligated balance carried forward:			
Cash (operating fund)	13,774,000	3,921,000	
Borrowing authroity			228,000
Total	13,774,000	3,921,000	228,000

HELIUM FUND

The estimate for 1967 is $26 million (borrowing authority), an increase of $10 million over 1966.

Need for increase

The amount of borrowing authority requested for 1967 will be needed to supplement income from helium sales and unused borrowing authority from previous years to meet the Bureau's financial commitments under the helium conservation program.

Objectives

A. National goal: The single enduring national objective of the Bureau of Mines helium program is to obtain maximum beneficial use of the natural helium resources of the United States.

B. Contributory goals: The Bureau of Mines helium program endeavors to achieve its national goal through the accomplishment of three subsidiary objectives.

1. The production and sale of helium for current beneficial use.
2. The acquisition and storage of helium that would otherwise be wasted in order that this helium may be used beneficially in the future.
3. Research that will contribute to a more effective utilization of the natural helium resources of the United States now and in the future.

Guiding considerations

The Bureau of Mines helium program is an integral part of a total national helium effort. Historically, about 25 percent of the helium sold by the Bureau of Mines for current use is delivered to end users, particularly in industry, through private compressed gas distributors. These distributors also provide technical advice to their customers regarding specific industrial applications.

The part of the program concerned with the acquisition and storage of helium for future use was developed by the Bureau of Mines in close cooperation with the principal Federal helium-using agencies, and a close relationship with these agencies is maintained on a continuing basis. Most of the helium saved for future use is acquired from industry. An excellent working relationship has also been established with the private companies that are now, or soon will be, producing and selling helium to civilian consumers separate and apart from the Government program.

The research conducted in the helium program is directed primarily to the assurance of an adequate continuing supply of helium to meet present and future needs and to fill in gaps in knowledge regarding the physical properties of helium. It complements research in industry on specific helium applications and in universities on helium as a unique form of matter.

Program of work

The helium program in fiscal year 1967 will be a continuation of the program for fiscal year 1966. The five Bureau of Mines helium plants will continue to operate to produce an estimated 824 million cubic feet of helium—of which it is estimated that 650 million cubic feet will be sold to supply current helium demands, and 174 million cubic feet will be injected into the Cliffside field for use in the future. This estimate of sales for fiscal year 1967 anticipates that about 100 million cubic feet of helium will be sold to civilian consumers by private industry.

Plant improvements, initiated at the Keyes and Exell helium plants in fiscal year 1966, will be completed in fiscal year 1967. Additional automation at Keyes and a new helium extraction unit at Exell will enable the Bureau of Mines to recover more helium from the gas processed and to reduce operating expenses at these plants sufficient to recover the cost of the improvements in about 3½ years.

The Bureau of Mines shall also acquire—by purchase from private industry under already existing contracts—an estimated 3.8 billion cubic feet of helium, which shall be stored in the Cliffside field for future use. All of this helium will be recovered from natural gas en route to fuel markets; and except for the helium conservation program, it would be lost into the atmosphere without serving any useful purpose when the gas is burned.

The Bureau's program of helium research will continue in fiscal year 1967 at about the same level as in fiscal year 1966. The objective of this research is to provide useful scientific information on the properties of helium and helium-bearing gases, so that maximum benefits can be derived from our country's limited natural helium resources.

New programs

The Exell Helium Plant will be modified by the installation of one crude helium separation unit with automated controls to replace 12 smaller units with individual controls. Design of the new unit will incorporate recent advances in technology and result in recovery of more helium at a reduced operating cost. The investment costs for this work will be recovered from savings in about 3½ years, but the benefits are expected to continue to accrue for a much longer period.

PREPARED STATEMENT

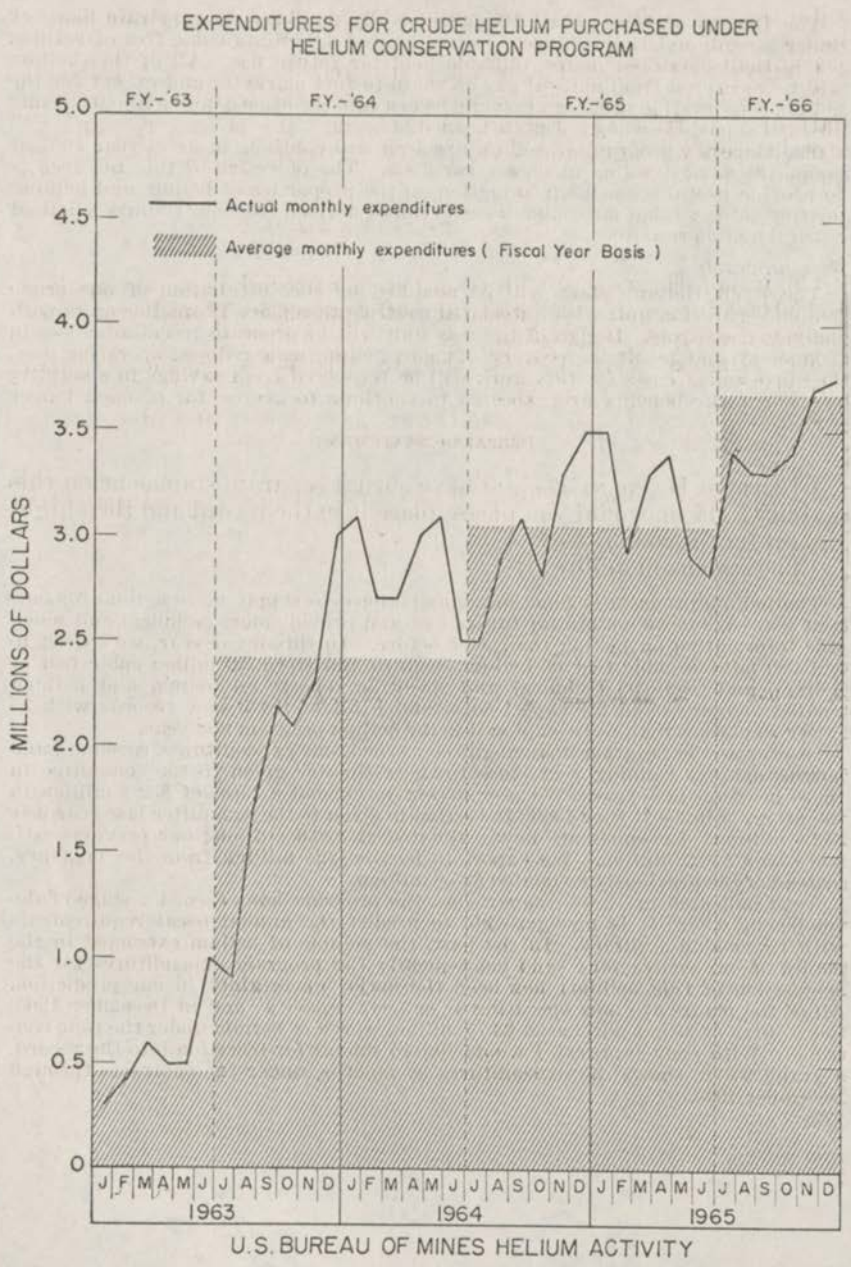
Chairman HAYDEN. Do you have such a separate statement on this activity? If so, would you please place it in the record and then highlight it for the committee?

(The statement follows:)

The helium program is functioning as planned to supply more helium for current use, save more helium for future use, and provide more technical and scientific information on helium than ever before. In this fiscal year, we expect to sell 680 million cubic feet of helium, acquire and store 3.9 billion cubic feet of helium, and issue 98 technical and scientific reports on helium and helium-related subjects—and we expect to establish all of these new records with 25 fewer employees than were employed in the helium program last year.

Insofar as the program financing is concerned, our expenditures, revenues, and borrowings are running very close to the estimates given to the committee in these hearings last year. We now expect to expend a total of $52.4 million in the program in fiscal year 1966; the estimate given to the committee last year was $52.8 million. Revenues are now estimated at $26.6 million; our previous estimate was $26.2 million. We expect to borrow $25 million from the Treasury, instead of the previously estimated $25.8 million.

As is indicated by these comparisons, the program has reached a stage of development where it is now possible to predict the annual fiscal requirements with reasonable accuracy. In the past, the volume of helium extracted in the plants of our contractors (and consequently the program expenditures for the acquisition of this helium) has been the major uncertainty in our prediction. All of the plants are now operating at or near capacity; and in December 1965, the Bureau of Mines purchased $3.75 million worth of helium under the four contracts. With your approval, I would like to submit for insertion into the record, a graph which shows the expenditures by months, under the contracts through December 1965.



SALE AND STORAGE

Mr. HIBBARD. The helium program is functioning as planned to supply more helium for current use and to save and conserve helium for future use and provide technical and scientific information on the most effective use of helium. In 1966, we except to sell 680 million

cubic feet of helium and acquire and store 3.9 billion cubic feet of helium.

Chairman HAYDEN. There is a continuous demand for helium.

Mr. HIBBARD. Yes, sir; there is a continuous demand. More than half of it is from the Federal Government, the space program, the atomic energy program and various other technological programs requiring liquid helium.

CAPITAL EXPENDITURES

Chairman HAYDEN. Included in your material is an estimate of $3,950,000 for land, structures, and equipment. Would you please explain this figure to the committee?

Mr. HIBBARD. May I refer this to Mr. Wheeler, the Assistant Director?

Mr. WHEELER. I think we can best explain this by providing for the record a breakdown of the $3,949,000, and then explain the two major items in this list. One item is the development of an auxiliary gas-bearing dome in the Cliffside field as a backup helium storage reservoir for the main storage reservoir in the Cliffside field. This will cost an estimated $545,000 for the drilling of five wells and the construction of gas-gathering pipelines and gas compression facilities to bring this gas in to the helium plant at Amarillo.

We will expect to produce gas from this so-called Tuck-Trigg reservoir and derive income from the sale of that gas that will be more than enough to recover this estimated expenditure of $545,000.

INSTALLATION OF HELIUM EXTRACTION UNIT

The other major item of capital expenditure is for the installation of a single large crude helium extraction unit at our Exell helium plant to replace 12 small older units. What we are trying to do here is to bring the technology of helium extraction at the Exell helium plant up to the level of the technology incorporated in the new private helium plants built under the conservation program. This will cost an estimated $2.5 million. This will enable us to recover an additional 40 million cubic feet of helium a year at the Exell plant and enable us to reduce operating costs in the amount of about $400,000 a year at the Exell plant.

In effect, we will achieve a payout of this investment of $2½ million in 3½ years through the increase in helium recovery and the reduction in operating costs.

We will provide for the record a list of the other expenditures.

(The information follows:)

Proposed acquisition of assets from the helium fund, fiscal year 1967

[In thousands of dollars]

Helium operations:	
Office furniture and equipment	$1.4
Automotive equipment	32.1
Drill 5 Red Cave development wells on Tuck-Trigge Dome	300.0
Construct gas-gathering pipelines and gas compression facilities for Tuck-Trigg Dome production	240.0
Drill 4 wells on Bush Dome	260.0
Improvement of Cliffside gasfield facilities	200.0
Install crane and hydrostatic test equipment, Keyes helium plant	60.0
Modify 5 helium semitrailers	88.6
Install crude unit, Exell helium plant	2,500.0
Purchase and fabrication of other equipment	89.7
Total, helium operations	3,771.8
Helium Research Center:	
Equipment purchases	60.2
Construction and fabrication cost in connection with research projects	117.6
Total, Helium Research Center	177.8
Total proposed acquisitions, fiscal year 1967	3,949.6

PURCHASES FOR UNDERGROUND STORAGE

Chairman HAYDEN. Do you expect to purchase a greater quantity of helium this year for underground storage than you did last year? If so, how much more?

Mr. HIBBARD. I believe it is about the same.

Mr. WHEELER. The increase is, I believe, about $242,000 more for this purpose in 1967 than 1966. It is an increase of only about one-half of 1 percent.

ANTICIPATED PRODUCTION

Chairman HAYDEN. What will be the difference in quantity production of helium at the five Bureau of Mines plants in the coming year and in last year?

Mr. WHEELER. The quantity is about the same. There may be some slight variation, but it is essentially the same.

Chairman HAYDEN. The quantity is how much?

Mr. WHEELER. In fiscal year 1967 we expect to produce at the Bureau of Mines plants 824 million cubic feet, and in fiscal year 1966 I believe it is a little less than that. I can't seem to find that number here quickly, but it is a little less than 800 million cubic feet, so it will be up a little in fiscal year 1967.

HELIUM ACCOUNTS RECEIVABLE

Chairman HAYDEN. Is your helium account up to date. Are all purchases paid for or do you owe any accounts receivable?

Mr. WHEELER. We always owe for helium that has been delivered to us but for which we have not yet been billed. I think at the end of fiscal year 1966 we will expect to owe about $2.1 million for helium that we have received but for which we have not paid.

Chairman HAYDEN. Have any of your contractors been willing to renegotiate the price of helium that you are purchasing?

Mr. WHEELER. No, sir.

WORLDWIDE HELIUM PRODUCTION

Chairman HAYDEN. Is it true that this country is about the only Nation in the world that produces any quantity of helium?

Mr. WHEELER. It's the only one we have any information about. We just don't know what might be taking place behind the Iron Cutrain. There is a small amount of helium being produced in Canada, about 12 million cubic feet a year. We do not know of any helium production anywhere else in the world.

BUREAU OF MINES OBLIGATIONS

Chairman HAYDEN. For the record, I will include the table furnished with the Bureau of Mines justification statement showing obligations which have been incurred by the Bureau by activity and source of funds.

(The table follows:)

Fiscal years 1965–67

	1965	1966	1967
Coal:			
Bureau of Mines appropriation	$6,468,311	$6,524,000	$6,290,000
Department of Health, Education, and Welfare	265,986	215,000	220,000
Department of State	8,635		
Department of the Interior	17,912	14,000	13,000
Department of Navy		7,000	15,000
Atomic Energy Commission	107,142	100,000	100,000
General Services Administration	10,896	11,000	11,000
Other agencies	8,939	1,000	4,000
Contributed funds	42,500	68,000	10,000
Total	6,930,321	6,940,000	6,663,000
Petroleum:			
Bureau of Mines appropriation	2,300,346	2,360,000	2,125,000
Department of the Air Force	134,042	101,000	100,000
Department of the Army	90,899	120,000	120,000
Department of Health, Education, and Welfare	288,752	300,000	300,000
Department of the Navy	17,737	34,000	33,000
Atomic Energy Commission	70,566	97,000	100,000
Contributed funds	164,890	220,000	220,000
Total	3,067,232	3,232,000	2,998,000
Oil shale:			
Bureau of Mines appropriation	921,603	1,042,000	1,309,000
Atomic Energy Commission	45,673	85,000	85,000
Other agencies	10,979	12,000	4,000
Total	978,255	1,139,000	1,398,000
Metallurgy:			
Bureau of Mines appropriation	9,891,365	10,473,000	10,121,000
Executive Office of the President	10,000	15,000	15,000
Department of the Army		50,000	50,000
Department of the Interior	6,414	8,000	8,000
Atomic Energy Commission	540,235	472,000	472,000
Other agencies	12,680	9,000	8,000
Contributed funds	687,736	885,000	870,000
Total	11,148,430	11,912,000	11,544,000
Mining:			
Bureau of Mines appropriation	2,772,438	3,126,000	3,085,000
Department of the Air Force	33,291	5,000	
Department of the Army	56,856	50,000	50,000
Department of Health, Education, and Welfare	161,346	946,000	950,000
Department of the Navy	13,184		
Atomic Energy Commission	22,545	6,000	6,000
National Aeronautics and Space Administration	1,925	126,000	190,000
Other agencies	2,561	3,000	3,000
Contributed funds	40,264	25,000	20,000
Total	3,104,410	4,287,000	4,304,000
Marine mineral mining:			
Bureau of Mines appropriation	132,442	234,000	235,000
Atomic Energy Commission	26,597	30,000	30,000
Contributed funds	68,333	100,000	100,000
Total	227,372	364,000	365,000
Explosives:			
Bureau of Mines appropriation	500,778	567,000	570,000
Department of the Air Force	128,667	91,000	90,000
Department of the Army	171,202	104,000	101,000
Department of Health, Education, and Welfare	45,994	60,000	60,000
Department of the Navy	111,871	170,000	170,000
National Aeronautics and Space Administration	202,235	365,000	370,000
Other agencies	858		
Contributed funds	84,364	30,000	30,000
Total	1,245,969	1,387,000	1,391,000
Statistics:			
Bureau of Mines appropriation	1,555,434	1,839,000	1,803,000
Department of Commerce	7,319		
Total	1,562,753	1,839,000	1,803,000
Economic analysis: Bureau of Mines appropriation	223,077	231,000	466,000

Fiscal years 1965–67—Continued

	1965	1966	1967
Bituminous coal:			
Bureau of Mines appropriation	$965,852	$989,000	$893,000
Department of the Air Force	105,995	115,000	115,000
Department of the Army	75,636	77,000	77,000
Department of Health, Education, and Welfare	102,409		
Department of the Interior	9,236	5,000	5,000
Department of the Navy	54,834	56,000	57,000
Atomic Energy Commission	13,334	12,000	15,000
General Services Administration	2,438	3,000	3,000
Veterans' Administration	39,000	39,000	39,000
Other agencies	11,481	11,000	7,000
Total	1,380,215	1,307,000	1,211,000
Anthracite:			
Bureau of Mines appropriation	420,656	407,000	366,000
Department of the Army	8,311		
Total	428,967	407,000	366,000
Petroleum:			
Bureau of Mines appropriation	568,831	588,000	592,000
Department of the Interior	33,220	34,000	34,000
Total	602,051	622,000	626,000
Minerals:			
Bureau of Mines appropriation	3,239,512	3,730,206	3,054,000
Department of Agriculture	25,000		
Department of the Army	142,685	171,000	170,000
Department of the Interior	257,642	269,000	267,000
Department of Commerce	39,985	52,000	52,000
Atomic Energy Commission	4,595	26,000	26,000
Other agencies	3,172		
Contributed funds	18,680		
Total	3,731,271	4,248,206	3,569,000
International Activities:			
Bureau of Mines appropriation	556,014	573,000	557,000
Central Intelligence Agency	247,101	255,000	260,000
AID	270,072	330,000	330,000
Contributed funds	1,100		
Total	1,074,287	1,158,000	1,147,000
Inspections, investigations, and rescue work:			
Bureau of Mines appropriation	6,844,749	7,187,000	7,253,000
Department of the Interior	23,504	10,000	
Atomic Energy Commission	3,263	3,000	3,000
Other agencies	889		
Contributed funds	1,123		
Total	6,873,528	7,200,000	7,256,000
Control of fires in coal deposits:			
Bureau of Mines appropriation	401,697	311,000	203,000
Contributed funds	150,771		
Total	552,468	311,000	203,000
Health and safety research:			
Bureau of Mines appropriation	2,023,579	2,101,000	1,934,000
Department of the Navy	5,454	10,000	10,000
Total	2,029,033	2,111,000	1,944,000
General administrative expenses:			
Bureau of Mines appropriation	1,444,257	1,551,000	1,556,000
Other agencies	6,831		
Contributed funds	4,051		
Total	1,455,139	1,551,000	1,556,000
Laboratory facilities: Bureau of Mines appropriation	21,649		
Drainage of anthracite mines: Bureau of Mines appropriation	245,290	500,000	500,000
Subsidence, caving, and mine fire control:			
Bureau of Mines appropriation	7,370	8,000,000	12,793,000
Contributed funds		235,000	335,000
Total	7,370	8,235,000	13,128,000

Fiscal years 1965–67—Continued

	1965	1966	1967
Strip and surface mine area restoration: Bureau of Mines appropriation	$1,529	$1,000,000	$4,764,000
Demonstration grants: Bureau of Mines appropriation			800,000
Research, training, and technical services: Bureau of Mines appropriation		1,400,000	3,535,000
Helium production:			
Federal and non-Federal sources	45,113,393	52,443,000	55,334,000
National Aeronautics and Space Administration	28,159		
Total	45,141,552	52,443,000	55,334,000
Summary:			
Bureau of Mines appropriation	41,506,779	54,733,206	64,804,000
Other agencies	4,148,184	5,085,000	5,148,000
Contributed funds	1,263,812	1,563,000	1,585,000
Helium production:			
Federal and non-Federal sources	45,113,393	52,443,000	55,334,000
Total	92,032,168	113,824,206	126,871,000

METALLURGICAL RESEARCH PROGRAM

Chairman HAYDEN. Senator Bible.

Senator BIBLE. I have two or three questions.

In examining your justification, Dr. Hibbard, I notice your amount of funding for metallurgical research is held fairly close to the $10 million level for fiscal years 1965 and 1966 and again for fiscal year 1967. I am wondering if you could indicate, either now or by supplying it for the record, those portions of the metallurgical research which have been of assistance to the minerals industries. In reading your justification, I think you do this, but it seems to be rather drawn out from pages 35 to maybe 55 in your justification. I am wondering if you could condense that and indicate how this metallurgical research has been of benefit to the mining industry.

Mr. HIBBARD. I will highlight a couple and then give you greater detail.

BLAST FURNACE TECHNIQUES

Two I would like to mention have struck me as being quite interesting. The extensive work at Bruceton, for example, has produced new techniques for operating the blast furnace for preheating the blast, and injecting fuel into the tuyeres of the furnace. These have been adopted widely throughout the steel industry and we estimate that they have been worth several millions of dollars every year to the companies, and therefore a saving to the nation as well. So there have been extensive contributions through the blast furnace activity.

MICA RECOVERY

With respect to the recovery of fine mica. In general, fine mica is used in roofing and paints and various other ways to provide insulation and fire retardency. In the past processes for recovering fine mica resulted in the wasting of about half the resources. The Bureau of Mines had ideas about recovering the mica by flotation and thus developed techniques for recovering much of this half of the fine

mica. These techniques are now being used by four plants now in operation. There are two additional plants scheduled to be on line soon.

USE OF RESEARCH BY PRIVATE INDUSTRY

Senator BIBLE. I notice under your heading "Accomplishments," you furnish other examples where private industry has made use of the research conducted and carried on by the Bureau of Mines. I think it would be well if you condensed that for the record. It seems to be a little verbose and could be cut down.

(The summary follows:)

Additional examples of the usefulness to industry of metallurgy research conducted by the Bureau of Mines are:

1. Phosphate rock reserves for one Idaho company were increased substantially by the inclusion in their new fertilizer plant of a segment of a Bureau process for treating low-grade phosphate ore.
2. Scrap auto bodies were shown to be effective to upgrade unused taconite ores in a magnetic roasting process; the method is now included as a major segment of the solid-waste disposal program.
3. Three commercial clay-treating companies have altered their plants to adopt the Bureau microgrinding process for upgrading filler-grade clay to coating grade.
4. Pure vanadium metal, produced by the Bureau of Mines using its new electrorefining technique, is in high demand for industrial research. Requests by companies including Bell Telephone Laboratory, Westinghouse Corp., and North American Aviation, have far exceeded the quantity of vanadium available from the research project.
5. Westinghouse Electric Corp. is initiating an electrolysis research program based on Bureau of Mines pioneering work in fused salt recovery of refractory metals.
6. Synthetic mica by the new Bureau arc-resistance process will be adopted by two companies for commercial production.
7. An Oregon mercury producer adopted a Bureau flotation process to concentrate on ore difficult to treat by conventional means.
8. Copper recovery from oxide ores on a commercial basis using the segregation (salt-coke roasting) process was substantially advanced by Bureau research according to companies entering the field.
9. A major computer manufacturer is making use of Bureau developing knowledge on high damping alloys to fabricate special high-speed magnetic tape reels.
10. The Bureau's low-cost uranium metal process has attracted substantial AEC interest. Bureau-developed techniques for processing uranium are widely used by industry.
11. Cooperative research with Molybdenum Corp. of America resulted in the production of superior steel by rare earth compound additions. If these results can be duplicated in commercial steelmaking practice important advantages will accrue.
12. Academic and industrial laboratories all over the world have adopted a computer technique for interpreting electron probe microanalyzer data.
13. Inorganic thermodynamic data continues to be an essential product of Bureau research for use by industrial applied research and development programs.

TIME INTERVAL BETWEEN RESEARCH AND PAYOFF

Senator BIBLE. Even though the material is condensed on page 38 of your justification it still does not give me what I need for this next question. What is the time interval between doing this research and the so-called payoff when the industry adopts and uses it commercially? That is a catchall question and is difficult. As you indicate on page 38 in one instance it was 15 years before scrap preheating in the arc furnace steelmaking was used by the industry, although you researched it 10 years earlier. If you have any comments on that, I would like to have them.

Mr. HIBBARD. This is an important aspect. In my previous job, I made a study on it. In a corporation which is profit-minded they are not inclined to wait 10 years for this sort of thing. We made a case history study for the significant developments which had an impact in the materials area of the country, the time at which these were originally started, how long it took, and why delays occurred. In general the average time from the conception of an idea to the actual sale of a product resulting from it is 10 years. If you are very, very lucky, it might be as little as 5 years; if not so fortunate, it might be 15 or 20.

MANMADE DIAMONDS

A lucky case was the manmade diamonds General Electric now sells. This took less than 5 years from the conception of the idea to the actual sales.

SYNTHETIC MATERIALS

On the other hand, things like nylon and corfam, synthetic materials used for stockings and for leather, are examples of the 15-year type, so you can't really predict how long it will take except on the average it will be 10 years. Therefore, if you see a need, you better start research 10 years in advance of it; otherwise you will be 10 years too little and too late in general.

Senator BIBLE. That is a satisfactory answer. I realize it is a broad question because you are in so many different areas. One area of research is not going to apply in another.

Has industry shown any interest in your research developments in the field of electrical chemistry?

Mr. HIBBARD. I believe they have.

INDUSTRY ADOPTION OF MINES DEVELOPED TECHNIQUES

Mr. ROSENBAUM. Recently the people who make tungsten and molybdenum metals have adopted some of the techniques resulting from research and development at the Reno Laboratory. These are being tried out in pilot plants with the anticipation of expansion to an industrial scale of operation. Other instances of Bureau contributions in electrochemistry are work on manganese, chromium, and uranium metals, which has been widely adopted.

TUNGSTEN—PRICE AND SOURCE OF SUPPLY

Senator BIBLE. One further question, Mr. Chairman. I think this is a little afield from an appropriation hearing.

Your mention of tungsten arouses my curiosity; I understand tungsten is on its way back. Is there an increase in the demand?

Mr. ROSENBAUM. The requirement of tungsten as a superior metal for many uses is steadily increasing. The supply, however, has been doing quite a few flip-flops. There is an apparent dearth in some periods, and at other times a good supply.

Senator BIBLE. What is the price of tungsten now?

Mr. MEMMOTT. I understand there was a quote yesterday of $40.25 per short-ton unit.

Mr. ROSENBAUM. A year ago it was down to $17 and $18 and a few years ago it was much higher.

Senator BIBLE. One time we subsidized it at $63. Do we have a pretty good stockpile?

Mr. ROSENBAUM. Yes.

Senator BIBLE. Do we ship it in from the Philippines?

Mr. ROSENBAUM. A small part is domestic, the bulk is imported.

Senator BIBLE. From where?

Mr. ROSENBAUM. A large part of the material on the world market appears to come from very obscure sources except the material from South Korea, which is a major source of supply.

Senator BIBLE. South America?

Mr. ROSENBAUM. Some from South America, and a little from Mexico periodically.

DOMESTIC PRODUCTION

Your State of Nevada has been a substantial contributor; the State of South Carolina in the past has produced substantial tungsten.

Senator BIBLE. They produced it and I think we overpriced it at $63 a unit; we developed so many mines, the price immediately went to about $18 or $20 even. Then the mining operations went out of business and liquidated their companies and liquidated their mills and left, so I think all in all our tungsten picture has left an awful lot to be desired. I don't know that there is an easy answer as I don't know how to regulate the supply and demand.

Mr. ROSENBAUM. We do what we can to improve processes for domestic materials to be competitive with imported materials.

Senator BIBLE. Is Union Carbide's operation at Bishop, Calif., still producing tungsten?

Mr. ROSENBAUM. They are still producing tungsten and byproducts.

Senator BIBLE. Bishop is?

Mr. ROSENBAUM. Yes, along with copper and molybdenum.

Senator BIBLE. They wouldn't exist without copper?

Mr. ROSENBAUM. I think it is a three-product thing.

Senator BIBLE. Thank you.

IMPORTANCE OF TUNGSTEN TO MINING

Mr. MEMMOTT. The drill bits that are used in hard-rock mining in your State and across the country, and also used on continuous mining machines in potash and coal extraction contain tungsten carbide. Continuous mining methods and the rapidity of mining would not be as economical without the tungsten carbide bit.

Senator BIBLE. In closing, I simply want to compliment the new Director, who is real new to the job, fresh aboard, and also to compliment and commend Mr. Frank C. Memmott and those other men around him here. They have been most helpful in our mining State of Nevada. Mining is coming back. I think this is true of my State, your State, Mr. Chairman, and the entire west coast. More types of research like this will result in securing mining for many years to come. I compliment you. You have done an excellent job. Thank you.

REPORT ON STRIP MINING AND LAND SURVEY OF WEST VIRGINIA

Chairman HAYDEN. Senator Byrd.

Senator BYRD. Thank you, Mr. Chairman.

A little earlier you referred to the 2-year study of strip mining and survey of lands you are required to make under the Appalachian Regional Development Act. How is the report as far as West Virginia is concerned?

Mr. HIBBARD. The report with respect to West Virginia, as I understand it, is in on time. Some of the sections are in preliminary draft and we expect the report to be on time.

Mr. ZINNER. That is correct.

Senator BYRD. That would mean you expect the preliminary draft to be ready by July 1 of this year?

Mr. HIBBARD. Yes, sir.

Senator BYRD. Is there anything you can state at this point with regard to your preliminary findings?

Mr. HIBBARD. Mr. Zinner?

Senator BYRD. In West Virginia.

PRACTICAL METHOD OF STRIP MINING RESTORATION IN WEST VIRGINIA

Mr. ZINNER. I think anything we would say now would apply generally throughout Appalachia, and certainly it would be very significant to West Virginia. First of all the strip mining in the areas of low relief presents a little different problem than those in higher areas where the topography is more rugged. We are attempting to find the practical methods of restoring strip lands in both of these provinces and what it will cost, that is cost in terms of what benefits might be measured. I think our study will be able to fairly well bracket the cost aspect of the investigation. I am speaking of the study due next July.

I am sure we will not propose complete restoration of every stripped area nor is it likely that we will propose restoring all areas to their original contours.

We are seeking realistic solutions that will satisfy and correct the most urgent problems. The problem might be stream pollution, it might be erosion, or it might be any variety of other environmental problems.

SEALING ABANDONED MINES IN WEST VIRGINIA

Senator BYRD. In your justification document you refer to your sealing and filling of voids in abandoned coal mines, you say the projects are submitted to the Appalachian Commission in States for approval. What projects have been submitted in West Virginia for improvements, if any?

Mr. ZINNER. We have received no subsidence projects from the Commission as of this date. This does not mean that we will not receive any, but as of now we have not.

SEALING OF ABANDONED COAL MINES IN PENNSYLVANIA

Senator BYRD. You have received and approved about seven submitted by Pennsylvania, haven't you?

Mr. ZINNER. That is correct.

Senator BYRD. You received no requests or applications from West Virginia through the Commission?

Mr. ZINNER. That is correct.

WEST VIRGINIA FIRE CONTROL PROJECTS

Senator BYRD. What about requests from West Virginia with reference to fire control projects?

Mr. HIBBARD. I think in this case we have not received any but anticipate that we will.

Mr. ZINNER. There are six under consideration in West Virginia that are anticipated in the 1967 program estimate. We have not received these as yet, but we know that at least that number are being considered.

Senator BYRD. Are these initiated by the Department of Mines in West Virginia?

Mr. ZINNER. Yes, it would come through the Department of Mines, but it can come through other State agencies also. The Commission can receive it through any device the State chooses to employ.

Senator BYRD. Through the department of natural resources, for example?

Mr. ZINNER. Yes, sir.

Mr. MEMMOTT. It is handled through the West Virginia Department of Mines.

FILLING ABANDONED COAL MINES IN WEST VIRGINIA

Senator BYRD. As to the sealing and filling of voids, do you envision the filling in of these voids all the way back to the old mine face which might be 3 or 4 or 5 miles underground? Do you intend to go throughout all these various entries and fill in around the pillars or just for a distance inside the mine pit?

Mr. ZINNER. The purpose of this filling is to minimize subsidence. There are many locations where even if subsidence takes place, the surface effects would not be too damaging. In a given mine only a certain portion might be filled immediately beneath an area where some surface damage is involved. However, it is practical to fill a mine completely if the need demands that. There are several ways. It can be done through boreholes or by controlled filling underground.

Mr. HIBBARD. Isn't the other question a matter of water quality? We would like to avoid contamination of water and this has an impact on the amount of filling.

Mr. ZINNER. There are many aspects; water control would be one.

UTILIZATION OF SLATE DUMPS FOR FILLING MINES

Senator BYRD. Do you utilize the old slate dumps for filling the mine voids, Mr. Memmott?

Mr. MEMMOTT. Yes, that is correct. We concentrate usually near an area where there is concern about subsidence. The old dumps have been utilized in areas in Pennsylvania for this purpose.

Senator BYRD. It seems to me this would be a very difficult and costly operation particularly in those old mines where the tracks have been pulled out. How do you get this slate back in the mine?

Mr. MEMMOTT. As mentioned previously, boreholes are drilled and the slate is put back in the mines in a water-refuse mix. The water drains off and the refuse remains.

Mr. ZINNER. I might point out in this connection, Senator, that in our individual contractual agreements on each of these projects we

require that the State or some private concern contribute the fill material. Of course if it has to be crushed in size, this becomes part of the cost, but we do not buy this fill material.

Senator BYRD. Can the State get credit for the fill material on its 25 percent?

Mr. ZINNER. No.

MINE FILLING PROJECTS COMPLETED

Senator BYRD. Have any of the projects been completed yet, the mine fill projects?

Mr. ZINNER. We have completed a number of these in Pennsylvania, not under the Appalachia program, but under the amended anthracite mine-water control program. As you will recall, that program initially provided for pumping and diverting water from inactive mines to prevent flooding adjacent working areas. A subsequent amendment permitted certain flushing and backfilling operations. Under that program we gained a great deal of experience that permitted us to develop some techniques that are now applicable to the Appalachia program. There were perhaps some 16 surface diversions and 4 flushing projects completed before the initiation of this current program.

Senator BYRD. Were these conducted under a 50–50 matching program?

Mr. ZINNER. That is correct.

PROGRESS ON MINERAL STUDIES IN APPALACHIA

Senator BYRD. What progress is being made on the mineral studies of the Appalachian program and what will be done in the forthcoming year?

Mr. ZINNER. This is coming along very well. As you know, this is a joint effort between the Bureau of Mines and Geological Survey and a single report will issue, we hope, before the end of the current fiscal year.

This study seek to identify the mineral occurrences and related mineral industries in the Appalachian region that merit either further intensive study or some action that might move them into the commercial stage. We think the study will point to the areas that deserve such attention and in fiscal year 1967 we propose to undertake more detailed investigations at some of the sites that the study indicates are worthy of pursuing.

Senator BYRD. How about your progress in West Virginia; do you feel it is moving very well?

Mr. ZINNER. Yes; this is moving extremely well. As a matter of fact, in consultation with the State geologist in West Virginia we undertook, in advance of the findings of the study, an investigation of the limestone potential in the western part of the State and also to make an appraisal of quartzite production sites in the State. This investigation is going on right now. We think the study will show more instances that merit investigation.

COAL-FIRED GAS TURBINE PROGRAM

Senator BYRD. What benefits have been achieved thus far in your coal-fired gas turbine program and what do you envisage in the future?

Mr. HIBBARD. The coal-fired gas turbine program is aimed at the use of powdered coal and the combustion of this coal as a means of driving a turbine. There has been a prototype single-stage turbine operating under these conditions and it appears to show great promise in improved efficiency and improved utilization of coal. One of the major problems associated with the coal-fired gas turbine to date is the presence of solid products. Combustion, fly-ash, and the like, impinge on the turbine buckets and blades and cause wear. The major problem for the future to make this type of equipment economically feasible, is to find ways of removing the fly-ash and improving the life of the turbine.

Mr. Rosenbaum, would you care to comment?

Mr. ROSENBAUM. That about completes it.

Mr. MEMMOTT. Combustion is a factor, but we understand recently there is some interest from outside and we hope there will be outside money in support of this program.

Senator BYRD. Doesn't your budget in connection with the coal-fired gas turbine program represent a decrease of $120,000?

Mr. HIBBARD. It is a $120,000 decrease but we believe the program will not be decreased because we are seeking and believe we will obtain the $120,000 from industry. I believe this is an appropriate step because in the long run we want industry to use this equipment and we are moving it toward their use and seeking participation by them.

Senator BYRD. Why is there a decrease? Don't you need that much money?

ANTICIPATED CONTRIBUTION BY PRIVATE INDUSTRY

Mr. HIBBARD. We expect to have the same amount of money, but we expect $120,000 to be furnished by industry and the Federal Government won't have to furnish so much.

Mr. MEMMOTT. If they have a monetary interest, they are going to be interested in producing and marketing this turbine.

Senator BYRD (presiding). What private industrial firm is willing to pick up some of this funding slack?

Mr. HIBBARD. We have been in contact with an industry association and they have been receptive to the idea and have asked us to make a proposal to them for their support. We have made this proposal. This month we are going to make a presentation to them. I believe we will have these funds by fiscal year 1967.

Senator BYRD. How much is in the budget for the coal-fired gas turbine?

Mr. ROSENBAUM. The original amount was the same as last year's appropriation.

Senator BYRD. How much is that? That doesn't tell me anything. How much was that?

Mr. HIBBARD. It's about $400,000. It's somewhere between $400,000 and $500,000. We expect to get industry to invest to the extent of $120,000.

Senator BYRD. Can you state what is your budget estimate of this item?

Mr. ROSENBAUM. Yes, I will have that for you.

Senator BYRD. Put in the record.

ENGINEERING DEVELOPMENT SCHEDULE

Mr. HIBBARD. Yes, sir.

(The estimate follows:)

The 1967 budget estimate includes $500,000 for research on the coal-fired gas turbine.

Senator BYRD. Last year you indicated it would take approximately 5 years at your present level of effort to work out the engineering on the coal-fired gas turbine. What is your prognostication today?

Mr. HIBBARD. I still believe it is going to take about that long. The current prototype we are operating is a single stage, single wheel turbine. This is not a practical device. It is a prototype so there is a considerable amount of engineering to be done. The time and requirements for doing this are going to depend on how enthusiastic the purchaser of this equipment is. You can do this over a period of 2 years if you really want to concentrate and put in a lot of effort. It may take 4 or 5 years or longer if done on a more leisurely basis.

SITE OF TURBINE PROGRAM AT MORGANTOWN, W. VA.

Senator BYRD. Where is this being done?

Mr. HIBBARD. At our Morgantown operation.

Senator BYRD. Is this being done in cooperation with Bituminous Coal Research, Inc.?

Mr. HIBBARD. Not at the moment. This project originated with them some years ago and we developed interest with them and carried it through.

Mr. ROSENBAUM. The original equipment came from the Locomotive Development Committee of Bituminous Coal Research. This turbine was used for all the original studies. It had a limited life and has been replaced with a newer turbine and auxiliary equipment.

ORIGINAL FUND REQUEST

Senator BYRD. Does the amount of money in the budget represent the amount of money requested for this project?

Mr. HIBBARD. I can't answer that.

Mr. ROSENBAUM. Actually there was a decrease after consultations with the Bureau of the Budget, a decrease of approximately $120,000.

Senator BYRD. At the time the request was originally submitted were you aware of the possibility of $120,000 being picked up by some outside source?

Mr. ROSENBAUM. There was a possibility this would be considered and at the time the request was submitted the Bureau of the Budget was aware we were making outside inquiries and here was a possibility of outside support.

Senator BYRD. Do you feel that was the justification of the cut?

Mr. ROSENBAUM. Conceivably.

EFFECT OF RESTORATION OF BUREAU OF BUDGET REDUCTION

Senator BYRD. But you are not positive of that.

Do you need the additional $120,000 which was cut from your program at the Bureau of the Budget level?

Mr. ROSENBAUM. The amount of work we can do, the amount of work that needs to be done is much larger than the amount of money ever made available to us, so it is not a very easy question to answer.

Mr. HIBBARD. I think you can answer this way.

There are a certain number of weeks you can keep the gas turbine operating and we intend to operate it the maximum number of weeks we can under normal circumstances.

We have to shut it down for maintenance, inspection, and that sort of thing.

Senator BYRD. Do you think the reduction will cripple your efforts or bring about a delay?

Mr. HIBBARD. If we get the money from industry we will keep going at full blast.

Senator BYRD. You are pretty sure of that?

Mr. HIBBARD. Yes.

Senator BYRD. When will you know?

Mr. HIBBARD. March 9 we are going to talk to them.

Senator BYRD. Would you let the committee know if that $120,000 is or is not forthcoming after you have your consultation?

Mr. HIBBARD. Yes.

LOW-TEMPERATURE BITUMINOUS COAL TARS

Senator BYRD. Last year, Mr. Memmott, Mr. Perry indicated there had been two new recent discoveries in connection with low-temperature tar and he indicated also there was a processing scheme which they were developing which was thought to be economically attractive and they were at that time working on the details of two of the process steps.

He indicated following that they would be eager to test the process steps to show they had developed a manufacturing process for low-temperature tar.

Mr. Perry stated that by the end of that calendar year, fiscal year 1966, I suppose he meant, the Bureau hoped to have information which would show whether the efforts in this direction had been fruitful and whether the economics were attractive.

What is the status of the project as of this date and what were the findings?

Mr. MEMMOTT. My understanding is—and then I will refer the question to Mr. Rosenbaum—that this project has progressed as anticipated. We are doing research on the bituminous coal tars at this time and have continued through the year.

Is that not correct, Mr. Rosenbaum?

Mr. ROSENBAUM. Yes, sir.

PRODUCTS FROM CRACKING AND DISTILLING TARS

Mr. HIBBARD. Cracking and distillation of these tars can produce some very interesting chemicals, plasticizers, some degradable de-

tergents, and some binders for carbon electrodes. On a laboratory scale we have produced all these various products and we are in the process of evaluating them as to their use.

Particularly interesting to me are these degradable detergents because this is in fact a new material. I believe there is still some laboratory work to be done and some economic evaluation to be carried out before they are ready.

RESULTS OF COAL RESEARCH

Senator BYRD. What particular valuable chemicals have resulted from your studies?

Mr. HIBBARD. The cresylic acids are used in plastics, various alcohols, the olefin derivatives for detergents; that is a binder type of material.

Mr. MEMMOTT. There are also floor polishers, shoe polishers, and high-B.t.u. gas.

Mr. HIBBARD. That is a byproduct before you get to the tar.

Mr. MEMMOTT. Right.

COOPERATION WITH OFFICE OF COAL RESEARCH

Mr. HIBBARD. Incidentally, in this area of coal research I have been in close contact with the Office of Coal Research. We have discussed our two programs in some detail and are making, I think, real progress in coordinating problems.

In general, in this area of coal conversion we believe it is appropriate for the Bureau to do the laboratory small-scale type of research and when it gets to the stage where it is ready for demonstration plants this is appropriate for the Office of Coal Research.

Senator BYRD. So there is no overlapping of effort, you think?

Mr. HIBBARD. That is correct.

Senator BYRD. You maintain a good close liaison with the Office of Coal Research?

Mr. HIBBARD. Yes, sir.

PRODUCER GAS PROGRAM AT MORGANTOWN, W. VA.

Senator BYRD. Last year you indicated you had two major projects, a producer gas program currently getting started at Morgantown in which you would test what you could do from an economic standpoint to make gas under pressure and the slagging gas fire which had not been done in this country. What are the results of this program to date?.

Mr. HIBBARD. As I remember this program the gas producer has just arrived there but it has not been put in actual operation. It is on the site and we hope to have it going very soon.

Senator BYRD. What research are you planning as a means of overcoming the handicap to the conversion of coal to liquid or gaseous fuels?

Mr. HIBBARD. There are three. We have a three-phase program aimed at the conversion of coal. One is the direct hydrogasification of raw coal to form high British thermal unit gas.

The second is by the use of improved catalysts to reduce the costs of the gasification step.

The third has to do with the high-pressure gasification of coal. I think in this case a catalyst reacts with a coal paste to form liquid fuel.

Lastly, we are working in the area of fixed bed processes. We believe by a fixed bed type of approach that we can cut the cost. These are all in the laboratory stage.

Conversion of Coal to Liquid and Gas

Senator Byrd. I note that the budget request represents a decrease of $70,000 for the conversion of coal to liquid and gaseous fuels.

Why the decrease from last year?

Mr. Hibbard. This has to do with completed or reduced programs. These programs include some studies of pretreating coke and coal, some studies of possible methods of hydrogenating coal at high temperatures.

Senator Byrd. Are these independent of the gasification projects?

Mr. Hibbard. These are backup research basic studies behind the gasification. We have reduced the basic activities of our research a little.

Mr. Rosenbaum. The total difference is about $70,000 by a reshuffling of projects. The total effort in this area is about the same as it was.

Senator Byrd. Is this reduction a result of the overall economy program which is being brought to bear very effectively in some of these projects which are so beneficial to the future economy of West Virginia and some of the Appalachian States?

Mr. Rosenbaum. The apparent reduction of about $70,000 might stem from the fact that last year we had a small project on the gasification of anthracite. This work has been concluded.

Original 1967 Budget Request

Senator Byrd. Let me ask this. Does your estimate of $1,680,000 for conversion of coal to liquid and gaseous fuels represent your original request?

Mr. Rosenbaum. Yes.

Senator Byrd. You were not reduced at the Bureau of the Budget?

Mr. Rosenbaum. No.

Senator Byrd. So this is what you need for the projects?

Mr. Rosenbaum. This is what we suggested.

Senator Byrd. It is not a result of the economy program?

Mr. Rosenbaum. It was the result of action we agreed on and took last year in cutting back our program at Schuylkill-Haven, Pa.

Low Heating Value Industrial Gas

Senator Byrd. What new programs are involved in the production of a low heating value industrial gas referred to on page 10 of your justification?

You have $205,000 requested for new programs.

Mr. Hibbard. This is the development of an air-blown gas producer. This is the gas producer we mentioned before that is on site but not in operation.

Mr. ROSENBAUM. The equipment has been pretty well assembled.

Senator BYRD. It is not a new program, it is just a new item in a continuing program?

Mr. ROSENBAUM. The emphasis that is going on gasification for low B.t.u. gas is new, it represents a different emphasis that we had in recent years.

PERSONNEL IN HEALTH AND SAFETY PROGRAM IN WEST VIRGINIA

Senator BYRD. In the Bureau for Health and Safety in West Virginia, what is the number of people employed and what do they do?

Mr. HIBBARD. In the health and safety activities in West Virginia there are at present two top supervisors, 89 inspectors and safety representatives, 26 clerical personnel, and 15 laboratory technicians.

In addition, there are nine administrative employees housed at Mount Hope.

Senator BYRD. This doesn't represent any reduction of the employment level over the past year?

Mr. HIBBARD. No, sir; I believe not.

Mr. WESTFIELD. No, sir; actually, there is a little increase.

Senator BYRD. What is the increase?

Mr. WESTFIELD. This represents an increase of seven coal mine inspectors and safety representatives and three clerical personnel.

Senator BYRD. Where would these be located?

Mr. WESTFIELD. They would be located in the southern part of the State between Mount Hope, Princeton, and Logan.

BUREAU OF MINES PERSONNEL AT MOUNT HOPE, W. VA.

Senator BYRD. Last year, if you recall, Mr. Memmott, we had a surprise reduction in the number of people at Mount Hope. Nothing was said about it at the committee hearing. Later I learned there was going to be a reduction by virtue of the transfer of these certain personnel to a western station where they were consolidating their automatic data processing equipment, which is very reasonable, I think, and justifiable, but we were not told about that at the hearing.

I want to make sure there is not going to be any reduction in personnel in West Virginia that we are not informed of today. At Mount Hope there will not be a reduction. There is an anticipated increase of four to five persons in the area?

Mr. WESTFIELD. Yes, sir.

Mr. RAMPACEK. I might add a word in regard to the payroll clerks at Mount Hope. We had two clerks involved in the effort to automate our payroll.

These two clerks were temporary employees and in the interim period between July of 1965 and the present time they have taken employment with other Government agencies in the State. We have had a reduction of two payroll clerks in our administration functions but overall in health and safety activity, personnel has increased.

So, total employment is somewhat higher than last year.

Senator BYRD. Has there been a corresponding reduction in the number of positions?

Mr. RAMPACEK. Yes.

Senator BYRD. You have two less clerical positions which you don't intend to fill?

Mr. RAMPACEK. That is right.

COAL MINE SAFETY RECORD IN WEST VIRGINIA

Senator BYRD. Give us some comparisons in the overall effect of the coal mine safety record, West Virginia being a heavy producer of coal.

Mr. HUBBARD. You want the actual statistics or to talk about the program?

Senator BYRD. Why don't you put it in the record.

Mr. HIBBARD. All right, I will put it in the record.

(The information follows:)

Injury experience at bituminous coal mines in the United States and in West Virginia, 1960–65

	Average men working	Injuries		Injuries per million man-hours	
		Fatal	Nonfatal	Fatal	Nonfatal
Bituminous coal and lignite:					
Total United States:					
1960	170,628	290	10,501	1.13	40.85
1961	151,776	275	9,902	1.18	42.52
1962	147,276	263	9,783	1.15	42.86
1963	143,628	252	9,888	1.09	42.38
1964 [1]	143,300	216	10,090	.90	41.86
January to November 1965 [1]	142,600	223	9,295	1.01	42.26
West Virginia:					
1960	51,115	119	4,466	1.52	57.23
1961	44,240	87	4,155	1.26	59.98
1962	43,575	77	4,205	1.12	61.20
1963	44,647	123	4,292	1.67	58.44
1964 [1]	45,200	87	4,360	1.11	55.75
January to November 1965 [1]	45,600	88	4,185	1.21	57.53

[1] Preliminary.

NOTE.—West Virginia produces more coal, by far, than any other State, and 40 percent of the total U.S. deep-mined coal is produced in West Virginia mines. Consequently, the coal mine safety record for the entire coal-mining industry in the Nation is influenced very strongly by the safety record attained in West Virginia.

SAFETY EDUCATION PROGRAM IN WEST VIRGINIA

Senator BYRD. Will you please brief the committee on the new safety education effort being conducted in West Virginia?

Mr. HIBBARD. Early in 1965 the West Virginia Department of Mines, U.S. Bureau of Mines, and management and labor of the coal mine industries jointly formed the Coal Mine Safety Commission for the purpose of a new and determined effort to reduce the number of injuries in the State's coal mines.

Under this program each section foreman in nearly all the mines holds a 15- to 20-minute safety meeting in the mine for the men under his supervision.

The Bureau of Mines with the approval of the association provides the text material and the special messages and visual aids for these lectures.

As a result, safety cautiousness and safety information is reaching virtually all the people in the mines of West Virginia. We don't really know as yet what the results of this program will be but the respon-

siveness and the activity of everyone concerned with the program is very encouraging. We expect this will be a prototype case for expanding the safety education to all mines in the United States in addition to West Virginia.

Would you like to comment further, Mr. Westfield?

Mr. WESTFIELD. As the Director pointed out the cooperation we are getting with management and the unions is very good and we are able to reach far more men than we would have otherwise.

In expanding this training program we found that the foremen were not very good teachers. As a result, the coal companies have come to the Bureau of Mines and we are putting on a training program for these foremen so they can be better teachers and will be better equipped to pass these safety messages to people they supervise.

This is turning out very successfully.

BUREAU OF MINES MOBILE UNITS OPERATING IN WEST VIRGINIA

Mr. HUBBARD. Our mobile units are also operating in West Virginia. These are effective.

Mr. MEMMOTT. The increase in coal production at this time and the worktime being greater make this record more significant. This is the time when miners and management get tired and are a little less conscious of the dangers. We are very happy with this program.

HEADQUARTERS BUILDING CONSTRUCTION AT MOUNT HOPE, W. VA.

Senator BYRD. How are you progressing with the construction of the additional story to the headquarters building at Mount Hope?

Mr. MEMMOTT. The third floor is necessary to relieve congestion in the Mount Hope building, which was completed in 1959.

At present, employees who are assigned to perform office duties must work in the library, the conference room, and in space intended for laboratories.

More than half the men's locker room is used for laboratory space. The additional floor is needed to avoid this congestion and to allow proper use of the building's facilities.

Construction cost of the additional floor on the office building is estimated at about $290,000.

Work on the design for the additional floor will be completed during February 1966. Bids for construction of the third floor will be advertised on March 8, 1966, and the bids will be opened on April 5, 1966.

CONSTRUCTION START AT MOUNT HOPE, W. VA.

Senator BYRD. Why is it taking so long? Last year you indicated an architect had been assigned to design the additional story. Now you say it is not complete.

The construction work will begin at about what date?

Mr. MEMMOTT. If GSA authorizes, I would assume immediately after the bids are opened.

Senator BYRD. Last year you said construction work on the third story would start at the end of 1965.

Mr. WESTFIELD. There was no construction work.

Senator BYRD. You have not begun it. You said the construction work would start at the end of 1965.

Mr. MEMMOTT. We had expected GSA to move with more expediency.

ESTIMATED TIME TO COMPLETE MOUNT HOPE BUILDING

Senator BYRD. Do you feel that—you are certainly in contact with the GSA, now what is your prognosis as to the construction date? How long will it take to complete it once it is begun?

Mr. MEMMOTT. I do not have that figure in mind, Senator, as this is a GSA responsibility.

Senator BYRD. You won't need any more money; you are sure of that?

Mr. MEMMOTT. Yes, sir; that is correct according to GSA.

PILOT PLANT FOR COAL TAR RESEARCH

Senator BYRD. One final question on the coal tar.

I understood in a letter from the Department of the Interior about a year ago that it was anticipated that a pilot plant would be needed in connection with this research project.

What is the feeling of your department at this time in that regard?

Mr. HIBBARD. I think this refers to the same project we discussed a few minutes ago.

Senator BYRD. It does?

Mr. HIBBARD. The next step after we have completed our laboratory experiments would be to make an engineering study which would be an economic evaluation and preliminary design of the pilot plant. This would require about $100,000 to carry out and would take anywhere from 6 to 8 months to complete, depending on the complications and details.

Then, after that study, one would then be able to determine whether or not it was desirable and feasible to proceed with the demonstration plant. I believe before the end of this fiscal year it would be appropriate to start on a study of this sort and I have discussed this with George Fumich of the Office of Coal Research.

Senator BYRD. It would require about 6 or 8 months for the study?

Mr. HIBBARD. Yes, sir.

Senator BYRD. Before the pilot plant project would begin?

Mr. HIBBARD. This would outline the kind of equipment necessary for the demonstration plant and also give an economic appraisal of whether or not this is worthwhile proceeding forward on.

Senator BYRD. So whether or not there is a pilot plant project would depend on the outcome of the study which you have not yet done?

Mr. HIBBARD. Yes, sir.

Senator BYRD. Do you anticipate beginning this?

Mr. ROSENBAUM. We are presently evaluating the additional products made in laboratory quantities from the tars. We are looking them over as to composition, quantity, and kind.

TRAVEL EXPENSES

Senator BYRD. What about your travel expenses, are you being squeezed too much on these or do you have too much money for travel expenses? Can you enforce further economies in this regard?

Mr. MEMMOTT. As you know, last year we achieved a 27-percent cut below what had been appropriated to us. We scrutinize all travel requests very closely at top level, at my desk and Dr. Hibbard's desk, and at the Assistant Directors' desks.

At this time I believe our funds are sufficient.

Senator BYRD. You are not keeping your men at their desk too much; you are not sacrificing efficiency for economy, are you?

Mr. MEMMOTT. I think not.

Mr. HIBBARD. I think the amount of travel required is a function of the program. When you have a program involving extensive fieldwork you need more travel. I believe our travel request fund is appropriate at the moment but how it will be in the future depends on the change in our program needs and how much we are in the field as compared to the laboratory and the office.

Mr. MEMMOTT. I think it is better to request additional funds if we find there is a need. I prefer not to have to create a need for expenditure of travel funds because the money has been appropriated. I am sure, after our conversations last year, you are in agreement.

Senator BYRD. Before Senator Hayden departed, he handed me some questions left with him by other Senators. I will place them in the record and I ask that you place appropriate responses in the record.

(The questions and answers follow:)

QUESTIONS SUBMITTED BY SENATOR MCGEE

HELIUM RESERVE, SUBLETTE COUNTY, WYO.

Question. I understand that a rather sizable deposit of helium reserve has been located in Sublette County in northwestern Wyoming. Since the Bureau is interested in helium, I would appreciate it if you would comment on this deposit and indicate, if possible, what its possibilities might be for some increased emphasis on commercial development and production.

Answer. The Tip Top field in Sublette County, Wyo., has produced oil and gas from the relatively shallow Nugget and Frontier formations for a number of years. Gas produced from these formations does not contain appreciable helium. Several years ago a major oil company drilled a deep test in the Tip Top field, and gas samples recovered from the deep-lying (below 12,000 feet) Phosphoria, Tensleep, Madison, and Big Horn formations showed, upon analysis, helium content ranging from 0.5 to 0.8 percent. However, the natural gas from the Phosphoria formation also contains about 5.7 percent hydrogen sulfide and 9 percent carbon dioxide, and gas from the other deep formations contains from 65 to 85 perent carbon dioxide. These quantities of impurities make the gas unsuitable for fuel—in fact, the gas from three of the formations is noncombustible. The well was, therefore, plugged and abandoned insofar as the deep formations is concerned.

The limited information available from the single well makes precise evaluation of the helium resources impossible, although test data from the well indicate that such resources are significant.

Because of the quality of the natural gas, commercial development, or production of the deep reservoirs as a natural (fuel) gas resource is not anticipated. Also, we believe that the high cost of drilling and completing wells, coupled with high operating costs brought about by the nature of the gas, would make helium extraction costs much higher than present sources. It is conservatively estimated that a single well penetrating the helium-bearing formations would cost upward of $700,000.

Further, we believe that the interests of the United States are fully and adequately protected under present conditions. Most of the land in the Tip Top field is public domain, and, of course, Federal oil and gas leases contain a reservation of helium ownership to the United States. No production is presently occurring from the helium-bearing reservoirs—in fact, no wells are available for production—and thus no waste of helium is occurring. No conservation objective would be served by development of the helium-bearing reservoirs—rather,

such development would be directly contrary to the basic principle of the helium conservation program; i.e., the extraction of helium from natural gas after such gas is produced but before it is consumed in fuel markets.

Thus, the Tip Top field might best be considered as a "hole card." We feel certain that some helium is present and can be recovered, although just how much cannot be determined under present conditions. When the national supply of helium so demands, Tip Top gas can be more completely evaluated, and, if warranted, developed, produced, and processed for helium extraction.

TRAVEL EXPENSES

Question. With the increased emphasis which is being placed on economy in government, I would like to call special attention to the policy of official travel which was invoked by the Bureau of Mines last year under the acting directorship of Frank Memmott. As I recall, Mr. Memmott came in for special praise by a Member of the House of Representatives for the savings of travel costs with the Bureau. I would like to determine if the policies instituted by Mr. Memmott, as Acting Director, are still being followed and if the same close scrutiny is being applied on departmental travel matters.

Answer. Yes, the Bureau of Mines is maintaining its travel at the lowest level consistent with efficient operation. A strict policy of insisting that our personnel travel by less than first-class air fare is being enforced, and we are keeping an eye on all levels of our activities to make certain that there is no unnecessary travel.

QUESTION SUBMITTED BY SENATOR BARTLETT

OPERATION OF BUREAU FACILITIES IN ALASKA

Question. Does the Bureau of Mines plan to continue operating its facility in Alaska during fiscal year 1967?

Answer. During 1966 the Bureau of Mines maintained two facilities in Alaska, a headquarters establishment at Juneau and a field office at Anchorage. The estimates for 1967 provide for continuing the operation of both facilities.

QUESTIONS SUBMITTED BY SENATOR MUNDT

BUREAU ACTIVITIES IN SOUTH DAKOTA

Question. Can you please furnish the committee with a narrative rundown on any work you are doing or plan in South Dakota?

Answer. Much of the Bureau's research on mineral resources has been planned on a nationwide basis. The following studies now in progress contain sections or chapters on South Dakota which include material on resources, production and potential production, marketing, and economic possibilities.

1. Reserves and potential sources of ores of copper, lead, zinc, silver, and their byproduct metals.
2. Resources of gold in the United States.
3. Clays and shales for lightweight aggregate.
4. Pozzolanic resources investigation (volcanic rock materials used in the manufacture of hydraulic cement).

In addition:

1. A Bureau of Mines information circular (I.C. 8278, "Iron Ore Resources in South Dakota," by C. M. Harrer) will be released this month.
2. The Bureau is preparing a section on the mineral resources of the Black Hills area of South Dakota and Wyoming as part of a joint Department of the Interior and Department of Agriculture study.
3. A study has been made and a manuscript is in preparation on beryllium-bearing pegmatite deposits, which includes a section on the beryllium-bearing pegmatites in South Dakota.
4. A manuscript is in preparation on the availability, resources, and quality of refractory clays deposits in North Dakota, South Dakota, and Nebraska.
5. Work is continuing on strip and surface mine restoration in South Dakota as part of the Appalachian Regional Development Act of 1965. To date, material has been received from sand and gravel, clay, and stone operators.

MINERALS RESOURCES SURVEY FOR SOUTH DAKOTA

Question. I would appreciate your sending my office a rundown on the comprehensive resources survey of minerals you indicate on page 77 of your justifications has been completed for South Dakota.

Answer. The resources survey of minerals in South Dakota will be published in the Bureau of Mines series of information circulars. The manuscript has been completed and is in the process of technical and editorial review. The information circular will contain chapters on mineral production and consumption by commodities and counties, including petroleum and natural gas; economics; markets; and outlooks for the State mineral industries.

SUBCOMMITTEE RECESS

Senator BYRD. On Wednesday, March 2, the subcommittee will hear the Indian Claims Commission, the Office of the Solicitor of the Department of the Interior, and the Office of Coal Research.

The subcommittee stands in recess until 10 o'clock, Wednesday, March 2.

Thank you, gentlemen.

(Whereupon, at 1 p.m., Tuesday, March 1, 1966, the hearings were recessed to reconvene at 10 a.m., Wednesday, March 2, 1966.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

WEDNESDAY, MARCH 2, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senators Magnuson, Byrd, and Young.

INDIAN CLAIMS COMMISSION

SALARIES AND EXPENSES

STATEMENTS OF ARTHUR V. WATKINS, CHIEF COMMISSIONER, AND JEAN R. HANNA, ADMINISTRATIVE OFFICER

1967 BUDGET REQUEST

Chairman HAYDEN. The subcommittee will be in order.

The Indian Claims Commission proposes a budget of $438,000 for fiscal year 1967. This is $91,000 more than was appropriated to this agency during the past fiscal year. The justification for the request will be included in the record.

(The justification follows:)

The Indian Claims Commission was organized on April 10, 1947, under the act approved August 13, 1946 (25 U.S.C. 70).

The duties of the Commission are to hear and determine all causes arising under section 2 of the act, up to and including August 13, 1946, on behalf of any Indian tribe, band, or other identifiable group of American Indians residing within the territorial limits of the United States. The act provides that the claims may be heard notwithstanding any statute of limitations or laches, but all other defenses shall be available to the United States.

Of the 570 claims filed 208 have been completed. Payments of awards are dependent upon subsequent appropriations made through the claims, judgments, and private relief acts appropriation to the Treasury Department. Final awards through December 1965 total $198,533,299.15.

Salaries and expenses

Appropriation 1965	$335,000
Appropriation 1966 supplemental appropriation (proposed)	347,000

SUMMARY OF INCREASE AND DECREASES, 1967

Personal services	+50,000
Personal benefits	+4,000
Communications	+1,000
Other services	+35,000
Supplies and materials	+1,000
Total	+91,000
Budget estimate, 1967	438,000

Analysis by activities

Activities	Amount available, 1965	Amount available, 1966	Estimate, 1967	Increase (+) or decrease (−)
Hearing and adjudication of Indian claims	$302,000	$347,000	$438,000	+91,000
Unobligated balance no longer available	33,000			
Total	335,000	347,000	438,000	+91,000

REQUIREMENTS FOR FISCAL YEAR 1967

The estimate for funds needed to operate the Indian Claims Commission in fiscal year 1967 is $438,000.

JUSTIFICATION FOR PERSONAL SERVICES

The following summary table presents the essential facts with respect to this item:

	1966 estimate	1967 estimate	Estimated change in 1967 from 1966
1. Number of positions	22	24	2
2. Annual salary cost of permanent positions (total personal services)	$306,000	$356,000	+$50,000

Increase in personal services is for the addition of two attorney assistant positions (GS-15), which are essential to keep the program moving toward final completion, and to cover the full-time financing of the recently enacted salary increase, Public Law 89-301.

DETAIL STATEMENT

12 *Personal benefits.*—Section 4(a) of the civil service retirement amendments of 1956 (70 Stat. (747)) requires agencies to match the 6½ percent contribution of employees. This also covers FICA, employees' group life insurance, and employees' group health contributions. This is a $4,000 increase due to salary increases (Public Law 89-301) and increase in personnel.

21 *Travel expense.*—The principal provision of the Indian Claims Commission Act requiring expenditures for travel by the Commission and members of its staff are contained in 25 U.S.C. 70p 709. The amount requested for travel is $6,000.

23 *Communications.*—$4,000 is requested to cover the cost of telephone facilities, long-distance calls and postage. The $1,000 increase is due to increase in telephone rate which service is furnished by the GSA and also to cover the cost of increased mailings of opinions rendered by the Commission.

24 *Printing and reproduction.*—The estimate for printing and reproduction for 1967 is $2,000, and is to cover the printing of stationery and envelopes, miscellaneous forms, and binding repairs to old books in use by the Commission and reproduction of the opinions rendered by the Commission.

25 *Other services.*—The amount of $35,000 over that requested for last year is to pay for reporting service which has been in the past paid by the parties involved in the cases. This amount also covers the cost of maintenance of office machines, premiums on surety bond for certifying officers, and miscellaneous services by other agencies, including the Commission's pro rata share for emergency service in the Health Unit in the building in which we are located.

26 *Supplies and materials.*—$1,000 increase in this amount is to cover the cost of blank paper, binders, jackets, folders, stencils, carbons, and miscellaneous office supplies.

31 *Equipment.*—The estimate for this year is $2,000 and is to cover the cost of additional file cases, incidental equipment as needed, and repairs to furniture.

Object classification

	1965 actual	1966 estimate	Estimated change in 1966 from 1965	1967 estimate	Estimated change in 1967 from 1966
11 Personnel compensations: Permanent positions	$276,000	$306,000	+$30,000	$356,000	+$50,000
12 Personal benefits	20,000	23,000	+3,000	27,000	+4,000
21 Travel and transportation of persons	1,000	6,000	+5,000	6,000	
23 Rent, communications, and utilities	2,000	3,000	+1,000	4,000	+1,000
24 Printing and reproduction		2,000	+2,000	2,000	
25 Other services	2,000	2,000		37,000	+35,000
26 Supplies and materials	1,000	3,000	+2,000	4,000	+1,000
31 Equipment		2,000	+2,000	2,000	
Total obligations	302,000	347,000	+45,000	438,000	+91,000

SUBJECT OF BUDGET REQUEST

Chairman HAYDEN. Commissioner Watkins, would you please present your statement to the committee?

Mr. WATKINS. May I introduce Mrs. Jean Hanna, Administrative Office from the Commission who has some of the details.

Our budget request for $438,000 was approved by the Bureau of the Budget. This is an increase of $91,000 over the $347,000 allowed for 1966. Of this amount $50,000 is needed to cover the cost of two additional attorneys (GS–15, $16,240), reclassification of two positions, within grade advancements, and recent salary increases allowed by Congress.

Details of costs are shown in our budget estimates. Of this amount $4,000 is for personnel benefits, $35,000 is to cover the cost of hearing reporter service, and $2,000 for equipment, supplies, communications, etc.

ADJUDICATING INDIAN CLAIMS

We submit the following statement as our justification for this increase.

It is a very brief statement and I will read it so I can keep my mind on the subject.

As you know, the Indian Claims Commission is under heavy pressure to finish the task assigned it by the Congress of adjudicating ancient Indian claims against the United States. It was given 10 years in the beginning to carry out the program. It has had two 5-year extensions and another extension should be authorized this year.

It is probable that interest in these claims has been increased largely by these circumstances: During the first 12 years of the Commission's existence, awards were made to Indian claimants in the sum of $37,318,101.13.

During the last 6 years awards made to Indian claimants have increased to more than $185,013,299.15. Under the law all claims had to be filed by August 13, 1951. So all the claims were filed within a 5-year period.

Indian tribes which have not received awards feel that since their cases were filed about the same time as the others they should also have their claims determined at somewhere near the same time.

Hence, the increased pressure to do something to get the cases finished. Congress properly reacts by putting pressure on the Commission. We don't object to that and think it is all right.

We are called before committees to explain why we are not making greater progress. And, we also receive considerable mail on the subject from Members of Congress and Indian tribes and their membership.

The attitude of the Indians and of Congress is understandable when it is remembered that the claims were hoary with age when the Commission was created and given the assignment of adjudicating them. And this assignment came after many decades of endeavors on the part of the Indians to get "their day in court" on their claims.

Accelerating Activities

We have greatly increased our output of adjudicated cases as the above figures indicate. But that is not all of the story. Not all tribes win their cases, so in addition to the 90 awards which were made, there were 120 cases dismissed—that is, the Indians lost—making a final disposition of 210 cases.

But in addition to the cases disposed of, a large number have been processed through one or more of the three stages in which they must be considered before an award can or cannot be made.

The reorganized Commission, following the resignations of Commissioners Witt and O'Marr, began a program to accelerate the activities of the Commission.

Payment of Expert Witnesses

The newly accelerated trial program was slowed down temporarily because many Indian tribes did not have funds to pay for needed expert witnesses to help prepare their cases and testify at the trial.

The Commission called this situation to the attention of Congress and Congress responded 1½ years later with a revolving loan fund for the Indian tribes out of which they could pay necessary expert witnesses.

This loan fund program is well underway and we should, in the very near future, be able to greatly increase the number of cases on our trial calendar. We are advised that practically all of the $900,000 loan fund which had been set up by the Congress has been committed by the Indian Bureau. That is all the money has been applied for.

INCREASED PERSONNEL

More trials mean more cases requiring more lawyers to assist the Commission in analyzing and weighing voluminous evidence, writing findings and opinions (giving reasons for the adoption of the findings). There are many incidental activities leading to the entry of a final judgment, including numerous orders granting or denying motions made by the parties during the processing of these extremely complicated cases.

The Commission is sincerely pushing ahead with its accelerated program. Additional counsel are an important item in that program. Section 4 of the Claims Act authorizes the Commission to appoint a clerk and such other employees as shall be required to conduct the business of the Commission.

REPORTING OF HEARINGS

Another item here is the hearing reporter service. We are asking for $35,000 to cover the cost of reporting our hearings. Under the present arrangement the Indians and the Department of Justice pay the cost of the reporting service.

The Commission has never had a court reporter on its staff. Neither does it have a contract with a reporting service to report its hearings. This situation is contrary to the general practice for courts or commissions of record throughout the land, State or Federal.

Incidentally, the law requires us to keep a written record of all we do. At the present time the parties to the cases filed with us hire the reporters and divide the costs of the service between them.

Obviously, the Commission must have a transcript of the hearings held by it. The evidence presented is so voluminous and the oral arguments so extensive that it would be difficult to carry on our task without a complete transcript of our proceedings. Also, many of the cases processed by us are appealed to the Court of Claims. It would be impossible for that court to review the evidence we received without a transcript of it.

COSTS OF SERVICE

The parties, that is the Indian tribes on one side and the United States on the other, each acting through the Department of Justice, each contribute to the cost of a copy of the transcript for the use of the Commission.

We have checked with Justice and with some of the law firms having a rather large practice before the Commission and from the information furnished we have estimated that the cost of transcripts for the Commission would average approximately $35,000 per year.

We also learned that the cost division between the parties is based on the amount of testimony offered by the parties. Usually the transcripts of Indian testimony run many more pages for the Indians than they do for the Justice Department.

Thus, the Indians would have the greater financial burden. It should also be pointed out that the Indians or their lawyers now pay for their own copies of the transcript, which is burden enough and they will continue to pay for their own transcripts and so will Justice under the arrangements we propose.

Since no other courts or commissions, with perhaps one or two exceptions, require the parties to pay for transcripts used by the courts or commissions, it seems a reasonable and pertinent inquiry to ask, "Why should the Indian litigants be the only citizens required to do so?" We believe our present practice is not quite fair to the Indians.

Of greater importance, however, is the need of the Commission to have complete control of the services and the loyalty of the person or persons performing the service. We believe we can get that control and loyalty in its fullest meaning only when we are the employer and the paymaster.

QUALITY OF SERVICE

Incidentally, at times the reporting service, the people sent to report, do not do a very good job. That is one of the problems we face.

We regret we are not able to give the exact figures on the cost of a reporting service because we cannot know in advance how many hearings will be held or how long they will last, and so forth. But we assure you we will keep the cost to a minimum, consistent with good service.

We greatly appreciate the fact that our budget increases were approved by the Bureau of the Budget, and as you probably know the President has urged that where increases occur that they be supported by the agency securing the increase. We sincerely do so.

EXPERT ASSISTANCE PROGRAM

May I take up one matter here? We have with us a statement prepared by the Interior Bureau of Indian Affairs showing how the expert assistance program is progressing.

Those figures are there and if you want it in the record that is fine.

Chairman HAYDEN. We will include it in the record.

(The statement follows:)

Appropriation		$900,000
Less allotments:		
Fort Berthold	$25,000	
Rocky Boy's	15,000	40,000
Cash balance, Mar. 1, 1966		860,000
Approved unallotted commitments:		
Aberdeen area:		
Cheyenne River Sioux Tribe	31,833	
Oglala Sioux Tribe	78,003	
Rosebud Sioux Tribe	58,563	
Santee Sioux Tribe of Nebraska, docket No. 74	8,505	
Santee Sioux Tribe of Nebraska, dockets No. 142, 359-363	3,500	
Sisseton and Wahpeton Sioux Tribe of North Dakota	3,500	
Sisseton and Wahpeton Sioux Tribe of South Dakota	3,500	
Three Affiliated Tribes of Fort Berthold	10,000	
Turtle Mountain Band of Chippewa Indians	50,000	
Yankton Sioux Tribe	105,000	
Minneapolis area: Minnesota Chippewa Tribe	32,000	
Phoenix area:		
Havasupai Tribe of the Havasupai Reservation, Ariz	60,000	
Te-Moak Bands of Western Shoshone Indians	145,000	

Approved unallotted commitments—Continued		
Portland area:		
Chinook Tribe	$20,000	
Shoshone-Bannock Tribe	96,000	
Central office:		
Miami Tribe of Indiana	5,000	
Seminole Tribe of Florida	50,000	$760,404
Balance available for loans, Mar. 1, 1966		99,596
Applications in central office:		
Aberdeen area: Sioux Indians of the Fork Peck Reservation in Montana	10,206	
Albuquerque area: Pueblo of San Ildefonso	4,500	
Phoenix area:		
Papago Tribe	80,000	
Fort McDowell Mohave-Apache Community	45,000	
Yavapai-Apache Community	45,000	184,706
Total		(85,110)
Applications under consideration:		
Minneapolis area: Red Lake Band of Chippewa Indians	25,000	
Phoenix area:		
Ak-Chin Indian Community	25,000	
Gila River	80,000	
Fort Mojave and Mohaves of Colorado River Reservation	30,000	
Portland area:		
Cowlitz Tribe	15,000	
Spokane Tribe	85,000	260,000
Shortage, Mar. 1, 1966		(345,110)

Loan Fund Program

Mr. Watkins. I understand they will be coming before the Congress for a supplemental appropriation sometime during this session to take care of applications which are processed to the point where they will be calling for money.

I made some investigation of the loan fund program and I would say they are doing very well. It took quite a while to get it going. The Indians appreciate this help and you know they have to pay it back if they get a judgment; that is why it called a loan fund.

Personnel Increase

Chairman Hayden. I note in the statement that $50,000 of your proposed increase is for personal services, and that you will add two attorney assistants to your staff. I assume that included in this increase is an amount to cover the pay act costs of last October. How much of the $50,000 is required to meet the cost of pay raises?

Mr. Watkins. Mrs. Hanna can answer that.

Mrs. Hanna. The pay act cost is $13,000. The breakdown on the balance would be approximately $34,000 for the two new attorney positions, $3,000 for realocation of two positions and within-grade advancements.

Mr. Watkins. May I say we find it necessary to step up this limited program. We believe we are under the mandate of the Congress to do this work they gave us and the only way to do it is to get some able men to begin with even if we have to pay more.

In the long run it will be cheaper. We want people that can earn a grade 15 salary. If we can't offer that kind of money we can't get them. We sometimes have to take them from other departments.

This is what we call a crash program under which Congress expects us to make progress and finish the job. We can't without the help.

CLAIMS PROCESSED IN FISCAL YEAR 1966

Chairman HAYDEN. How many claims were you able to finalize in the last fiscal year?

Mr. WATKINS. I don't happen to have that.

Mrs. HANNA. I believe it was around 20.

Chairman HAYDEN. You may put a tabulation of them in the record.

Mrs. HANNA. Yes, sir. Of 29, however, 2 of the dismissals are now on appeal.

Chairman HAYDEN. We thank you for your appearance.

Mr. WATKINS. Thank you for your consideration.

(The information follows:)

Final judgments

	Date	Tribe	Case No.	Area allowed (acres)	Amount claimed [1]	Net final judgment
1	July 14, 1950	Choctaw	16 (Res.)	3,374,663.00	$3,374,663.00	$2,587,835.47
2	do	Chickasaw	23 (Res.)	1,124,888.00	2,355,674.00	902,008.11
3	Oct. 19, 1951	Loyal Creek	1	[2]	690,000.00	600,000.00
4	May 7, 1954	Quapaw	14 (Res.)	1,161,284.75	48,175,280.00	927,668.04
5	Mar. 1, 1955	Osage	9 (Res.)	844,632.95	[3]	864,107.55
6	Mar. 2, 1955	Kaw	33 (Res.)	4,559,040.00	10,930,180.00	1,600,220.02
7	do	do	35 (Res.)	2,000,000.00	2,298,000.00	798,000.00
8	Oct. 10, 1955	Otoe and Missouria	11 (Ab.)	1,879,892.00	9,726,920.00	1,156,034.45
9	Aug. 8, 1955	Pottawatomie	15-B	341,672.99	3,462,475.00	359,460.61
10	do	do	111 (Res.)			
11	Apr. 23, 1957	Shoshone	63 (Res.)	700,642.00	6,118,840.00	433,013.60
12	May 6, 1958	Coeur d'Alene	81 (Rec. I.T.)	2,389,924.00	22,500,000.00	4,342,778.03
13	June 17, 1958	Tillamook	239 (Res.)	191,798.80	2,000,000.00	416,240.85
14	June 1, 1959	Kiowa-Comanche Apache	32 (Res.)	2,033,583.00	7,000,000.00	2,067,166.00
15	Aug. 6, 1959	Seminole	150 (Res.)	320.00	1,050,000.00	34,053.66
16	Dec. 4, 1959	Snake	17 (Ab.)	1,449,304.77	3,000,000.00	567,000.00
17	Dec. 10, 1959	Pottawatomie	15-J and 71-A (Rec. I.T.)	5,909,565.20	24,600,000.00	3,288,974.90
18						
19						
20	Feb. 11, 1960	Omaha	225-A, B, C, and D (Ab.) (Res.)	5,080,000.00	[3]	[4] 2,900,000.00
21						
22						
23	Mar. 1, 1960	Colville	181 (Ab.)	1,729,762.00	2,425,000.00	1,000,000.00
24	Apr. 25, 1960	Kootenai	154 (Ab.)	1,600,000.00	[3]	[4] 425,000.00
25	May 13, 1960	Chickasaw	269	[5]	190,934.78	190,934.78
26	June 13, 1960	Uintah Utes	44 and 45 (Ab.) (Res.)	7,613,017.00	[3]	[4] 7,700,000.00
27						
28	June 17, 1960	Nez Perce	175-A (Res.)	6,932,270.00	18,250,000.00	4,157,605.06
29	May 29, 1961	Crow	54 (Rec. I.T.)	30,530,764.00	25,870,025.00	10,242,984.70
30	do	Absentee Shawnee	334 (Res.)	1,404,790.00	3,455,783.40	1,269,338.02
31	May 31, 1961	Miami	251	254,158.34	609,976.80	[6] 195,723.70 [7] 153,469.89
32	do	do	124-A			[8] 64,738.80
33	May 12, 1961	Nez Perce	180-A	[3]	9,920,510.45	3,000,000.00
34	July 3, 1961	Northern Paiute	87 (I.T.)	10,500,000.00	5,775,000.00	[9] 3,650,000.00
35	Sept. 14, 1961	Cherokee	173	6,022,754.17	60,227,541.70	[10] 14,364,476.15
36	July 6, 1962	Pawnee	10	24,067,332.97	33,467,505.00	[11] 7,315,985.70
37	July 9, 1962	Quileute	155 (I.T.)	224,300.00	[3]	[4] 112,152.60
38	do	Quinaielt	242 (I.T.)	463,500.00	[3]	[4] 205,172.40

See footnotes at end of table.

Final judgments—Continued

	Date	Tribe	Case No.	Area allowed (acres)	Amount claimed [1]	Net final judgment
39	Aug. 27, 1962	Tillamook	240 (I.T.)	223,750.00	$510,750.00	$169,187.50
40	Nov. 16, 1962	Miami	67 & 124 (Rec. I.T.)	4,291,500.00	8,025,105.00	4,647,467.67
41						
42	Mar. 21, 1963	Kalispel	94 (I.T.)	2,373,000.00	[3]	[4] 3,000,000.00
43	May 24, 1963	Skokomish	296 (I.T.)	355,800.00	764,970.00	[4] 373,577.00
44	June 27, 1963	Northern Arapaho	329-D (Rec. I.T.)	12,966,376.00	10,381,200.00	[12] 3,230,000.00
45	July 12, 1963	Nooksack	46			49,383.50
46	Oct. 7, 1963	Chehalis	237			754,380.00
47	Nov. 27, 1963	Cheyene-Arapaho	329-C			4,360,886.19
48	Dec. 11, 1963	Duwamish	109			62,000.00
49	Jan. 31, 1964	Klamath	100			2,500,000.00
50	Apr. 14, 1964	Otoe and Missouri	11-A			1,750,000.00
51	do	Iowa	138			1,750,000.00
52	do	Red Lake	18-A			2,034,889.56
53	June 15, 1964	Absentee Delaware	337			1,627,244.64
		Indians of California:				
54	July 20, 1964	Clyde F. Thompson	31			
55	do	Ernest Risling	37			
56	do	Baron Long	80			
57	do	do	80-D			29,100,000.00
58	do	Pitt River	347			
59	do	Yokiah	176			
60	do	Yana	215			
61	do	Shasta	333			
62	October 1964	Creek Nation	21			3,913,000.00
63	Dec. 23, 1964	Seminole	248			63,680.00
64	Jan. 18, 1965	Southern Piute	88			
65	do	do	do	330		7,253,165.19
66	do	do	330-A			
67	do	Chemehuevi	351			996,834.81
68	do		351-A			

69	Feb. 11, 1965	Ottawa Tribe	303			368,039.55
70	Feb. 18, 1965	Confederated Ute	327			7,908,586.00
71	do	Ute Tribe of the Uintah and Ouray Reservation	349			300,000.00
72	Feb. 24, 1965	Shoshone Tribe	157			120,000.00
73	Mar. 2, 1965	Sac and Fox	138			1,096,533.42
74	Mar. 10, 1965	The Sac and Fox of Mississippi	195			192,000.00
75	Mar. 22, 1965	The Sac and Fox of Kansas and Nebraska	138			1,372,267.50
76	Apr. 5, 1965	Yakima	161			
77	do	Colville	222			3,446,700.00
78	do	do	224			
79	May 19, 1965	The Sac and Fox	143			1,789,201.45
80	June 25, 1965	Yakima	47–A			61,991.40
81	July 27, 1965	Minnesota Chippewa	18–B			3,932,205.08
82	Aug. 5, 1965	Quechan	319			520,000.00
83	Aug. 27, 1965	Ponca	324			2,458.30
84	Aug. 31, 1965	Yakima	162			49,000.00
85	Oct. 18, 1965	Cheyenne-Arapaho	329–A			15,000,000.00
86	do	do	329–B			
87	May 2, 1965	Peoria Tribe	314 amended			876,477.30
88	Feb. 11, 1966	Confederated Tribes of the Umatilla Indian Reservation	264			
89	do	do	264–A			2,450,000.00
90	do	do	264–B			
		Total				185,013,299.15

[1] Does not include claim for interest.
[2] Civil War claims.
[3] Not specified.
[4] Settlement.
[5] Allotments.
[6] Annuities.
[7] Interest.
[8] Gold removed.
[9] Settlement of part of area in case.
[10] Offsets to be determined in No. 173–A.
[11] Interest on $31.90 at 5 percent from Mar. 3, 1893.
[12] Part of cases 329–348.

WEDNESDAY, MARCH 2, 1966.

DEPARTMENT OF THE INTERIOR

OFFICE OF THE SOLICITOR

SALARIES AND EXPENSES

STATEMENTS OF FRANK J. BARRY, SOLICITOR; EDWARD WEINBERG, DEPUTY SOLICITOR; GEORGE MIRON, SPECIAL ASSISTANT TO SOLICITOR; EDITH A. MAHON, ADMINISTRATIVE OFFICER; DALE R. ROTHROCK, CHIEF OF BUDGET AND FINANCE; JOSEPH M. BREEN, BUDGET OFFICER; SIDNEY D. LARSON, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

1967 BUDGET REQUEST

Chairman HAYDEN. Mr. Weinberg from the Office of the Solicitor. The fiscal year 1967 estimate for the Office of Solicitor is $4,704,000, an increase of $107,000 over the amount appropriated in fiscal year 1966, including an anticipated pay cost increase of $41,000. This amounts to a program increase of $66,000 in fiscal year 1967.

The justification for this estimate will be printed in the record.

(The justification follows:)

Salaries and expenses

Appropriation, 1965	$4,223,000
Second supplemental appropriation, 1965	170,000
Total appropriation, 1965	4,393,000
Transfer to General Services Administration	—252
Total available, 1965	4,392,748
Appropriation, 1966	4,487,000
Pay cost supplemental	110,000
Total appropriation, 1966	4,597,000

SUMMARY OF INCREASES AND DECREASES, 1967

Nonrecurring item due to the contemplated completion of updating the annotations of the Federal reclamation laws	—25,000
To provide for increased pay costs for fiscal year 1966 positions	+41,000
Addition of 3 new positions including $6,000 for personnel benefits and other expenses	+26,000
Increase to permit funding of existing positions on a full-year basis	+65,000
Net increase, 1967	107,000
Budget estimate, 1967	4,704,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers	Amount available
Legal services	$4,350,215	$4,487,000	$110,000		$4,597,000
Unobligated balance lapsing	42,533				
Total	4,392,748	4,487,000	110,000		4,597,000

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase or decrease (—), 1967 compared with 1966		
				Total	Pay cost	Program
Legal services (total)	$4,392,748	$4,597,000	$4,704,000	$107,000	$41,000	$66,000

JUSTIFICATION

The estimate for 1967 is $4,704,000, an increase of $107,000 over 1966. The increase consists of—

(1) A decrease of $25,000 which is a nonrecurring item related to the updating of the annotations of the Federal reclamation laws;

(2) An increase of $41,000 for increased pay costs;

(3) An increase of $26,000 for three new positions and the inclusion of $2,000 for personnel benefits and $4,000 for other expenses; and

(4) An increase of $65,000 to permit funding of existing positions on a full-year basis.

All of the new positions are to be added to the legal offices maintained in the field. In detail, one attorney and a stenographer will be added at San Francisco, where the staff currently is limited to the field solicitor and his secretary; one attorney will be provided the regional solicitor's office at Portland. The grade of the professional positions is GS–9 and that of the stenographic position is GS–5.

The increase from $147,000 to $152,000 in the ceiling on reimbursements is to provide recovery of the rise in salary costs under the 1965 Salary Act.

Throughout the organization there are 11 positions which are being funded on a less than a full-year basis. These shortages are in areas of work where the impact of departmental activity, particularly in the power, reclamation, and recreational and parks fields, is being felt the hardest. Apart from this, the need relates to the employment for the first time of a full-time management analyst (at GS–11). Such an addition is important to the emphasis being placed on continuing and extending studies of manpower utilization and management improvement in the conduct of the legal work of the Department. An internal management improvement program has been undertaken. Progress has been slow owing to the unavailability of a staff member whose energies and knowledge can be devoted to the program and then, in turn, to the details of implementation. Because of the importance of the attention needed, a person of requisite qualification will be sought and hired in the current year, if funds permit, and should be available certainly in the budget year if the program is to produce the desired results.

In the justification submitted last year in support of the 1966 appropriation request, examples of expected increases in workload were listed in 11 separate items. Most of these items of work have materialized and are requiring legal assistance to the substantial extent anticipated. Most could be enumerated again in this justification as indicative of the continuing claims upon the lawyers' services. Added to the list are further examples, a few listed below, that are representative of the rising state of the law work of the Department:

Legislation authorizing the third powerplant at Coulee Dam has passed the Senate and the House Interior and Insular Affairs Committee has held hearings. Its authorization is anticipated by the commencement of fiscal year 1967. This will almost double the existing capacity (1,700,000 kilo-

watts) at the dam. The initial contracting on major items of work, contract administration, and the handling of claims, and the byproducts of these activities, will heavily engage our lawyers in both the Portland and Denver regions of the Office of the Solicitor as well as in the Washington headquarters office.

Similarly, in relation to other projects, such as those of the Bureau of Reclamation, the prominence of the legal staff in the activities relating to preparation and awarding of contracts, supporting contracts for supplies, equipment, and services, as well as those involved in the acquisition of land and rights-of-way, must be taken into account when reviewing the projects to be initiated in 1966 and 1967, as well as those operating and under-construction projects heretofore authorized.

The Classification and Disposal Acts of September 19, 1964 (Public Law 88–607 and Public Law 88–608) look toward markedly increased activities both in public land disposition for purposes of community growth and development, or for residential, commercial, agriculture, and public uses, and in management of retained lands. By reason of these acts and intensive review of the public land laws being undertaken by the Public Land Law Review Commission established by Public Law 88–606 also enacted on September 19, 1964, the requirement for legal services in the public land area will rise sharply during the fiscal year.

As significantly more settlements of tribal claims against the United States are made each year, substantial amounts of work are added to the usual heavy load of Indian legal matters. The settlements themselves, subject to secretarial approval under tribal claims attorney contracts, require much time for legal review, and it is estimated the preparation of tribal rolls needed to program the tribal judgments will result in fiscal 1967 in approximately 2,000 enrollment appeals, more than 20 times the number handled in fiscal 1965.

The authorizations by the 88th and 89th Congress, 1st sess., of 21 new National Park Service areas will result in requirement for substantial legal service in the fiscal year covering such matters as land acquisition, contractual arrangements with public and private agencies and organizations which are incident to their administration and in the myriad of problems that arise in the early stages of their development.

Inasmuch as the budget for the law work of the Department is in the main a personnel compensation requirement, the funds relate almost entirely to staffing needs. As closely as possible, the staff level must relate to the agencies served. Since 1954 (the time of consolidation of the Department's legal services), the advancement in the strength of the legal staff has never been commensurate with that of the Department, as a whole. In this period the Department's employment has risen 26.4 percent; the rise in the legal staff has been so small, a fraction of 1 percent, that it is hardly computable. In this period also the volume of incoming legal business has risen from 102,159 matters in 1955 (the first recorded year) to 169,124 matters in 1965. Despite these facts, the estimate for 1967, which provides for a very small increase in personnel, have been conservatively developed with the expectation that the projections will be so viewed and approved.

The project of updating the annotations of the Federal reclamation laws, for which funds ($25,000) were continued in the current year's appropriation, is likely to be completed by the end of the current fiscal year. In such anticipation, the funds have been dropped from the 1967 request, although it no doubt will be necessary to continue the services of the two employees into the new fiscal year until the assistance required incident to proofing and printing is finished. The cost of these services will be absorbed. The 1967 request also contemplates the absorption of the cost of the summer law clerk trainee program, as in past years. The cost, in compensation to the students, is approximately $12,000 for the 11 participants.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$4,476,009	$4,748,000	$4,856,000	+$108,000
Advances and reimbursements from other accounts	−125,794	−151,000	−152,000	−1,000
Unobligated balance lapsing	42,533			
New obligational authority	4,392,748	4,597,000	4,704,000	+107,000
New obligational authority:				
Appropriation	4,393,000	4,487,000	4,704,000	+217,000
Transferred to "Operating expenses, Public Buildings Services," General Services Administration	−252			
Proposed supplemental for civilian pay increases		110,000		−110,000
Object classification:				
11 Personnel compensation	3,794,914	4,028,000	4,127,000	+99,000
12 Personnel benefits	281,309	292,000	297,000	+5,000
21 Travel and transportation of persons	109,033	109,000	109,000	
22 Transportation of things	10,586	14,000	15,000	+1,000
23 Rent, communications, and utilities	76,973	80,000	80,000	
24 Printing and reproduction	28,182	30,000	30,000	
25.1 Other services	8,858	10,000	10,000	
25.2 Services of other agencies	88,271	92,000	94,000	+2,000
26 Supplies and materials	14,564	25,000	25,000	
31 Equipment	63,234	68,000	69,000	+1,000
42 Insurance claims and indemnities	85			
Total obligations	4,476,009	4,748,000	4,856,000	+108,000

PREPARED STATEMENT

Chairman HAYDEN. Would you please explain to the committee the need for the amount which you request? If you have a written statement you may place it in the record and summarize it if you desire.

Mr. WEINBERG. Thank you, Mr. Chairman.

(The statement follows:)

Mr. Chairman and gentlemen of the committee, I appreciate the opportunity to present the appropriation request of the Office of the Solicitor.

The estimate for the year 1967 for the budget of the Solicitor's Office is $4,704,000 which represents a net increase of $107,000 over 1966. This budget provides for the expenses of all legal services provided by the Department to the Secretariat and to the various bureaus, divisions, and offices.

The 1967 estimate takes into account:

(1) A decrease of $25,000 which is a nonrecurring item related to the updating of the annotations of the Federal reclamation laws.

(2) An increase of $41,000 for increased pay costs.

(3) An increase of $26,000 for three new positions and the inclusion of $2,000 for personnel benefits and $4,000 for other expenses.

(4) An increase of $65,000 to permit funding of existing positions on a full-year basis.

The decrease of $25,000 relating to the updating of the annotations of the Federal reclamation laws is based on our belief that the project is likely to be completed by the end of the current fiscal year. For that reason the funds have been deleted from the 1967 budget request, although it may be necessary to continue the service of the two employees involved in the project into the next fiscal year for assistance required incident to proofing and printing the results of the project. The costs of these services will be absorbed. It should be noted that the 1967 request also contemplates the absorption of the cost of the summer law clerk trainee program, as in the past years. That cost, for compensation to the 11 trainees, will be approximately $12,000.

The increase of $26,000 for new positions is for positions to be added to legal offices maintained in the field. One attorney and one stenographer will be added at San Francisco, where the staff currently is limited to the field solicitor and his secretary. The legal needs of several departmental activities are growing

more concentrated in San Francisco, so that it is no longer reasonable to expect a single attorney to give all the service needed, where it is needed.

The ceiling on reimbursements has been increased from $147,000 to $152,000 to provide recovery for the rise in the salary costs occasioned by the 1965 Salary Act.

The increase of $65,000 to permit funding of existing positions on a full-year basis is accounted for as follows: There are 11 positions in the Solicitor's Office which are being funded on less than a full-year basis. These shortages are in areas of work where increased departmental activity, particularly in the power, reclamation, and recreational and park fields, is being felt the hardest in terms of additional requirements for legal services. This funding includes provision for empoyment for the first time of full-time management analyst (GS-11). The employment of such an analyst will give this office the ability to fulfill its role in the continuing efforts of the Department to study manpower utilization and improve management. We have already undertaken an internal management improvement program but progress has been slow because of the unavailability of a staff member whose skills and energies can be devoted to the program and to its implementation. Because of the importance of our management improvement program we are seeking to hire a person of requisite qualification in the current fiscal year, if funds permit. There is a need for funds for the services of such a person in the coming budget year if the program is to produce the desired results.

The total requested budget of $4,704,000 is designed to provide the Office of the Solicitor with funds to furnish legal services for the entire Department of the Interior, including its field and regional establishments and to the Secretariat. As I have pointed out in previous budget statements, the Solicitor's Office has been called upon to provide competent and prompt legal advice for the substantially increasing programs of the Department and has done so with a legal staff smaller than it had in 1952. The number of lawyers in the Department in 1952 was 225. The number in 1965 was 194. In the same period the total number of persons employed by the Department increased from 49,811 to 63,612, and the direct appropriations of the Department increased from $533,857,216 in 1952 to $1,109,071,717 in 1965. While the Department's increases in personnel and appropriation are not a precise guide to the increases in its needs for legal services, they nonetheless reflect a substantial increase in programs which must have competent legal services. We take pride in having been able to handle the continuing increase in legal work resulting from new programs and from increases in existing programs without concomitant increases in staff. I must advise, however, that we cannot realistically expect to continue to service new programs and heavier demands under ongoing programs without adding to our staff.

I have pointed out in the formal justification statement prepared for the subcommittee several areas where substantial increases in departmental activity have recently occurred or will soon occur. I will not undertake to repeat that description here but you may be assured that we intend to provide the same high level of legal services to these programs as we have done with respect to others, from the budget we have requested.

I therefore believe that the current workload of the Solicitor's Office and the additional workload which new programs will generate justifies the request for the modest increase in the Solicitor's budget for the fiscal year 1967.

Federal Reclamation Laws, Annotated

Mr. Weinberg. I have with me this morning our administrative officer, Edith Mahon, and George Miron, special assistant.

Solicitor Barry is home with laryngitis today which accounts for my giving the presentation.

I can proceed by summarizing our statement which is before you for inclusion in the record.

Our 1967 estimate includes a decrease of $25,000, which is a nonrecurring item. We are finishing the updating of the annotation of the Federal reclamation laws for which the committee allowed us money in the current fiscal year budget.

We anticipate we will not quite finish within this fiscal year. There will still be a slight amount of proofing and printing but we intend to

absorb the cost in fiscal year 1967 and are not requesting any money for this purpose.

The so-called green book includes all the Federal reclamation laws and the annotations which include court cases and departmental rulings and rulings of other agencies which interpret the Federal reclamation laws.

That is a very valuable working document not only for the Federal Government but the practicing bar in the Western United States.

Senator MAGNUSON. It is long overdue.

Mr. WEINBERG. Yes, sir; the last updating of the annotations was done in 1946, as I recall.

PERSONNEL INCREASES

We are asking for an increase of $41,000. As you know this takes account of last year's pay increases. We are asking for $26,000 for three new positions.

SAN FRANCISCO FIELD OFFICE

One of the two attorney positions is in the San Francisco field solicitor's office. An additional stenographic position there is also requested. The San Francisco field office is now a one-man operation consisting of a field solicitor and his secretary. San Francisco is a very important center of National Park Service activity as well as other Department activities, and we are unable to keep abreast of the work with the present staff.

PORTLAND FIELD OFFICE

We are also asking for one additional attorney in the Portland regional office which continues to experience a heavy workload by reason of the activities of the Bonneville Power Administration and other departmental activities which headquarter in Portland.

We are also asking for——

Senator MAGNUSON. Could I ask a question there.

This increase, as I understand it, is for purely Bonneville work and not reclamation?

Mr. WEINBERG. That is correct, in the Portland regional office.

Senator MAGNUSON. You will recall we had this discussion regarding the removal of some of the reclamation lawyers from Ephrata and one was to go to Portland?

Mr. WEINBERG. We do not contemplate transferring any.

Senator MAGNUSON. This is for Bonneville?

Mr. WEINBERG. Yes, and other work coming into the regional office.

Senator MAGNUSON. I wouldn't want someone to say you took one out of Ephrata and put another down at Portland, I would have trouble explaining that.

FUNDING POSITIONS ON FULL-YEAR BASIS

Mr. WEINBERG. We are asking for $65,000 for funding of existing positions on a full-year basis. The only reason we have been able to maintain our staff is because we have been counting on slippage. We have delayed filling vacancies and so on and there is only so much of this one can do and, after allowing for what we think is a safe amount of slippage, we feel we require full-year funding for these 11 positions.

MANAGEMENT ANALYST

We are seeking the employment for the first time of a management analyst in the GS–11 grade.

I might say that neither Solicitor Barry nor I are professional managers. Solicitor Barry came to the Department as a practicing attorney and practically my entire career in the Government has been as an attorney in the Department of the Interior.

The Solicitor and I continue to be full-time practicing attorneys in addition to administering the Office of the Solicitor because there are many matters which the Secretary feels necessitate the personal attention of either the Solicitor or myself, or both of us, in something more than a review capacity. For that reason and because we are ourselves not trained management people, we need a management analyst to assist us in better organizing the Solicitor's Office and, in general, in improving our management operations.

Chairman HAYDEN. Is he 1 of the 11 you would add?

Mr. WEINBERG. He is 1 of 11 we have included in this request for full funding for $65,000.

Chairman HAYDEN. I see.

ANTICIPATED PERSONNEL REQUIREMENT

Mr. WEINBERG. That basically concludes our statement, Senator Hayden, except in one respect. We have pointed this out before and I feel compelled to do so again.

In 1952 we had 225 lawyers on our rolls; in 1965, 194. At the same time the Department's personnel increased from 50,000 to roughly 64,000 and the Department appropriations approximately doubled. The Solicitor's Office during Mr. Barry's incumbency has operated on a tight basis. We have limited our requests to those we felt clearly and without argument could be justified.

I am happy to say we have always received most fair consideration from the Budget Bureau as well as from the Appropriation Committees of the Congress.

We are, however, I think, coming to the time when, if the Department assumes substantial program increases we will have to face the possibility of adding commensurately to our staff.

Thank you very much.

Chairman HAYDEN. Thank you for your appearance.

WEDNESDAY, MARCH 2, 1966.

OFFICE OF COAL RESEARCH

SALARIES AND EXPENSES

STATEMENTS OF GEORGE FUMICH, DIRECTOR; NEAL COCHRAN, CHIEF, DIVISION OF UTILIZATION; WAYNE McCURDY, CHIEF, MINING AND PREPARATION DIVISION; A. HOWARD SMITH, CHIEF, ECONOMICS AND MARKETING DIVISION; AND EDWARD G. LARSON, CHIEF, CONTRACTS AND ADMINISTRATION DIVISION

1967 BUDGET REQUEST

Chairman HAYDEN. We will now hear from the Office of Coal Research.

For "salaries and expenses" in fiscal year 1967, the budget proposal of the Office of Coal Research is $8,237,000, an increase of $1,017,000 over the amount appropriated in the last fiscal year. The justification statement will be placed in the record.

(The justification follows:)

The Office of Coal Research program proposed for fiscal year 1967 will require funding estimated at $8,237,000. This represents an increase of $444,166 over the $7,792,834 available in fiscal year 1966 (which includes an authorization of $7,220,000 and a carryover balance from fiscal year 1965 of $572,834). Two thousand dollars of the requested increase in fiscal year 1967 funds is to provide for increased pay costs, $17,000 is to provide for small increases in other administrative and supervisory expenses, and $425,166 is to provide for program acceleration.

The Office of Coal Research staff is composed of 19 persons. There are four vacancies at the present time. No increase in the present ceiling of 23 is being requested in fiscal year 1967.

The 40 contracts which have been executed to date have brought into the coal research program the scientific, professional, and technical abilities, and facilities of some of the Nation's outstanding research organizations. Additional proposals are in hand from such organizations and more are continually being received for worthwhile research projects. However, out of almost 400 proposals received to date, OCR has awarded only 40 contracts. The careful evaluation procedures exercised by OCR and the degree of selectivity enable only those which are considered of greatest value to the total OCR program at the time of their selection to go forward to contracts. Many more desirable projects are in a reserve status at any given time, and limitations on available funding preclude action on them.

Expanding program needs require careful technical and administrative monitoring of individual research projects. The slight increase in administrative and supervisory expenses proposed for fiscal year 1967 will insure that these tasks are properly performed.

OCR's fiscal year 1967 request provides for estimates of adequate levels of funding for continuing research and development work on existing projects, projects which are scheduled for execution before the end of the current fiscal year, as well as four new projects in fiscal year 1967. The funding estimates also cover proposed "scale up" of three projects to the next stage of their development—the pilot plant phase.

Salaries and expenses

Appropriation, 1965	$6,836,000
Unobligated balance from prior year	56,202
Total available, 1965	6,892,202
Appropriation, 1966	7,220,000
Unobligated balance from prior year	572,834
Total available, 1966	7,792,834

SUMMARY OF INCREASES AND DECREASES

To provide for increased pay costs for fiscal year 1966 positions	2,000
To provide for small increases in operating expenses	17,000
Acceleration of contract research	425,166
Net increase, 1967	444,166
Budget estimate, 1967	8,237,000

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Unobligated balance	Amount available
Administration and contract supervision	$274,790	$365,000			$365,000
Contract research	6,044,578	6,855,000		$572,834	7,427,834
Unobligated balance	572,834				
Total	6,892,202	7,220,000		572,834	7,792,834

Salaries and expenses

Activities	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
Administration and contract supervision	$274,790	$365,000	$384,000	$19,000	$2,000	$17,000
Contract research	6,044,578	7,427,834	7,853,000	425,166		425,166
Unobligated balance	572,834					
Total	6,892,202	7,792,834	8,237,000	444,166	2,000	442,166

JUSTIFICATION

The estimate for fiscal year 1967 is $8,237,000. This is an increase of $1,017,000 over the appropriation for fiscal year 1966. However, it is actually an increase of only $444,166 over the amount available in fiscal year 1966—which includes a carryover balance from the previous year (fiscal year 1965) of $572,834. The increase consists of—

(1) $425,166 to provide continued funding of existing projects, and scale up to the pilot plant phase—the next stage of development—on three projects, and funding for new projects.

(2) $2,000 to provide for increased pay costs.

(3) $17,000 to provide for certain administrative and supervisory expenses such as personnel benefits, travel and transportation of persons and things, printing and reproduction, and purchase of supplies, materials, and equipment.

These increases total $444,166.

The funds requested under this program will be used for continued financing of existing contracts as well as additional contracts which are projected for execution during the remaining portion of this fiscal year, and four new contracts in fiscal year 1967. The 26 contracts currently in effect are with 23 separate contractors. Five contracts have been awarded in this fiscal year to date, and several others are in varying stages of negotiation at the present time, and are scheduled for execution before the end of the current fiscal year. Three contracts were completed in the past fiscal year.

A grand total of 40 contracts have been executed since the program began and 14 have been completed. As a result of research progress, some followon contracts have been executed for additional work with the same contractors who have completed projects.

OCR works very closely with its consultants, with its General Technical Advisory Committee, with the coal industry, and with the Bureau of Mines to assure the avoidance of duplication and to seek coordination of the programs of the two agencies.

Coal is currently furnishing more than one-half of the energy for the Nation's electric power needs. The Nations' energy needs for liquid and gaseous fuels for electric power as well as for transportation is even greater. In an effort to enable coal to project itself into meeting a portion of these ever-expanding energy needs, sizeable parts of the OCR research program are directed toward these ends.

Extensive efforts are also being made to develop new uses for coal, such as new materials for use by the construction industry, chemicals and chemical by-products, and various market research designed to assure coal a proper place in the competitive energy and nonenergy fields.

Various projects currently underway will, if successful, also provide substantial benefits for a lessening of air pollution and water pollution. Each of these projects has, as a primary objective, work other than air pollution research.

Some projects are intended to provide support for other aspects of the OCR program in terms of a lower product cost for such elements as hydrogen which is required extensively in the liquefaction research contracts which are underway.

The program for fiscal year 1967 provides for increased emphasis on all of the contracts underway as well as those which are proposed to be undertaken, in order to enhance coal's position in the energy market and expand its use as the basic raw material source for liquid as well as gaseous fuels, as a filtration medium for sewage and industrial waste treatment, for brick and other construction materials from fly-ash, as an improved source of fuel for raw energy needs by the electric utilities (having conventional power production) as well as potential future power production through means such as the fuel cell, magnetohydrodynamic power (MHD), electro-gas-dynamics (EGD), and gas turbines. All of these are being sought through the medium of contract research using new and oftentimes unconventional research processes in the contractors' laboratories.

We are hopeful that as a result of these research contracts, it will be possible for coal to retain its present markets and eventually find substantial new markets.

The OCR staff of 19 is 1 less than a year ago at this time. It is 4 below our authorized ceiling of 23. No increase in the ceiling is being sought for fiscal year 1967 although the increasing number of contracts, together with proper technical and administrative monitoring of these contracts, is resulting in an increasingly heavy workload. An evidence of the ratio of contract workload to administrative and supervisory costs is borne out by the increasing number and dollar amount of contracts over the 5-year period the program has been operating, as contrasted with the relatively stable number of employees and dollar amounts of administrative and supervisory funds. Efforts to maintain administrative and supervisory funds and employee levels in a relatively stable state will continue, and increases will be requested only when necessary.

We are pleased to report on significant results of the contract research program during the past year. The benefits from the research projects underway should have both short-range and long-range effects on our Nation, on its economic strength, and its rich heritage of adequate supplies of energy resources properly used.

Emerging technologies for such purposes as use of coal for sewage and industrial waste treatment represent an area of use which is not being met by any other fossil fuel.

As a result of the research work performed to date, 11 patent applications have been filed. Some of these may have a far-reaching effect on future economic value of coal and its potential for economic good in the Nation as a whole.

A process has been developed for producing brick and potentially other construction materials from coal fly ash. The obvious benefits from such a process lie in turning what is now essentially a waste product into an economic benefit, thereby increasing the likelihood for large-scale coal users to continue the use of coal in preference to other materials, as well as installing more sophisticated equipment at the point of combustion and use in order to reclaim the fly ash and thereby also reduce air pollution.

On another OCR contract, improvements in the catalyst system for producing gasoline from coal indicates that it should be possible to produce gasoline of approximately 100 octane rating at a number of sites around the country at a refinery price of just slightly over 11 cents per gallon.

On two of OCR's gasification projects, it now appears that a breakthrough has been made which will bring about a significant reduction in the potential cost of gas from coal.

Another OCR project has developed a means to use coal as a filtration medium for treatment of sewage and industrial wastes. The treated water, after going through the process, is much cleaner than the treated liquids which emerge from existing primary treatment plants using other present methods. The residue from such sewage treatment plants is high in B.t.u. values which make it feasible for use as the heat source for other powerplants or incinerators.

On still another OCR contract, recommendations have emerged for coal transportation and handling in the West to make coal a more attractive energy commodity at numerous locations for power generation purposes.

Considerable progress is being made on a possible coal-energized fuel cell with projections for ultimate power efficiencies at least half again as good as present day conventional methods.

The Office of Coal Research has received nearly 400 proposals for research in the past 5 years. The degree of selectivity exercised by OCR is quite apparent since only 40 contracts have been executed from this much greater group of proposals—a ratio of 1 to 10. Many more worthy and urgent projects are available which OCR's level of appropriations cannot possibly permit and, therefore, OCR constantly screens out proposals of lesser potential.

It shall be our continuing endeavor to fulfill the mandate of Congress as expressed in the Coal Research Act—"to encourage and stimulate the production and conservation of coal in the United States through research and development and to develop through research new and more efficient methods of mining, preparing, and utilizing coal."

Itemization of estimate

		Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
Program and financing:					
Total obligations		$6,319,368	$7,792,834	$8,237,000	$444,166
Unobligated balance, start of year		−56,202	−572,834		572,834
Unobligated balance, end of year		572,834			
New obligational authority (appropriation)		6,826,000	7,220,000	8,237,000	1,017,000
Object classification:					
11	Personnel compensation	216,849	286,000	288,000	2,000
12	Personnel benefits	16,462	19,000	19,000	
21	Travel and transportation of persons	13,464	24,000	27,000	3,000
22	Transportation of things		2,000	3,000	1,000
23	Rent, communications, and utilities	4,630	5,000	6,000	1,000
24	Printing and reproduction	6,486	8,000	16,000	8,000
25.1	Other services	6,041,431	7,427,834	7,853,000	425,166
25.2	Services of other agencies	16,925	17,000	18,000	1,000
26	Supplies and materials	2,032	2,000	3,000	1,000
31	Equipment	1,089	2,000	4,000	2,000
Total obligations		6,319,368	7,792,834	8,237,000	444,166

PREPARED STATEMENT

Chairman HAYDEN. Mr. Fumich, would you please summarize your activities of the past year, and indicate your plans for the coming year. You may do this orally if you wish, and file your written statement for the record.

Mr. FUMICH. I would like to present a short oral statement. We have our statement which we submit here.

(The statement follows:)

Mr. Chairman, we welcome the opportunity to appear before this committee to make an accounting on the progress of the past year and to answer any questions you may have on the status of our work projected for the coming fiscal year. I intend to keep our statement brief but I am prepared to answer specific questions in whatever detail the committee may desire.

As you know, the program is now in its fifth year of operation and we sincerely believe that our work, especially the exciting progress made during the past year, has acted as a catalyst for the tremendous changes now revolutionizing the energy industry. The Nation today is in what might be described as an energy revolution in which old concepts of marketing, transportation, procurement, and utilization are being reexamined. We believe that the image of coal as the fuel of the past is changing to that of the fuel of the future. And we believe that the work now underway in OCR is part of the reason for the new thinking.

A few years ago coal was an isoalted segment and the "poor cousin" of the energy industry—the retarded member of the energy family. Today coal is a growth industry whose name appears more and more frequently in the general and industrial press.

We feel that the program of the Office of Coal Research is, at least in part, responsible for the "total energy" concept that is emerging. The fossil fuel industries are joining hands for the common—and national—good. Gasoline from coal—natural gas from coal—are no longer sneered at as being the pipedreams of wild-eyed visionaries. Coal lands and coal stocks appear in increasing amounts in the financial reports of companies whose past interests have been solely in liquid and gaseous fuels.

Our request for fiscal year 1967 is $8,237,000 as against $7,220,000 for fiscal year 1966. The total funds requested represent an increase mostly for ongoing work. This year for instance, eight new projects were approved by the Congress. The requested funding will accommodate work on four new projects as well as continuation of projects which will be underway at the close of fiscal year 1966.

We are mindful of the desire of the President and of the Congress to keep expenditures at a minimum, and this is the "barebones" figure below which program costs would be increased in the long run—or past expenditures would be wasted. Our request for administrative funds is $384,000 or 4.6 percent of the total request, as compared to 5.3 percent the previous year, and 22.5 percent several years ago. Per capita effort is being constantly increased.

Our present staff of 19 is 1 less than last year and 4 below our authorized ceiling. No increase in the ceiling has been requested. Although our contract workload is constantly increasing as the program matures, it shall continue to be OCR's policy to request and implement personnel expansion only when necessary, and we believe that our actions bear this out.

Although major efforts of our program are devoted to conversion of coal to energy liquids and gases and to electricity, ancillary to these efforts we have developed a hard-hitting program in terms of cost reduction in mining, preparation, transportation, and recovery of byproducts from all operations. The effort is supported by detailed studies on the economics of coal use and problems associated with its marketing. All of this effort is predicated on our belief that in future years the Nation will require intelligent use of our coal reserves, our tar sands, and our oil shales, as well as our supplies of petroleum and natural gas.

With respect to our areas of effort, we can say that we now estimate that gasoline can be produced from commercially-priced coal for 10½ to 13 cents per gallon, depending on location, cost of coal, and a multitude of other factors. We believe that this represents progress and that vigorous implementation of

this program should be carried out. Our efforts in this area should produce one or more processes that could find application pretty well throughout the United States.

All future projections on energy use show an increasing demand for natural gas. We are working diligently in the area of conversion of coal to useful fuel gases and are assisted in our efforts by sizable contributions from the American Gas Association. Here, too, we believe that we are nearing a point of commercial application.

We would be remiss if we did not look carefully at ways of converting coal to electricity more efficiently. This work is progressing favorably.

Our work has also suggested the potential for new and unexpected market, such as for sewage treatment. We can now foresee potential contributions to the Great Society, in the form of reduction of air and water pollution. A number of our projects are expected to provide these auxiliary benefits.

We firmly believe that our program to date and the projects we anticipate for future years hold great promise for benefit to the American taxpayer. Research results are difficult to assess under the best of circumstances, but we do believe that our program has shown and will demonstrate interchangeability of coal with other energy resources, and that this result will contribute to a growing national economy.

Our efforts in these and other areas are constantly being reviewed as we continue to receive new proposals at the rate of approximately one per week. To date we have received nearly 400 proposals for research and have executed 40 contracts.

We continue to work closely with our consultants, our General Technical Advisory Committee, the coal industry, and with Bureau of Mines. We work closely with the Bureau of Mines to prevent duplication and to assure coordination of effort.

I realize that the time of the committee is valuable and for that reason have reserved my comments on the general direction, scope, and impact of our program. Although I did not wish to belabor you with figures and statistics, we stand ready to provide such information and data as may be of value to you.

Energy Industry Revolution

Mr. Fumich. Mr. Chairman, we consider it an honor and a privilege to appear before the committee and make our annual accounting.

As you know, the program is now in its fifth year of operation, and we sincerely believe that our work, especially the exciting progress made during the last year, has acted as a catalyst for the tremendous changes now revolutionizing the energy industry. The Nation today is in what might be described as an energy revolution in which old concepts of marketing, transportation, procurement and utilization are being reexamined. We believe that the image of coal as the fuel of the past is changing into that of the fuel of the future, and we believe that the work now underway in OCR is part of the reason for the new thinking.

COAL NOW GROWTH INDUSTRY

A few years ago, coal was an isolated segment and the "poor cousin" of the energy industry—the retarded member of the energy family. Today, coal is a growth industry whose name appears more and more frequently in the general and industrial press.

COAL-EXTRACTED GASOLINE AND NATURAL GAS

We feel that the program of the Office of Coal Research is, at least in part, responsible for the "total energy" concept that is emerging. The fossil fuel industries are joining hands for the common—and national—good. Gasoline from coal—natural gas from coal—are no

longer sneered at as being the pipedreams of wild-eyed visionaries. Coal lands and coal stocks appear in increasing amounts in the financial reports of companies whose past interests have been solely in liquid and gaseous fuels.

We think the sponsors responsible for the legislation setting up the Office of Coal Research, should be congratulated, and that the members of this committee should be proud of their continued support.

STAFF ORGANIZATION

Our organization is on the small side, consisting of 19 employees, 1 less than the staff that we had last year at this time, and we are anticipating that our staff will continue at this approximate size unless our pilot program that is emerging, will require us to hire an additional engineer or two.

1967 BUDGET REQUEST AND 1966 APPROPRIATIONS COMPARED

As you know, we are requesting $8,237,000, which is an increase of $1,017,000 over our formerly-authorized budget of last year. Actually, this is an increase of OCR's total authorization of only $444,000 above last year's appropriation of $7,220,000 plus the carryover of $573,000 from fiscal year 1965. Of this $444,000 increase, $2,000 will be applied to personnel increases; $17,000 will be applied for administration and $425,000 to the contract program.

REPROGRAMING OF 1966 FUNDS

The program is actually not expanding in another way. For instance, the $1,709,000 that we requested last year for eight new projects was used to reprogram four existing projects.

The four projects for which we requested reprograming authority and which the Appropriations Committees approved, were the Anthracite Culm Bank project amounting to $375,000; the Rand Development Corp. (sewage) project for a total of $250,000; the FMC (COED) (char-oil-energy device) project for a total of $500,000; and the Westinghouse (fuel cell) project for a total of $580,000.

1967 NEW RESEARCH PROJECTS

The request of $8,237,000 includes $573,000 for four new projects that we would like to execute in fiscal year 1967. These four projects are the Gourdine project, for which we are requesting funding in the amount of $225,000; the Howard University diesel project, for which we are requesting funding of $148,000; and the Char Market project, for which we are requesting funding of $100,000; and a project in a transportation area which we would like to fund with $100,000.

FUNDING OF PROPOSED PROJECTS

I would like to mention to the committee at this time the fact that the Gourdine proposal or project which we have scheduled for 1967, is one on which we would like to make a request to reprogram this project for funding in fiscal year 1966. For your information, today's

Wall Street Journal has an article describing this very project, which I recommend for your reading pleasure.

We would propose to use the funds appropriated for the coal blending project which we have earmarked for use in fiscal year 1966; $100,000 would be enough funding from that project to reprogram the Gourdine proposal. We would only need a small increment of funding for 1966, approximately $25,000, to fund the Howard University project this fiscal year. We would propose to get that money from the FMC reprograming of this past year. At that time, we requested and the committees approved reprograming $500,000 for the FMC proposal, but we actually negotiated a contract amendment to this project in the amount of $478,000, so the remainder amount in the reprograming could be used in the Howard University proposal for the remaining months of this fiscal year.

The reason that we are making a request to reprogram the Howard University project is because in our negotiation process, we have arrived at the point of signature much more quickly than we had anticipated and, since we have this project ready for execution at the present time, we would much rather sign it now than wait until July of this year, which would be the start of fiscal year 1967. We do not think we should waste that much time since we do have the contract ready for signature.

Administrative and Supervisory Funds

Without further ado, I'd like to mention one other aspect of our program to show that we are trying to hold down costs as much as possible. Last year we had administrative and supervisory funds of $365,000. I would like to emphasize that we are running much below that figure as far as our administrative costs are concerned. We have 19 employees at the present time, one less than the number that we had last year at this time.

We will try to stand pat at that figure although we must realize that with three new pilot projects starting this fiscal year, the Consolidation Coal Co. project gasoline pilot plant, the Rand Development Corp. sewage pilot plant, and the West Virginia University flyash brick pilot plant this may not be possible. This pilot plant activity will require much more intensive surveillance and technical examination by our personnel. For that reason, it might be required that we add additional professional engineering staffing. This might be required in order to check these projects properly.

Administrative Expense Program

For fiscal year 1967 we are requesting $384,000, an increase of $19,000 over our administrative and supervisory funding of last year, which, incidentally was $365,000.

Of this amount, $2,000 will be required for salary increases and $17,000 of this amount would be required for general administration. The largest increments in this administration area would be a $3,000 increase for transportation and an $8,000 increase for printing.

Even though we are requesting $384,000, I am hopeful that I can come back here next year and again show that we are not spending our authorized amount. In other words, I would like to be in the same position as we are this year. We are requesting the $384,000

for possible anticipated administration expenses, but we are hopeful that we can operate at a lower level.

Rather than take up further time with the committee with my oral presentation, I now stand ready to answer any questions of the chairman and other members of the committee, which they may have concerning our fiscal year 1967 request.

CONTRACT PROGRAM

Chairman HAYDEN. Would you please place in the record, a table showing your contract program, both present and proposed? I believe that the type of table which you prepared last year was quite satisfactory and will again be sufficient.

Mr. FUMICH. We will submit that shortly.

(The table follows:)

Office of coal research program budget estimates

[Dollar amounts in thousands]

Contractor (1)	Date of contract (2)	Date of contract completion (3)	Location of work (4)	Estimated cost of contract (5)	Funded prior to fiscal year 1966 (6)
A. PROJECTS UNDER CONTRACT FEB. 16, 1966					
1. Atlantic Refining Co	Aug. 10, 1964	Aug. 10, 1967	Philadelphia, Pa	$968	$600
2. Bituminous Coal Research, Inc. (No. 324).	Dec. 20, 1963	Dec. 20, 1966	Monroeville, Pa	975	500
3. Booz, Allen & Hamilton, Inc. (No. 486).	Nov. 18, 1965	Nov. 18, 1966	Washington, D.C	109	
4. Combustion Engineering, Inc.	Nov. 24, 1965	Nov. 24, 1967	Windsor, Conn	406	
5. Consolidation Coal Co. (No. 310).	Aug. 30, 1963	Aug. 30, 1969	Library, Pa., and Cresap, W. Va.	9,993	4,900
6. Consolidation Coal Co. (No. 415).	June 11, 1964	June 11, 1967	Library, Pa	884	384
7. FMC Corp	May 16, 1962	Oct. 16, 1966	Princeton, N.J	1,599	1,121
8. Hydrocarbon Research, Inc.	Feb. 4, 1965	Feb. 4, 1968	Trenton, N.J	2,064	600
9. Iowa State University	May 11, 1965	Nov. 11, 1970	Ames, Iowa	226	226
10. Institute of Gas Technology.	July 29, 1964	July 29, 1967	Chicago, Ill	856	700
11. M. W. Kellogg Co. (No. 380).	June 11, 1964	June 11, 1969	New Market, N.J	1,709	600
12. M. W. Kellogg Co. (No. 481).	June 25, 1965	June 25, 1966	do	109	109
13. Arthur D. Little, Inc	Dec. 30, 1965	Oct. 30, 1966	Cambridge, Mass	92	
14. Melpar, Inc	May 26, 1965	May 26, 1967	Falls Church, Va	234	234
15. Robert R. Nathan Associates, Inc. (No. 475).	Oct. 12, 1964	Sept. 12, 1966	Washington, D.C	169	169
16. Ralph M. Parsons Co	May 16, 1962	Nov. 16, 1969	Los Angeles, Calif	444	200
17. Pope, Evans & Robbins (No. 242).	Feb. 26, 1962	Feb. 26, 1967	New York, N.Y	164	164
18. Pope, Evans & Robbins (No. 478).	Feb. 20, 1965	Aug. 20, 1967	do	531	531
19. Rand Development Corp. (No. 483).	Aug. 25, 1965	Aug. 25, 1967	Cleveland, Ohio	617	
20. University of Utah	Aug. 24, 1962	Aug. 24, 1967	Salt Lake City, Utah	270	170
21. Virginia Polytechnic Institute (No. 410).	June 9, 1964	Dec. 9, 1967	Blacksburg, Va	287	287
22. Westinghouse Electric Corp. (No. 303).	Dec. 6, 1962	June 6, 1968	Pittsburgh, Pa	2,397	1,000
23. Westinghouse Electric Corp. (No. 476).	Feb. 4, 1965	Feb. 4, 1966	do	113	113
24. West Virginia University (No. 488).	Dec. 6, 1965	June 6, 1968	Morgantown, W. Va	467	
Subtotal				25,683	12,608

Contractor (1)	Date of contract (fiscal year) (2)	Estimate for completion (months) (3)	Location of work (4)
B. NEW PROJECTS (PROPOSED) IN BALANCE FISCAL YEAR 1966			
1. Avco Corp	1966	48	Boston, Mass.
2. Bituminous Coal Research, Inc	1966	36	Monroeville, Pa.
3. Blast Furnace Fuel Injection Economics	1966	14	
4. Eastern Gas & Fuel Associates	1966	48	Everett, Mass.
5. Franklin Institute	1966	24	Philadelphia, Pa.
6. Gourdine Systems, Inc [1 2]	1966	42	Irvington, N.J.
7. Pennsylvania State University	1966	36	College Park, Pa.
8. Pennsylvania State/Dorr-Oliver Co	1966	30	Scranton, Pa.
9. Stanford Research Institute	1966	60	Menlo Park, Calif.
10. Union Carbide Corp	1966	36	Institute, W. Va.
C. CONTRACTS (PROPOSED) FOR EXECUTION IN FISCAL YEAR 1967 REPRESENTING EXTENSIONS OF EXISTING OR PAST CONTRACTS			
1. FMC Corp	1967	----------	
2. Westinghouse Electric Corp	1967	----------	
3. Pittsburg & Midway, division of Gulf Oil (Spencer Chemical).	1967	----------	
D. NEW PROJECTS IN FISCAL YEAR 1967			
1. Howard University	1967	36	Washington, D.C.
2. Market study (char economics)	1967	10	
3. Transportation system economics	1967	14	

[1] Reprograming request, OCR No. 2, Oct. 18, 1965.
[2] If project not approved for reprograming to begin fiscal year 1966, should then be shifted to "New projects" in fiscal year 1967.

NOTE.—For description of work and potential benefits see apps. A and B.

APPENDIX A

A. Projects under contract as of February 16, 1966

1. Atlantic Refining Co.: A new process based on a method of feeding bituminous coal, together with crude oil residuum, into a fluid coking operation is now underway. The coal is "topped" and volatiles are removed for further processing into gasoline and other liquid fuels. If successful, there could be a substantial increase in coal usage in the many locations where oil refinery and coal-fired. electric-generating plants are located in relatively close proximity to one another.

2. Bituminous Coal Research, Inc. (gasification) : The overall objective of the contract is to develop equipment to produce gases suitable for process heat, as a source of hydrogen, or to mix with pulverized coal for pipeline transportation. It is anticipated that equipment can be developed ranging in size from small-scale use to very large-scale applications, opening new markets to small, medium, and large coal producers.

3. Booz, Allen & Hamilton, Inc. (industrial coal market analysis) : Industrial users represent coal's second largest market. A depth analysis is needed to develop a realistic and effective future course of action. This study will be to indicate whether coal can realize its optimum potential and what realistic steps the industry should take to bring it about. The survey will seek to enhance profitable sales volume and provide a cushion against possible losses in other coal markets.

4. Combustion Engineering, Inc.: Corrosion of external surfaces of high-temperature electric utility boilers fired with coal or residual oil has become an expensive problem. It is believed that there may be materials in certain clays and shales physically associated with the coal seams that act as natural corrosion inhibitors. These are presently removed by the coal cleaning operation. This project will investigate the causes of corrosion and determine methods of modifying the coal and to prevent it.

5. Consolidation Coal Co. (gasoline) : Under this contract, a pilot plant is being constructed to convert approximately 24 tons of coal per day into gasoline. The plant will be operated to determine the process and equipment alternatives which

could enable a full-scale plant to be designed and built as a commercial venture by a private enterprise. The contract involves bench-scale research, design, and construction of pilot plant facilities, and operation and evaluation of the pilot plant.

6. Consolidation Coal Co. (lignite gasification): For the development of a CO_2 acceptor process for the production of pipeline quality gas from western lignite coals, based on a method of mixing hot calcined dolomite (a form of limestone) with lignite to gasify the lignite. Carbon dioxide gas formed in the process combines with the calcinate to form a carbonate and is removed in solid form from the fuel gas. The residual char is burned in another vessel to recalcine the carbonate which is then recycled back to the gasifier. A nitrogen-free gas is produced without the use of oxygen. It is estimated that if this project goes on to the pilot plant stage, the construction and operation will require sizable additional funds.

7. FMC Corp.: To determine the possibility of deriving from coal a synthetic crude oil of a kind that, mixed with the residue (char), can be transported by pipeline.

8. Hydrocarbon Research, Inc.: The contractor will seek to develop a process for converting various coals to liquid products ranging from heavy fuel oils to high-octane gasoline, with minimum production of byproducts. The work will investigate the application to coal processing technology of improved methods for hydrogenation, gasification, and the manufacture of oxygen. The work will be performed using existing pilot plant equipment of about 30-barrel-per-day capacity in the contractor's laboratory at Trenton, N.J. The program will conclude with the process design for a full-scale commercial plant which would be constructed with private funds.

9. Iowa State University: This project is investigating the processing of coal in fluidized beds through which an electric current is passed. A laboratory-scale and bench-scale investigation is planned. As with other electro-processing methods there is a potential for the generation of a wide spectrum of useful and more valuable products from coal.

10. Institute of Gas Technology: Funds in an equal amount supplied by OCR and the contractor. The objective is to develop a competitive process of manufacturing a high-B.t.u. gas from coal which will supplement the Nation's natural gas reserves. The process includes charring and hydrogenation of coal plus methanation of the resulting gas. The period of the contract is 3 years. Experimental work will be performed at IGT's laboratories in Chicago. Cosponsored.

Total cost:

Government	$855,930
IGT	855,930
Total	1,711,860

If the project proceeds to larger stage, additional Government-cosponsored cost is estimated at $6,300,000 to be funded for a similar amount by the contractor.

11. M. W. Kellogg Co.: For further development of a new coal-gasification process originated by Kellogg and based on a method of injecting steam and coal into a molten salt under pressure to produce a synthesis gas. By controlling the conditions of the reaction, gas can be "tailor made" for further processing into useful products. Major objectives are to produce pipeline gas (essentially methane) and hydrogen at competitive prices. A cost-saving feature of the process is that oxygen is not required.

12. M. W. Kellog Co. To determine under what conditions coal can best be used to supply the energy required to produce fresh water from ocean or brackish water and also combined power generation.

13. Arthur D. Little, Inc. (transportation systems economics): Transportation cost is often a significant percentage of coal's delivered price. Any reduction in rates made possible through improved practices or equipment will enhance coal's competitive position versus the other fossil fuels or nuclear energy. Directed toward a survey of equipment and terminal economics.

14. Melpar, Inc.: A laboratory investigation of a process for producing acetylene from anthracite via sodium carbide using fluidized beds. It has the promise of producing low-cost acetylene which would be the basis for the establishment of a chemical processing industry in the anthracite region.

15. Robert R. Nathan Associates: To make a study appraising intensively the potential markets for U.S. coal, including lignite, produced in the States west of the Mississippi River, including Alaska, and the constructive steps that may be taken toward achieving that potential. Analyze and project the potential market for western coals, including lignite, to the year 1980 by major producing area, by major market area, and end uses.

16. The Ralph M. Parsons Co.: To analyze the engineering and economic feasibility of a process owned by the Consolidation Coal Co., Pittsburgh, Pa., to convert coal into gasoline and to act as design consultants to OCR during pilot plant construction, operation, and evaluation.

17. Pope, Evans & Robbins: To design and develop a new, completely integrated, coal-fired industrial heating plant of intermediate-size range requiring minimum attendance and space, and with initial and operating costs considerably more favorable more than existing coal-fired equipment.

18. Pope, Evans & Robbins: As a result of experience gained in the performance of a previous contract with OCR, further research on a coal-fired packaged boiler using radically improved firing methods may be developed. The contractor will seek to design a unit with a capacity of 100,000 pounds of steam per hour or more. It is expected that such coal-fired boilers would be competitive with oil- and gas-fired units in many areas of the country in cost and automatic operation, and would permit coal to compete with greater effectiveness in the expanding industrial energy market.

19. Rand Development Corp.: Construction and operation of a pilot plant for coal processing of sewage and industrial wastes employing filtration and adsorption process developed under previous contract.

20. University of Utah: Bench-scale testing of the response of powdered coal in an electric arc, by flash photolysis, and in other reactions, toward recommending a final process for converting western coals into gaseous and liquid fuels. Cosponsored.

Government	$270,000
State of Utah	174,000
Total cost	$444,000

21. Virginia Polytechnic Institute: To develop the most favorable integrated power, drainage, ventilation and haulage systems that are applicable to a given mining situation. Also, similar scientific analyses of longwall mining production systems. The contractor will conduct mining engineering, industrial engineering, and operation research to develop formulas, programs and mathematical models which can be quickly solved by computer techniques, including development and field-proving of the formulas and programs.

22. Westinghouse Electric Corp.: To develop a fuel cell burning pulverized coal, a gas derived from coal or a combination. End result will be construction and operation of a 100-kilowatt prototype cell system operated in conjunction with a connected d.c. load to provide engineering data required for the design of a pilot plant.

23. Westinghouse Electric Corp. (MHD Power): This is a preliminary study of the feasibility of magnetohydrodynamic (MHD) power generation using coal as fuel. One factor to be investigated is the possibility of fixing nitrogen, for fertilizer and other uses in the high-temperature MHD duct. The program will seek to define problems of high-temperature coal combustion, and other MHD requirements, and outline a rational program for their solution. It will culminate in the conceptual design of a 20-megawatt pilot plant which would be the first step in a more extensive development program to bring coal-fired MHD power to the point of pilot plant and then eventual commercial application.

24. West Virginia University: A pilot plant for development and production of structural brick, and potentially other building materials as well, using fly-ash and bottom-ash from coal combustion.

B. New projects proposed in balance fiscal year 1966

1. Avco: A promising electro-coal processing scheme to feed coal into an electric arc as a consumable electrode. Theoretical studies indicate the possibility of producing useful and more valuable liquids, gases, and chemicals by this method. The work is planned with an initial feasibility demonstration before proceeding to detail development of process and equipment.

2. Bituminous Coal Research, Inc. (ebbulating bed reactor) : This project has potential application in reduction of air pollution because use of a fluid bed for gasification and/or combustion causes the ash and other impurities to remain behind.

3. Blast Furnace Fuel Injection Economics: A coal injection system could represent an opportunity to protect or retain 50 percent of the potential coke replacement. Research will look at investment and operating factors, business aspects, and develop a report which may disclose coal's advantages in this application.

4. Eastern Gas & Fuel Associates (coal blending) : This project is the logical technical follow-up of a successful earlier export study conducted for OCR. The project would develop technical data to permit the optimum blending of U.S. coals with European coals. This in turn would lead to increased European use of American coals, and aid in the balance-of-payments program.

5. Franklin Institute: Research on the development of a coal gasifier, for producer gas or synthesis gas, with separation of devolatilization and combustion functions.

6. Gourdine Systems, Inc.: A new concept for generation of electrical power from coal, using the products of coal combustion as the working element in a Van de Graf generator to produce high-voltage d.c. or a.c. directly. If successful the process would solve some of coal's cost problems, air pollution, powerplant site restriction, and conversion of cost problems.

7. Pennsylvania State University (project specialty coals) : This project will seek to ascertain which components, or coal types, within a given anthracite or bituminous coal seam are most reactive in chemical and conversion processes, and then determine practical methods of separating the coal materials so that they may best be used for these special purposes. The remainder of the material will be utilized for conventional combustion or metallurgical purposes.

8. Pennsylvania State/Dorr-Oliver Co.: Research directed toward development of a treatment plant to demonstrate the economic feasibility of converting coal refuse dumps for direct use in the construction of roads, building materials, and the manufacture of concrete. Additional funds ($125,000) from State of Pennsylvania.

9. Stanford Research Institute: This work is to develop experimentally methods of processing coal by electric induction heating in a fluidized bed. It has the possibility of producing useful and more valuable liquids, gases, and chemicals and is part of OCR's broad investigation of electroprocessing of coal. When coupled with an extremely cheap source of coal-generated power, such as MHD generation, one or all of the various electro-processing methods has the potential of being the basis for new processing industries located in the coal-producing areas.

10. Union Carbide Corp. (H.P.H.) : A unique process employing controlled aggomeration in a fluid bed to produce useful gases from coal at low cost. This is to develop a process to manufacture high-pressure hydrogen needed by other projects we have under development. Use of Carbide's process will make the production of liquids and gases from coal independent of natural gas as a source of hydrogen and may potentially affect the price of the product as much as 10 percent.

C. Contracts proposed for execution in fiscal year 1967 representing extensions of existing or past contracts

(1) FMC Corp.: If work under existing FMC contract continues successfully, and subsequent evaluation and recommendation is to proceed to the design, construction and operation of a pilot plant of this project, the effort will concentrate, at a larger scale, on vis-breaking and catalyst work on the liquid product which emerges from this process, and on a sulfur-free char fuel.

(2) Westinghouse Electric Corp.: The work to date has been successful in the production of a small-scale solid electrolyte coal-burning fuel cell. If the additional work in fiscal year 1966 is successful, and a subsequent evaluation and recommendation is to proceed to the design, construction and operation of a 10-megawatt cell unit, burning pulverized coal or a gas derived from coal (or a combination) the funds projected would be for this purpose.

(3) Pittsburg & Midway Coal Mining Co. (formerly the Spencer Chemical Division project) (Division of Gulf Oil Corp.) : To provide funding to complete design work on pilot plant, and initiation of purchases of long-lead-time items of equipment, construction, and operation of a 25-ton-per-day pilot plant. Work

on laboratory and process development-unit scale already completed under earlier contract ($1,240,000) was thoroughly and impartially evaluated. Recommendation was to proceed to pilot plant effort. Prior work produced an excellent quality low-ash product. B.t.u. values were considerably up-graded from original coal used in process, contaminants and noncombustibles almost wholly removed.

D. New projects proposed for fiscal year 1967

1. Howard University: This project represents an attempt to capitalize on the low-cost and high-energy value of coal to recapture the railroad locomotive market. Problems of oil contamination and metal abrasion remain to be overcome. In addition, a dependable method of injecting the fuel into the engine in variable metered amounts has not been developed.

2. Market study (char economics): Successful marketing of char may make a project commercially economic and assist in disposing of the large quantities of char involved.

3. Transportation studies: A significant part of the delivered price of coal to the industrial consumer is transportation cost. It involves many destinations and problems quite different from those encountered with unit train movements. A transportation survey will be developed to see what can be done to lower the transportation cost of coal to industrial users.

APPENDIX B

A. Projects under contract as of February 16, 1966

1. Atlantic Refining Co.: This process is to adapt the use of coal to the established oil-refinery fluidized coking process to take an overhead stream of gasoline, producing oils, and a bottom stream of char for fuel in adjacent power plants. In one refinery/power-plant complex, such as Philadelphia (and others) the potential additional coal market is estimated at 20 million tons per year.

2. Bituminous Coal Research, Inc. (gasification); 6. Consolidation Coal Co.; 10. Intitute of Gas Technology; 11. M. W. Kellogg Co.: These projects, while all different in their approach, have the same objective. This is to produce pipeline quality gas for something less than 50 cents per million Btu. Successful achievement of this could result in an additional coal market of 100 million tons, or more, per year. Each 1 percent of project 1980 gas requirement will develop a market for about 9 million tons annually. Because large populations are on the east and west coasts close to large coal reserves, it is estimated that as much as 30 percent of the market by 1980, or 270 million tons of coal, should be possible.

3. Booz, Allen & Hamilton, Inc. (industrial coal market analysis): Potential expansion of 10 million tons annually.

4. Combustion Engineering, Inc.: Development of corrosion retardant coals will aid in reducing the cost of electricity to the American public. It would prevent expensive boiler outages. If the project concurrently succeeds in reducing air pollution from coal-fired boilers, major impact would be made on a national problem.

5. Consolidation Coal Co. (gasoline); 16. The Ralph M. Parsons Co.: The purpose of this contract was to expedite the commercial potential of the Consolidation Coal synthetic liquid fuel process. The successful bench scale research has indicated a 2-cent-per-gallon reduction under former estimates with a probable refinery rack-sale price of 11 cents per gallon for 100-octane gasoline. A pilot plant has been designed and construction started in October 1965 to obtain data for design of a commercial plant. The pilot plant will be completed during calendar year 1966 and the complete evaluation is scheduled in 1969. An estimated market for 200 million tons of coal annually by 1980 using this process is possible if only 10 percent of the Nation's gasoline is produced from coal.

6. Consolidation Coal Co. (lignite gasification): See A–2 above.

7. FMC Corp.: 8 Hydrocarbon Research, Inc.: Both of these projects are designed to produce an oil refinery feed stock—to produce gasoline primarily—plus varying amounts of fuel char. Another objective of the FMC project is to produce a pumpable mixture of char and oil for use in an improved pipeline transportation system. If successful, it is estimated that 20 or more "coal refineries," each consuming perhaps 10 million tons of coal per year may eventually be constructed. The FMC project has been shown to be technically feasible and requires a pilot plant for commercial validation of prior results.

8. Hydrocarbon Research, Inc.: See A–7 above.

9. Iowa State University: This is an investigation of electrical processing of coal using fluidized-bed methods. If hydrogen can be successfully produced, a large market for coal would result in the manufacture of chemicals and hydrogen made from char (carbon, steam, and electricity). The project also supports work on making gasoline and pipeline gas.

10. Institute of Gas Technology: See A–2 above.

11. M. W. Kellogg Co.: See A–2 above.

12. M. W. Kellogg Co.: Coal, as a source of energy, is more economical in many areas than nuclear reactors which have been extensively studied as heat sources for desalination plants. This study is intended to place coal in its proper perspective.

13. Arthur D. Little, Inc. (transportation systems economics): Two separate projects are envisioned which indicate an estimated market for an additional 20 million tons per year.

14. Melpar, Inc.: Anthracite consumption has been declining for many years. This project, intended to develop a process for making low-cost acetylene from anthracite, could result in a substantial chemical industry locating in the anthracite region even though the increase in anthracite consumption need not be large. A plastics industry based on low-cost acetylene can be envisioned with attendant employment, payrolls, and social benefits.

15. Robert R. Nathan Associates: Potential markets for 60 million tons of western coals annually.

16. The Ralph M. Parsons Co.: See A–5 above.

17. Pope, Evans & Robbins: Boilers developed under this contract and now in operation are burning about 500,000 tons of coal annually. The installations were made on the basis of providing lowest energy cost to the consumer.

18. Pope, Evans & Robbins: If the contractor succeeds in this attempt to develop industrial package boilers which prevent pollution of the air from coal-fired plants, the social benefits will be huge. In addition, cost of energy to the consumer will be further reduced.

19. Rand Development Corp.: Pilot plant effort to advance the area of sewage and waste treatment may make practicable low-cost sewage treatment for towns and cities, preventing water pollution and encouraging water conservation. New uses of coal are estimated at 1,000 tons per day for every 200 million gallons of sewage treated under the process. A potential market for more than 3 million tons annually is estimated.

20. University of Utah: A general supporting project to determine characteristics of western coals which would permit adaption of OCR processes, originated elsewhere, to the West. It could expedite establishment of any or all of our major liquid, gasification, or power projects in the area.

21. Virginia Polytechnic Institute: This work should further reduce the cost of mining coal, thus tending to curb price increases of all competitive fuels and reduce the cost of electricity to the consumer. It should also enable coal to retain a competitive position in the electric utility market which may otherwise decline if prices of coal advance appreciably.

22. Westinghouse Electric Corp.: This projects seeks to develop a coal-burning fuel cell power plant and shows considerable promise to increase current thermal efficiency from approximately 40 percent to as high as 80 percent. (About 50 years were required to increase efficiency from approximately 20 percent to today's 40 percent.)

Technical feasibility has been proven with a 100-watt operating unit, and work developing low-cost cell batteries is approaching success. The next step will be to fabricate a self-sustaining unit, 100-kilowatt plant, to establish thermal balance and heat-transfer characteristics. Assuming success, the final phase will be a pilot-scale unit, 10,000 kilowatts, for obtaining commercial-plant data proving economic feasibility. Power plants located in the semiarid West would not require water.

23. Westinghouse Electric Corp. (MHD power): This project is a preliminary technical and economic evaluation of magnetohydrodynamic power generation. Successful development of a coal-fed MHD unit could lead to a power plant producing fresh water and high-quality fertilizer while operating at 50+ percent thermal efficiency for electric generation. It is estimated that an initial commercial plant would use 5 million tons of coal per year after 1975.

24. West Virginia University: This project should create a major new market for an electric utility waste, resulting in an overall decrease in the cost of electric

power generation and providing an economic incentive to the utilities to improve their air-pollution abatement procedures.

B. Projects proposed in balance of fiscal year 1966

1. Avco; 9. Stanford Research Institute: These are both intended to develop systems for producing useful chemicals, including hydrogen, by electrical activation of the coal molecules. Successful development, especially when operated in connection with coal-refinery/powerplant complexes could be highly beneficial to the coal industry. The use of electricity constitutes use of coal to upgrade itself.

2. Bituminous Coal Research, Inc. (ebbulating bed reactor): This system of coal combustion may be able to solve the problem of sulfur and nitrogen emission and thus protect coal's position in large utility and industrial applications where more stringent air-pollution regulations may otherwise pose a threat to such coal markets.

3. Blast furnace fuel injection economics: Potential expansion of markets by 7 million additional tons annually.

4. Eastern Gas and Fuel Associates (coal blending): Success of this work should aid in breaking down barriers to increased use of American coals, improve the balance-of-payments problem, and increase employment in Appalachia and in the transportation industry.

5. Franklin Institute: To develop a novel combustion gasification system; also promises to have air pollution reduction benefits.

6. Gourdine Systems, Inc.: An electrogasdynamic power generating system seem to be ideally suited to coal (the fly-ash is beneficial). If all of the promises of theoretical analysis are confirmed in this development program, there would be great benefits in reduction of power costs, cheapening of EHV transmission, water conservation, air pollution reduction, and a greatly expanded market for coal—potentially 100 million tons per year or more.

7. Pennsylvania State University (project specialty coals): Success of this project will provide new markets for anthracite and other coals in making chemicals, liquid and gaseous fuels. Success will also increase the technical and economic feasibility of the entire OCR conversion program, thus shortening the period before such processes are commercially exploited on a large scale.

8. Pennsylvania State/Dorr-Oliver Co.: While this project should increase the market for anthracite, its prime potential impact is in creating noncoal jobs in the depressed anthracite area. Success of the project could have the additional impact of reducing both air and stream pollution in the anthracite Appalachian area.

9. Stanford Research Institute: See B–1 above.

10. Union Carbide Corp. (H.P.H.): This is a controlled agglomeration fluid-bed process to produce high-pressure hydrogen at low cost from either coal or char. It is estimated that this will reduce the cost of liquid and gaseous products in other OCR projects. Cost of gasoline may be reduced 0.5 to 1.0 cent per gallon while eliminating the need for natural gas.

C. Contracts proposed for execution in fiscal year 1967 representing extensions of existing or past contracts

(1) FMC Corp.: See A–7 above.

(2) Westinghouse Electric Corp.: See A–22 above. Potential use of such fuel cell process with its greater potential efficiency could insure as much as 20 million tons per year of coal. (Coal's share of the expanding utility market, at approximately 10-percent growth per year.)

(3) Pittsburg Midway Coal Mining Co. (formerly the Spencer Chemical Division project) (Division of Gulf Oil Corp.): This project demonstated the technical feasibility of producing a very low-ash, low-sulfur solid fuel from a wide range of coals at low cost. Market surveys indicated a potential market for 25 million or more tons per year as a fuel and graphite-carbon base. Pilot-plant work is needed to prove the process and to provide sufficient product for adequate utilization testing and equipment development data from which full-scale plants might then be built.

D. New projects proposed for fiscal year 1967

1. Howard University: This project could return coal to the transportation picture with a potential market of several million tons in the railroad industry alone. Its threat would serve to prevent increases in the price of competitive fuels to the consumer.

2. Market study (char economics) : Supporting project.
3. Transportation studies: Supporting project.

PROJECTS ELEVATED TO PILOT PLANTS

Chairman HAYDEN. Your justification statement indicates that you plan to bring three of your projects up to pilot plant stage. Which are these, and how much money have you asked for each of them?

SPENCER CHEMICAL LOW-ASH COAL PROJECT

Mr. FUMICH. One of the projects is what we generally call the Spencer Chemical low ash coal project. It is now the Pittsburg Midway Coal Mining Co., a subsidiary of Gulf Oil Corp.

We originally executed a contract for $1,240,000. We anticipate going into a pilot plant stage.

Chairman HAYDEN. Where is it located?

Mr. FUMICH. The site location has not been made; we are not in that particular phase as yet. We are now negotiating a pilot plant contract and requesting $1 million for that particular project.

WESTINGHOUSE FUEL CELL

The second project is the Westinghouse fuel cell contract. That was originally executed for $1 million, but was amended since that time and we are requesting $1 million in fiscal year 1967. If this work progresses satisfactorily in 1966, we'll be ready for a pilot plant stage in fiscal year 1967.

The third project——

Chairman HAYDEN. Where is this?

Mr. FUMICH. The site has not been selected because we are not near that stage.

FOOD MACHINERY CORPORATION PROJECT

This next project is the FMC COED project. Originally this was executed for $1,121,000 and was later amended for a total of $478,000. We have $1,599,000 obligated on this at the present time. We are requesting $500,000 in fiscal year 1967. We hope to get into design of a pilot plant. We are not ready for the pilot plant site. Those are the three projects on which we are contemplating pilot plant activity.

Chairman HAYDEN. What new projects are you including in your fiscal 1967 budget and how much have they allocated for initial costs on these? You have done that?

NEW PROJECTS, 1967

Mr. FUMICH. Yes, sir; on the Gourdine proposal we are requesting funding of $225,000; $148,000 for the Howard University diesel project; $100,000 for the char market study, and $100,000 for transportation program.

ADMINISTRATIVE AND SUPERVISORY EXPENSE

Chairman HAYDEN. A part of your increase over last year is $17,000 for administrative and supervisory expenses. Can you detail this a bit more than the short statement in your justification?

Mr. FUMICH. The $17,000 is broken down as follows: $3,000 for transportation of persons; $1,000 for transportation of things; $1,000 for rent and communications and utilities; and $8,000 for printing and reproduction; $1,000 is for services of other agencies; $1,000 for supplies and materials; and $2,000 for equipment. These add up to the total of $17,000 requested in the administrative area.

PROJECT GASOLINE PILOT PLANT, CRESAP, W. VA.

Chairman HAYDEN. How is your Project Gasoline coming along?

Mr. FUMICH. Mr. Cochran will testify on that.

Mr. COCHRAN. This particular project has progressed to a point where a pilot plant is being constructed at Cresap, W. Va. In general terms, the project is proceeding very well. There are outstanding men assigned to the job by the contractor and they are doing an outstanding job. I can supply all the detail you would like. In general we can say it is proceeding very well.

QUESTIONS SUBMITTED BY SENATOR JACKSON

SOLVATION PROCESS FOR COAL TREATMENT

Chairman HAYDEN. Are there any questions?

Senator MAGNUSON. Yes, Mr. Chairman, I have some questions.

Chairman HAYDEN. You may proceed.

Senator MAGNUSON. My colleague, Senator Jackson, chairman of the Interior Committee of the Senate, wanted to ask one or two questions which he has given to me. You have answered the first, which is: there is a request for $1 million for the Pittsburg Midway Coal Mining Co. Is this for a pilot plant?

Mr. FUMICH. Yes, sir.

Senator MAGNUSON. How will that be spent?

Mr. FUMICH. Possibly for the design of a pilot plant and purchase of preliminary equipment.

1967 PROJECT CAPABILITY

Senator MAGNUSON. Are there any circumstances which might arise making the $1 million appropriation inadequate to meet the project's needs for fiscal year 1967?

Mr. FUMICH. My understanding is if we sign this contract before the end of this fiscal year and if we work more quickly, there might be a need for additional funding requirements.

Senator MAGNUSON. I think that is what the Interior Committee was thinking about, particularly Senator Jackson. He says if Congress appropriated $2 million for this project for fiscal year 1967, could this money be used to purchase some of the necessary items having a long leadtime?

Mr. FUMICH. Under the circumstances, I related, yes.

Senator MAGNUSON. It could be.

Would an appropriation of an additional million prevent a timelag by insuring that these long-lead items are available for installation as soon as the plant is ready to receive it?

Mr. FUMICH. Under the same circumstances, yes.

Senator MAGNUSON. If you had this problem, you would propose to come back, would you not?

Mr. FUMICH. We have anticipated about the right volume of funding for our entire program, depending on slippages in certain areas to make up for shortages in other areas. However, we also anticipate that, in the event that a shortage does occur that we would not have been able to cover with slippage, we will announce that fact immediately.

Senator MAGNUSON. I think that answers the questions for the Interior Committee.

Chairman HAYDEN. Senator Byrd?

Senator BYRD. Thank you, Mr. Chairman.

NATHAN REPORT ON FAR WEST COAL POTENTIAL

Mr. Fumich, with regard to the Nathan report on the Far West coal potential, what would be the major thrust of that report?

Mr. FUMICH. Sir, we think one of the major things about that, of course, is the fact that they were able to consolidate so much information. Some information was available, but there were also large information gaps which were filled by the contractor. The major thrust of that report was the conclusion that Rocky Mountain coal could compete in the major energy markets of the Far West.

W. G. SAUNDERS PROJECT

Senator BYRD. What is the status of your export transportation study being done by William Saunders Associates?

Mr. FUMICH. We anticipate the final report from that agency in 2 weeks. We expect to receive recommendations to produce cost savings and hopefully a lower delivered cost to foreign consumers.

ARTHUR D. LITTLE, INC., PROJECT

Senator BYRD. There was some mention recently about a coal club meeting in Boston at which there was a presentation covering the Arthur D. Little contract. This relates, I believe, to coal transportation in New England. Please describe this work.

Mr. FUMICH. I attended that meeting several weeks ago. The next few years will be important for coal in New England. Major decisions will be made in the energy area and the major impact of this study will be to indicate the cost target which coal will have to meet. The substantial effort by the contractor will be in the transportation area to determine how coal may serve the developing power needs of the area.

WEST VIRGINIA UNIVERSITY PROJECT

Senator BYRD. You have a contractwith West Virginia University, executed November 24, 1965, for the construction and operation of a pilot plant to make bricks and other construction materials from fly ash. What is the status of that work?

Mr. FUMICH. They are gathering equipment and thinking about a site with several buildings and about an acre of ground. They are

going to have to get some equipment together, and a lot will have to be built from the ground up. Hopefully, the plant will be in operation in April 1967, about a year from today.

Senator BYRD. Is that somewhat ahead of the original work schedule?

Mr. FUMICH. Yes, sir.

Senator BYRD. What was the original work schedule?

Mr. FUMICH. We were anticipating about another 6 months, but things are progressing very well in that area.

Senator BYRD. Would you anticipate the delivery and installation of equipment units about that time?

Mr. FUMICH. We would expect this plant would be in full operation by 1967.

Senator BYRD. For how long will the plant be operated and when will the definitive design and economic data be available?

Mr. FUMICH. That plant will be in operation for 14 months and we hope the work will be completed and the project will expire around June 1968. At that time the final report is expected.

Senator BYRD. This would then permit the commercial application of the process?

Mr. FUMICH. Yes, sir.

COMMERCIAL EXPECTATION

Senator BYRD. Would you anticipate there might be commercial plants utilizing the information and data that has been acquired?

Mr. FUMICH. At this time we have had numerous requests from utilities and brick manufacturers expressing their interest and volunteering their support. In fact, not too long ago we received an expression of interest from a West Virginia manufacturer stating that he was ready to start construction of a plant at the time we found this was economically feasible.

We have no doubt it will be grabbed up quickly if it is in the economic ballpark.

UNIVERSITY OF WEST VIRGINIA CONTRACTS AND CONSULTING SERVICES

Senator BYRD. How many persons will be employed in the operation of the pilot plant?

Mr. FUMICH. We anticipate about 6 to 8, of whom 4 will be on the staff of the university.

Senator BYRD. What is the amount of this contract?

Mr. FUMICH. It is $467,000.

Senator BYRD. What other work, if any, is being done at the University of West Virginia for OCR?

Mr. FUMICH. We have no other contract with them, but we have a contract with Combustion Engineering, and this OCR contractor has a subcontract with West Virginia University to provide consulting services. This work is estimated at $110,000.

ANTICIPATED COMMERCIAL ACCEPTANCE

Senator BYRD. Has there been any expression of interest on the part of private electric utilities with regard to the fly ash project?

Mr. FUMICH. Yes, sir, we have received numerous inquiries in that area, sir.

Senator BYRD. You have no feeling there will be any difficulty in securing commercial acceptance if the pilot plant were successful?

Mr. FUMICH. We don't think so. One reason for this is that we anticipate this brick market will be increasing or expanding at the rate of about 10 percent a year. This would not displace any of the present brick industry. What we would be thinking about is part of the added market.

CHEAPER, STRONGER AND LIGHTER BRICKS

As a result, if this product comes out as we visualize it, it would be cheaper, stronger and lighter. We understand the physical characteristics would be better than the present brick. We would anticipate no problems at all.

Several chemical manufacturers have offered to supply us free of charge with sodium silicate, the brick bonding agent. The brick is made up of 97 percent fly ash and 3 percent sodium silicate. Utilities from all over the country have offered us fly ash at no cost.

Senator BYRD. This is going to be quite a breakthrough for the industry?

Mr. FUMICH. We hope so, sir.

SEWAGE TREATMENT PILOT PLANT, CLEVELAND, OHIO

Senator BYRD. With regard to your contract with Rand Development Corp., I believe this amounted to $617,000, calling for erection and operation of a pilot plant for treatment of sewage with coal. What was the basis for the Cleveland site?

Mr. FUMICH. Sir, we had contracted the previous work with Rand Development Corp. which has its offices and other laboratories within one-half mile of the Easterly sewage treatment plant, the site of the pilot plant location. Another reason was lowest cost to the Government. quality facilities, and saving of time. Those are the main reasons.

Senator BYRD. How large will the plant be and how many employees will it have?

PLANT PHYSICAL FACILITIES

Mr. FUMICH. First, the physical facilities. Their plant is not what we would consider in the ordinary sense of the word as what you would visualize as a plant. There will be three submerged concrete tanks covering about 400 square feet of space. The contractor is thinking of employing around 10 people. All would be from the Rand Development Corp.

TREATMENT PROCESS AND PROJECT STATUS

Senator BYRD. Tell us briefly about the process.

Mr. FUMICH. From all indications from the work carried out so far, the process would be equal to any secondary sewage treatment facility we have on removing solids and other contaminants and would be superior to any sewage plant existing today in the removal

of phosphates and hard detergents. It is our understanding there would be lower investment and operating plant costs.

Senator BYRD. How much coal would be used in the process?

Mr. FUMICH. About 1 pound of coal for every hundred gallons of sewage, about 1 pound per capita per day. A town of 10,000 population would use approximately 5 tons of coal a day.

Senator BYRD. What is the status of the work?

Mr. FUMICH. The contractor has already received quotations for the tanks and is working with a machinery manufacturer for construction of the equipment to remove the coal sludge and waste. Hopefully, we will be in operation there in July.

Senator BYRD. At the pilot plant?

Mr. FUMICH. Yes, sir.

PILOT PLANT DURATION AND ECONOMIC AND ENGINEERING DATA

Senator BYRD. How long would the pilot plant operate and when can economic and engineering data required for commercial design be available?

Mr. FUMICH. The plant will be operated for a 1 year period or until late July in 1967. Now, if no major problems of pilot plant design or of operation are encountered, definitive data sufficient for determining area required for commercial plants of given capacity and design and cost figures, may begin to emerge in the late fall of this year. However, a final report to the general public will not be issued until late August 1967.

Senator BYRD. Are you satisfied with the work in connection with this project?

Mr. FUMICH. Yes, sir; at least so far.

PROJECT GASOLINE, CRESAP, W. VA.

Senator BYRD. Mr. Cochran, with regard to Project Gasoline, how much equipment has been delivered to the site at Cresap?

Mr. COCHRAN. On the order of $900,000 worth of chemical process machinery is available there now.

Senator BYRD. Results thus far, according to what you said in answer to the chairman's questions have been very promising.

Mr. COCHRAN. The work in progress is good. Laboratory work is proceeding well, and we are developing an alternate method in the laboratory and construction work is proceeding as planned. I would like to say that after some 20 years of Government experience, I have never run into a better contractor than their Consol organization.

Senator BYRD. What does Dravo have to do with this project?

Mr. COCHRAN. He is a subcontractor. They do a very good job also.

Senator BYRD. Yes; they do a good job in the construction of our Ohio River reservoirs, dams, and locks. They are always ahead of schedule.

PROJECT FUNDING

What is the state of funding on this project?

Mr. COCHRAN. We have encumbered $6.4 million and are requesting $2 million for next year.

Senator BYRD. Will the $2 million being requested in this fiscal year's budget constitute your full capability? Could you efficiently utilize more money in fiscal year 1967 for this project?

Mr. COCHRAN. I would say $2 million is sufficient.

Senator BYRD. So you do not anticipate any requirement for appropriating any additional money in the forthcoming year?

Mr. COCHRAN. No, sir.

Senator BYRD. This project looks so good and you are moving ahead expeditiously.

I just want to be sure you are not operating under too tight a budget.

Mr. COCHRAN. I think the $2 million is adequate, sir.

ANTICIPATED COST INCREASES

Senator BYRD. What could you expect following this fiscal year. Can you talk in terms of what your monetary needs would be beyond fiscal year 1967?

Mr. COCHRAN. Subsequent to fiscal year 1967, it would be our view that it would be necessary to increase the original amount of the contract.

Senator BYRD. What was the original amount?

Mr. COCHRAN. It was $9,993,000.

Senator BYRD. Why would it be necessary to increase the original amount?

Mr. COCHRAN. In the original proposal, submitted to the Department, it was the Department's view, as evidenced in public testimony, that the contractor had understated or underestimated his costs originally. It was decided, however, by the Secretary, that we would hold the contractor to this amount in the contract and require detailed justification from him, the contractor, when and if our thoughts materialized.

It is our view that originally he underestimated the cost of the pilot plant. As a result of some discoveries, we have done some additional work in the laboratories and carried them into the pilot plant and this accounts for the overrun.

Senator BYRD. What does the figure now look like, the ultimate figure?

Mr. COCHRAN. I have an estimate of my own, sir; I would prefer that it not appear anywhere in the record as this is a public hearing. We will submit it to you. We would not like to jeopardize our position with the contractor.

ANTICIPATED SELF-LIQUIDATION

Senator BYRD. All right. This looks like a good project, successful so far, away ahead of schedule, and, if it is indeed successful in the end result, the taxes that would be paid on 1 year's operation would probably more than pay for the cost of the project.

Mr. COCHRAN. We certainly appreciate that statement. That is absolutely correct. We are unique. Our program is a self-liquidating one. If any of the things we do are successful, the taxes returned

to the U.S. Treasury will far outweigh any of the expenditures we plan on making.

Senator BYRD. How long will the pilot plant be in operation?

PILOT PLANT DURATION

Mr. COCHRAN. We would think 2 or 3 years, depending on the difficulties we may anticipate.

Senator BYRD. When would you expect to obtain results from this?

Mr. COCHRAN. Our final results—we would expect 15 months after we start up. I would project we would be starting the plant and have it pretty well shaken down and ready to make actual tests, actual test runs next December or January. Some 12 to 15 months from that date our date would be pretty well defined and we would know whether or not our current estimates are optimistic or about right.

Senator BYRD. I have some additional questions but I don't want to impose on the time of Senators Young and Magnuson.

Senator MAGNUSON. I have no questions.

Senator YOUNG. I have a few. I have had some similar questions in the last year or so.

SPENCER CHEMICAL CO. (PITTSBURG MIDWAY COAL MINING CO. PROJECT) LOW-ASH COAL

I would like to read a part of an Office of Coal Research report under the heading: "Low-Ash Coal (August 22, 1962–February 22, 1965)—Spencer Chemical Co., $1,240,000."

The contract was for the development of a solvation process for treatment of coal for the removal of ash and other impurities. Technical feasibility was demonstrated on a wide range of coals from the highest rank to lignite. The end product (regardless of the type of coal source), ran about 16,000 B.t.u.'s per pound, had an ash content of one-tenth of 1 percent, and a very low sulfur content.

Market studies, made in connection with the work, indicated possible sales potential as a powerplant fuel where atmospheric contamination was a problem, as a gas turbine and diesel fuel (perhaps mixed with distillate oil), as a raw material for carbon and graphite electrodes, and other uses. Negotiations are now underway for the construction and operation of a pilot plant which is expected to supply sufficient quantities of the product for end-use testing and development and provide firm engineering data for commercial-scale costing and construction.

CONTRACT NEGOTIATIONS

I understand that the work has progressed on the so-called low-ash coal project to a stage now where a pilot plant of a low-ash coal is necessary to continue the work. Has such a contract been entered into or are negotiations for such a contract underway?

Mr. FUMICH. As I stated, we are now in the process of negotiating with the Pittsburg Midway Coal Mining Co. We still have not signed it.

Senator YOUNG. The understanding I have of this process, is that from an economic standpoint, its general usefulness is in upgrading soft coal such as lignite. Is my understanding correct?

Mr. FUMICH. Yes, sir. We hope it will fit in these areas, but the main reason for going ahead with the pilot plant is that we haven't had enough of the product to come up with a firm market analysis. To restate, we are going into the pilot plant stage to produce more of the product for larger scale testing in the market areas mentioned.

PILOT PLANT LOCATION

Senator YOUNG. Have you selected a location for this plant?

Mr. FUMICH. No, sir.

Senator YOUNG. As you know, last year it was announced that the Bureau of Mines was moving its Coal Research Laboratory to other Bureau facilities. According to the announcement I received, and additional information I received from the Department of the Interior, the majority of the functions and positions in the Denver Coal Research Laboratory were to be transferred to the Grand Forks Lignite Research Laboratory, located adjacent to the campus of the University of North Dakota, with the move to be completed by June 30, 1966. Wouldn't it seem logical to locate a facility such as this pilot plant on low-ash coal adjacent to a facility such as the Grand Forks Lignite Laboratory with its large staff of specialists in the lignite field? In addition, as you know, North Dakota has the largest deposits of lignite coal of any State in the Nation. A further consideration is the fact that the University of North Dakota has a very strong department of geology, headed by Dr. Wilson Laird, who is also State geologist.

Mr. FUMICH. I would say it could be considered a good site, yes sir. We still have not made an evaluation of the various sites proposed to our office and until such time as we do evaluate each physical site we could not say where the pilot plant is going. The Secretary of the Interior will make the final decision.

Senator YOUNG. I hope you will give this serious consideration.

Mr. FUMICH. We are considering all sites.

Senator YOUNG. We have had this lignite laboratory for much the same purpose at Grand Forks for 15 years or so.

Mr. FUMICH. I visited there and can say it is an excellent facility.

Senator YOUNG. Thank you.

Chairman HAYDEN. Do you have any questions, Senator Magnuson?

Senator MAGNUSON. I have nothing further.

FMC COED PROJECT

Senator BYRD. I have other questions.

You spoke of two pilot plant starts included in your budget. I believe you also described this briefly, already, but I am particularly interested in the FMC project. Would you elucidate just a bit on that?

Mr. FUMICH. That is the contract we originally signed for $1,121,000. The FMC project is one of the major conversion projects executed by the Office of Coal Research. The objective was to try to change the coal into a liquid which could be used to transport the remaining B.t.u. value of the coal to market via a pipeline.

If progress continues during the present year, we plan to use the $500,000 we have requested for the design of a pilot plant.

PROPOSED SLURRY PIPELINE

Senator MAGNUSON. What happened to our slush line that was in my committee for a long time?

Mr. FUMICH. The slurry pipeline was very much a technical and economic success and accomplished its mission by being the entering

wedge in the reduction of railroad rates. I am talking, sir, about the existing slurry pipeline.

Senator MAGNUSON. I am talking of the new one that was going up to New York.

Senator BYRD. I think it is like the prophet's gold that flourished overnight and then withered. Probably as a result of the change in freight rates.

Senator MAGNUSON. It was highly controversial.

Mr. FUMICH. It still is.

LOCATION OF FMC COED PROJECT PILOT PLANT

Senator BYRD. What are the site requirements with respect to the pilot plant for the FMC project?

Mr. FUMICH. We would envision for that and the other justification projects we have been referring to, approximately 10 to 25 acres of pretty level land with rail and road access. Power and water should be available, and we would like to have provision for a chemical and sanitation sewer, if possible.

Senator BYRD. Are there requirements such, in your judgement, that would dictate that the pilot plant be located in New Jersey or are they such that it could be very well located in West Virginia at the source of the raw material, the mine mouth?

Mr. FUMICH. It may very well be located at the source.

Senator BYRD. What type of coals are needed in this process? Are they high volatile or low volatile?

Mr. FUMICH. My understanding is that the high-volatile coals have been the best type. One of the main reasons for extending the work in this area is to test Pittsburgh seam and other major coals.

Senator BYRD. We have both low and high volatile coals in West Virginia.

Mr. FUMICH. Yes, sir.

Senator BYRD. And medium.

Mr. FUMICH. We go all the way through the range as far as volatility is concerned.

Senator BYRD. So there would be no technical reasons or cost reasons why such a pilot plant could not be located in the coal fields of, let's say, West Virginia

Mr. FUMICH. I don't see why it couldn't be.

Senator BYRD. Could there not possibly be advantages to locating a pilot plant in those areas where they would be in close proximity to the raw material and also if the process proved to be feasible and economical, would the location of the pilot plant in those areas not in itself attract the location of commercial plants which would follow on the process?

Mr. FUMICH. I think, in large measure, you answered your own question. I would say yes, as far as the physical factors are concerned.

There are other factors which the contractor might take into consideration as far as personnel.

Senator BYRD. FMC has a large facility in Charleston which is used for the construction of armored vehicles. Is there any reason you know of why a pilot plant, in connection with the FMC project, could not be located in that area?

Mr. FUMICH. I see no reason.

Senator BYRD. I suppose the Secretary of the Department of the Interior will make the final decision as to the pilot plant location?

Mr. FUMICH. That is the final answer. He makes the final decision after evaluation of various proposed sites.

ENERGY INDUSTRY REVOLUTION

Senator BYRD. In your statement you mentioned that some of the exciting progress made during the last year has acted as a catalyst for the tremendous changes now revolutionizing the energy industry. Would you expand on this statement?

Mr. FUMICH. If we can paraphrase the statement made by one of the newspapers not long ago, the tiger in your tank may very well be made of coal. I don't want to be facetious, but we believe that we are near a competitive breakthrough in the area of high octane gasoline. A lot of other people in the energy industry are thinking the same thing.

U.S. CONSUMPTION OF PETROLEUM

Why is this important? It is important because in the next 15 years, the United States is going to use up more petroleum energy than it has in the whole 106 years of its history. We are now using 11.7 million barrels of petroleum a day. It is estimated, in 1980, we will be using around 17.5 million barrels per day.

If the industry is going to keep the same domestic share of the market and if we are going to keep our present historic production reserve ratio of 12 to 1, the industry must add to the proved reserves, approximately 85 billion barrels of liquid hydrocarbons within the next 15 years. This is more than the 78 million barrels consumed throughout its previous history.

SHARING BY COAL INDUSTRY IN INCREASED MARKET

The increase seems small except when you think of the total cumulative requirements. In other words, the petroleum industry will have to add to its proved reserves on the average of 5½ billion barrels of crude oil per year for the next 15 years. This will not be easy because in only 1 year of its history has the industry ever added as much as 4½ billion barrels. This total was added in 1951, approximately 15 years ago. More significant is the fact that the average increase since 1955, has been 3.3 billion barrels a year.

What I am saying, in effect, is that if the coal industory can come up with a competitive product, that is, a high-octane gasoline, coal can share in this added market without displacing any oil and that even a small share would add up to a large coal tonnage—in the millions of tons.

CURRENT CONSUMPTION OF NATURAL GAS

Why the interest in the gasification area? Today we are consuming natural gas at the rate of 42 billion cubic feet a day. By 1980, it is estimated we will consume 65 billion cubic feet a day. For gas under the same basic assumptions, and keeping a reserve to production ratio of 18 to 1, we shall need to add 450 trillion cubic feet of

gas to our crude reserves. This is an average of 30 trillion cubic feet a year.

Again, this will not be easy. At no time in its history has the petroleum industry ever added as much as 25 trillion cubic feet to its reserves of gas in any 1 year. The average since 1955 has been 20 trillion.

We also believe that coal can share in the added market without any displacement of natural gas and, again, a small share would add up to a large coal tonnage.

Cooperation With Bureau of Mines

Senator Byrd. Are you doing any work on a coal-fired turbine?

Mr. Fumich. No, sir; not on a coal-fired turbine.

Senator Byrd. This is Bureau of Mines?

Mr. Fumich. Yes, sir; this is going on in Morgantown, W. Va.

Senator Byrd. Do you have good liaison with that Bureau?

Mr. Fumich. Sir, to supplement, we have always made a close check with the Bureau of Mines to make sure we would not duplicate any of the past or present work they are doing. The fact is, we have used a lot of their personnel to make sure they examine some of our proposals as far as technical feasibility. We are now going further—we are really going into the meat of the situation. On checking for duplication, we are going into the program itself. We plan to do the conversion work ourselves. The Bureau will do basic research in the conversion area.

If they come up with anything good, then we will take the ball and go ahead. It shows both cooperation and coordination.

Sewage Treatment Pilot Plant

Senator Byrd. Just a question or two again with reference to the Rand Development Corp. project. If no major problems of pilot plant design operation are encountered, when do you anticipate gaining definitive data for a commercial plant of given capacity of rough design, and cost figures?

Mr. Fumich. If we have no unforeseen problems in our work, we will be hopeful we could come up with some definitive data of that kind by the late fall of this year.

Senator Byrd. You have not developed this to the stage that you can forsee at the moment, success, have you?

Mr. Fumich. No, sir. I would rather not say that. In other words, let's put it in this context. The work we have done so far looks excellent. We see no reason why it shouldn't progress that way but until we actually work in a pilot plant to come up with the correct parameters, we are not going to be sure. We would rather not say at this time that we are going to be competitive or be able to do the job but we are hopeful.

Report to Public and Project Termination

Senator Byrd. When would you expect to file a report to the general public?

Mr. Fumich. We hope to begin in July of this year, finish by next July, and have a final report in August, a month after that.

COMMENDATION OF DIRECTOR FUMICH

Senator BYRD. Mr. Chairman, this is one man who, like the Secretary of Defense, performs, shall I say, the functions of a walking computer. You note that he never has to wear his fingernails out thumbing through pages for figures. He wears the facts under his hairline.

I want to compliment him on the work he is doing and his staff. I think the Office of Coal Research is proving itself to be a good investment and their projects are moving forward in the main very well and they are going to provide breakthroughs that will stimulate and strengthen the economy of the coal industry in this country, and I salute them.

Of course, he is a West Virginian, I should add that.

I think the Office of Coal Research has certainly fulfilled the fond dreams we had when we worked over a long period of years to bring to fruition the legislation establishing that Office. I don't believe that we have appropriated the moneys that we should have thus far for the operation of the program. Of course, we had to start in a small way but I feel that we could have appropriated more moneys and made more progress.

I hope as we go along from year to year, the Congress will respond to the need here and appropriate the necessary moneys so that this fine Office can proceed as it has in the past and bring back, as the President says, more than a dollar's worth of value for every dollar that is spent.

U.S. FUTURE REQUIREMENTS

Senator MAGNUSON. Of course, the need for energy in the next, let us say, the year 2000, that is a little more dramatic, but that is just 34 years down the road, and that is not too far away. The need for energy makes this sort of thing you folks are doing just vital. We are going to have to put another America right on top of the one we have now in the next 35 years. Where there is one school, we will need two. Where there is one hospital bed, we need two.

The energy requirements will not only double, I think they will be greater than that. I know the Senator from Arizona and I, we started early on the hydro situation and we can see down the road now where we are going to run out of power and at that time we started slowly, but I think this is very important because you are just going to double, put another America right on top, 162 million more people. I don't know how many more automobiles will be on the highway. When I say one school, we have to build two, whereas for maybe one road, we will have to build six, I don't know.

IMPORTANCE OF COAL RESEARCH

This is very important what you are doing because this is one of the great of the three major sources of energy in this country—hydro, gas, oil, and coal. They are going to need every bit of research we can do. Every bit of it is going to be needed for this very important thing, and I want to compliment this Office, too, on the policy that looks like they are doing what we call farming out to industry these jobs so that they will have the know-how, too, and contribute back to the economy taxwise and otherwise. You are to be complimented.

Mr. FUMICH. Thank you, sir.

MAY 23 1966

QUESTIONS SUBMITTED BY SENATOR MUNDT

GASIFYING LIGNITE

Chairman HAYDEN. Senator Mundt has a few questions which I will place in the record. Please prepare responses to them.

(The questions and answers follow:)

Question. How long have you been working on your project for gasifying lignite?

Answer. About 1½ years.

Question. Can you give me a brief statement of the status of this project?

Answer. We have completed a phase I study report that established economic feasibility for the process and have built and operated a small-scale process development unit at Library, Pa. We have recently authorized an engineering subcontract, and design of the pilot plant has begun. I might say that all of our results so far are good.

Question. What are the requirements for a pilot plant site and when will a selection be made?

Answer. We will require some 10 to 25 acres of land, depending on the particular terrain. Rail and road access to the site is required, a close at hand supply of power is needed, and provision for a chemical and sanitary sewer is desirable. We expect surveys to be made during the next 3 to 4 months and the Secretary will make a final decision based on technical requirements of the project.

Question. I notice that your request for fiscal year 1967 is $500,000. How do you plan on spending your fiscal year 1967 request?

Answer. We will complete our engineering and begin purchase of equipment.

Question. When will you begin construction?

Answer. We would like to begin construction early in fiscal year 1968 if funds are available.

Question. How long will the pilot plant be in operation?

Answer. About 2 to 3 years.

Question. When will definitive results be obtained?

Answer. Twelve to eighteen months after shakedown operations have been completed.

SUBCOMMITTEE RECESS

Chairman HAYDEN. If there is nothing further, we will recess until Thursday, March 3, and take up both the Bureau of Sport Fisheries and Wildlife and the Bureau of Commercial Fisheries.

We will meet at 9:30.

(Whereupon, at 11:20 a.m., Wednesday, March 2, 1966, the hearings were recessed, to reconvene Thursday, March 3, at 9:30 a.m.)

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1967

THURSDAY, MARCH 3, 1966

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 9:30 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senators Byrd, McGee, Bartlett, Proxmire, and Young.

DEPARTMENT OF THE INTERIOR

BUREAU OF COMMERCIAL FISHERIES

STATEMENTS OF DONALD L. McKERNAN, DIRECTOR; HAROLD E. CROWTHER, DEPUTY DIRECTOR; CLEO F. LAYTON, ASSISTANT DIRECTOR FOR ADMINISTRATION; JAMES STORER, ACTING ASSISTANT DIRECTOR FOR ECONOMICS; RALPH C. BAKER, ASSISTANT DIRECTOR FOR RESOURCE DEVELOPMENT; LESTER J. GODFREY, BUDGET OFFICER; C. ELDRED PETERSON, CHIEF, BRANCH OF LOANS AND GRANTS; AND RUSSELL T. NORRIS, ASSISTANT TO THE DIRECTOR

FISHERY PRODUCTS

Chairman HAYDEN. The subcommittee will be in order.

To begin consideration of the 1967 budget estimates of the Bureau of Commercial Fisheries, I will place in the record a highlight statement furnished by the Bureau.

(The statement follows:)

There is no more important national need than that for food. In meeting this need, the fishing industry, made up for the most part of many small business units scattered along the thousands of miles of our coast, plays an essential role.

The strong demand for fishery products is shown by the fact that the world catch of fish has increased by 2½ times since 1950. This rate exceeds that for human population growth and is more rapid than the increase in production of meat from livestock.

Domestic use of fish products has increased about 6 percent per year for the past 10 years—roughly comparable to the increase in world use. There have been, moreover, some striking changes among species and products which may greatly affect the market base for the future in the United States.

Total use of fish products in this country has increased from 7.6 billion pounds in 1954 to 12 billion pounds in 1964—nearly 60 percent. During this period consumption of shellfish products increased by about 66 percent as did the use of

fishmeal for animal feed. Consumption of certain products such as fish sticks and portions has grown from a level which was too insignificant to be reported in 1954 to 185 million pounds in 1964. Canned fish consumption has increased by almost 100 percent since 1950 and the consumption of king crab has grown phenomenally, with per capita consumption tripling since 1950.

Based upon estimates of likely changes in income and food prices, it appears that the U.S. demand for fish products will increase in the next two decades at a rate substantially more rapid than population growth. The effect of such factors as rising incomes will be particularly striking for some fishery products and species. More specifically, it can be expected that total U.S. consumption of all fish products will reach 24 billion pounds (edible weight) in 1985, an increase of 100 percent over 1965.

The inevitable development of markets for fish protein concentrate will no doubt also increase the domestic market base for fish products. A preliminary analysis indicates that relative costs will be such that FPC as a tasteless and odorless powder may be used as a protein additive for many products.

In addition to the direct use of fish for human consumption, use of fish for industrial purposes is increasing, particularly in the United States and in Western Europe. An important product is fishmeal, about 75 percent of the total utilization of fishmeal in this country is as an ingredient in broiler rations. The remaining 25 percent is used primarily in other poultry feeds and in livestock feeding. With a projected per capita consumption of chicken meat of 35 pounds in 1985 and the use of fishmeal at the same level per bird as at present, fishmeal consumption needs in the United States will be about 2.9 billion pounds in 1985. This is more than double the 1964 U.S. supply. Use of fishmeal for broiler feed in Western Europe will expand unquestionably with the current Government inducements for production there. Fishmeal is also an ingredient in other livestock feeds. Thus, fishery products contribute further to the production of protein foods by promoting the expansion of livestock production.

To meet the demands, both now and in the future, the United States has two sources of supply: domestic production and imports. In recent years an increasing portion of the domestic consumption has been supplied by imports. Nearly 50 percent of the fish for human consumption and over 60 percent of the fishmeal and solubles for poultry and livestock are now imported.

Lower costs in foreign countries, in part explained by technological developments, but also by substantial Government assistance, have resulted in the fact that the net increase in consumption of fish products in the United States has been largely from imports. Since 1959, Peru has been by far the major exporter of fishmeal to the United States, providing 79 percent of total fishmeal imports.

Despite the inroads that imports have made, the United States is a leading fishing nation in the world. With an annual catch of about 5 billion pounds, the United States ranks fifth behind Peru, Japan, China, and the U.S.S.R. in that order. If a value comparison were made, the U.S. industry would rank even higher because of the greater proportion of highly valued species of fish included in the U.S. catch.

Altogether, the various components of the fishing industry in the United States in 1965 handled and distributed about 12 billion pounds of fish, in round weight equivalent, with a retail value of approximately $2 billion. Directly and indirectly, this activity provided employment for 350,000 workers.

It is in the interest of the United States to enable the domestic fishing industry to provide under economical conditions a greater proportion of the domestic market.

Economic growth in the United States since World War II has highlighted the importance and contribution of technological innovation to rising levels of income and employment, both in the national aggregate and in individual industries as well. During this post-World War II period, the technological innovations in fisheries have lagged behind the gains made in much of the balance of the economy. Thus, there is the potential for significant gains to be made in terms of cutting costs, increasing efficiency and bringing about an expansion of the industry through further technological development.

The lag in development and adoption of new technology in much of our fishing industry is related to the structure of the industry, i.e., the small and undercapitalized firm that typifies much of the harvesting sector. Such individual firms do not command the resources to carry out developmental research, and when new techniques are developed elsewhere, they still have a problem in adopting them because of capital limitations. However, when the

industry is assisted in converting to new technology, as in the case of shifting to purse seining in the tuna industry with the development of the power block, the results are substantial and profitable.

Advanced technology need not always result in a complete scrapping of the old. In California, for example, production efficiency in the tuna fisheries advanced sharply with the relatively recent adoption of power block purse seining. Much of this change was accomplished by converting existing vessels to the new methods. Conversion to the new method of fishing for tunas was accompanied by an increase in the size of production units. The larger units, in addition to experiencing increased catch efficiency by virtue of new techniques, have the advantage of economies of scale not available to smaller vessels.

There are, therefore, definite signs of improvement in the American fishing industry. The 1965 value of catch is estimated at an alltime high of $450 million. This progress is further illustrated by the New England trawl fishery. In dire economic straits for decades, this industry is now showing evidence of vigor. New vessels, restructuring of industry, and new capital into the New England fishing industry attest to the fact that efforts by industry and Governmen in recent years have borne fruit. A recent quotation from the August and September issues of the New England Business Review, published by the Federal Reserve Bank of Boston, states: "For the New England fishing fleet, stern trawling appears to be the technique of the future. New England fishermen are planning a fleet expansion during the next 5 years * * *. For New England as a whole, the Fleet Improvement Act may reverse the decline in the fleet and stabilize the region's share of the market."

The Bureau of Commercial Fisheries is committed to build upon these signs of progress and to assist the American fishing industry attain a stronger position in competing with foreign fishing interests as well as competing with the rest of American industry for labor and capital at adequate rates of compensation.

In the joint effort of private business and Government, it is necessary to have some objective. These cannot be expressed with any great specificity since they must be attained, quite properly, in a free enterprise economy governed by the multitude of market forces. Nonetheless, it is reasonable to expect that our output can be doubled by 1975 and that the value of the catch, especially for the more preferred species, should exceed this rate of increase. Furthermore, it is expected that the recent rapid growth of foreign imports can be abated so that a larger portion of the value of total consumption can be represented by domestic production.

To attain such goals requires an active role on the part of the Government, embracing a wide range of activities that cannot be undertaken by the small and fragmented independent fishermen and firms in this country.

These activities include both biological and technical, as well as economic research. The Government is concerned with conservation aspects of the resources both in domestic and international fisheries, to insure a catch that can be sustained in the years to come. A wide variety of services are also offered to industry. As a result of congressional action the Bureau administers several assistance programs which help industry to be competitive.

In the following pages is a brief discussion of some significant accomplishments in fiscal years 1965 and 1966 of the Bureau's programs as they relate, on the one hand, to the fishery resources and their development, and on the other hand, to the utilization of the resources by industry. Attention is also paid to the program emphasis planned for fiscal year 1967.

While much of our research has been concerned with basic aspects of the resource and its environment, a significant effort has also been concentrated upon programs of direct value to industry. These include prediction of abundance, control of predators and diseases, and discovery and delineation of unused or not fully utilized species.

Considerable progress was made in our studies of the three commercial species of shrimp in the Gulf of Mexico. Prediction of offshore abundance of brown shrimp were made. Techniques for determining harvesting size for maximum yield were developed, and larval shrimp culture was successfully accomplished for the first time, paving the way for eventual commercial, artificial culture of shrimp.

We have substantially improved our understanding of the relation of abundance and availability of commercial fishes to large-scale variations in the physical properties of the ocean. Based on this understanding, predictions are

now regularly made on the availability of skipjack tuna in the Hawaiian Islands region, and of albacore tuna in the eastern temperate Pacific Ocean, and of several other valuable food species in the North Pacific, North Atlantic, and Gulf of Mexico.

In the North Atlantic area, predictions of abundance, sometimes considerably more than 1 year in advance, were prepared for haddock, sea scallops, and several other species of lesser importance. With increasing fishing effort by a larger fleet of foreign vessels in the Northwest Atlantic, some species, such as haddock, may require additional conservation measures if the average annual yield of 120 million pounds from Georges Bank is to be maintained.

Satisfactory development of scientific instrumentation has continued seeking such devices as a free-drifting transponding telemetry buoy for use in deep water oceanographic studies. In preliminary feasibility studies the buoy system has successfully recorded and transmitted temperature data in the North Pacific Ocean to depths of 300 meters. Fully instrumented, the buoys will provide temperature and salinity data. Accurate positioning by satellite navigation will eventually permit the measurement of midocean currents with great accuracy. Information gathered automatically by these buoys is transmitted on signal to land stations hundreds of miles away, making the data immediately available to scientists and industry.

The infectious stage of the organism responsible for the oyster blight which has raised havoc with the mid-Atlantic oyster industry was definitely identified as a haplosporidian protozoan. This is a breakthrough in determining life cycle of the organism and will hasten discovery of measures for its control. Control measures will lead to restoration of the declining oyster industry.

In the Pacific the Bureau is taking the lead in launching a cooperative oceanographic study of an important region of the eastern tropical Pacific. Its purpose is to obtain fundamental information on the physical, chemical, and biological features of the region. These studies will provide a basis for increasing the harvest of the west coast tuna fishery.

We are mounting fecundity, subpopulation, abundance, and behavior studies on the Pacific anchovy in cooperation with the State of California, which authorized a limited anchovy fishery in 1965.

Fishing explorations in Lake Superior located extensive new areas of smooth bottom suitable for operating a commercial trawl fishery west of the Keweenaw Peninsula. This greatly expands the available area of operation for the emerging trawl fishery in this area.

Exploratory long line fishing off the middle Atlantic coast by the exploratory vessel *Delaware* revealed stocks of subsurface swordfish and yellowfin tuna occurring over a greater area than presently being fished commercially. Exploration along the southeast coast of the United States resulted in additional catches of swordfish off the east coast of Florida, indicating this important species is present in southeastern waters during the summer season, contrary to previous untested assumption.

An important economic study of the salmon fisheries of the Columbia River was completed in fiscal 1966. It revealed that a significant net economic benefit has resulted from expenditures for fisheries development on the Columbia River. A conservative estimate of the net economic benefits accruing to sport and commercial fishing from the Columbia River program averaged $8 million annually during 1962–64, compared with the average annual costs of $6.2 million to operate the program during these years.

Fish protein concentrate (FPC) research advanced significantly with the construction and operation of a model unit to study methods of FPC manufacturing. An accelerated program was initiated to develop a single FPC manufacturing process. The model unit provided the needed amounts of FPC to perform wholesomeness studies, toxicological studies, nutritional studies, and other research associated with the development of new foodstuffs. A chemical extraction process utilizing red hake as the raw material and isopropyl alcohol as the solvent was selected for initial study.

The commercial use of atomic energy for the preservation of fishery products was investigated through the use of a marine products development irradiator (MPDI). The MPDI, constructed by the Atomic Energy Commission, is being used by the Bureau to provide large quantities of fish which have been irradiated at different periods of time. The irradiated products are being used by both industry and Government for storage and shipment tests in various parts of the country.

During the fiscal year 1965, 22 applications for fishing vessel mortgage insurance were received, involving $2,573,000, and 15 for $1,612,000 were approved. The number of applications was held down somewhat because many prospective applicants were waiting for a construction differential subsidy bill to be passed before making arrangements for construction.

New legislation, reactivating and expanding the fishing vessel construction differential subsidy program was passed in late August 1964 and funded during fiscal year 1965. Since then, a total of 24 vessels has been approved for construction under this program—including a 262-foot stern trawler—and 31 additional applications are now being processed.

A total of $4,100,000 was appropriated for fiscal year 1966 to begin the State matching fund program under Public Law 88-309. A total of 119 proposals amounting to $3,900,000 has been received from 38 States representing coastal and inland areas. These proposals have requested Federal funding at either 50 percent or 75 percent levels. Ninety proposals have been approved, and 30 contracts have been awarded. It is expected that at least 45 States will submit a total of 150 or more proposals during fiscal year 1966.

The 21 hatcheries operated under the auspices of the Bureau's Columbia River fishery development program have progressively increased their production of fish per dollar and per man-year expended. In fiscal year 1965 the hatcheries released 1,795,000 pounds of salmon and steelhead ranging in size from about 13 to 600 fish per pound. This production was 204,000 pounds greater than in fiscal year 1965. The average cost per pound of fish produced was progressively decreased from $1.18 in 1963, to $1.12 in 1964, and to $0.96 in 1965.

International fishery problems have been increasing both in number and complexity. In order to protect American interests and to provide adequate knowledge to appropriate national and international agencies, the Bureau has strengthened its own information gathering and analysis activities, both in the field and in Washington.

Within the funds available, certain pressing economic problems will be investigated during fiscal year 1967. Among these are: (1) Controlled studies for determining the effectiveness of alternative methods of promoting selected fish and seafood products, (2) the market potential and economic feasibility for irradiated fish and seafood products, (3) the economic feasibility and market potential for fish protein concentrate, (4) an economic analysis of the relative efficiency of certain fishing vessels, and (5) limited entry of fishermen as an adjunct to managing the Lake Superior trout fishery.

Some technological problems of importance that will be studied during 1967 include: (1) Further demonstration of at least one commercially feasible method of manufacturing fish protein concentrate to the industry; (2) continued efforts to develop a means for utilizing the huge Pacific hake resource discovered by the Bureau, both as a human food product and as a raw material for animal food and industrial products; (3) continued efforts to demonstrate the commercial feasibility of irradiation pasteurization of fresh fishery products as a means of extending shelf life and marketing areas through the use of the marine products development irradiator located in Gloucester, Mass. The feasibility of low-level irradiation aboard the vessel will also be investigated, and (4) evaluate and implement changes in the standards development and USDI fishery inspection programs to facilitate greater use of the product quality standards and to strengthen and expand the fishery inspection service.

Programs related to ocean engineering problems will provide a quantitative analysis of various potential fisheries, and indicate areas where major gear development efforts can be expected to provide information for new and revolutionary fish locating and harvesting methods. Gear research activities will continue to emphasize development of new, more efficient, and economical methods for harvesting fish stocks, such as the giant midwater trawl developed by the Bureau in the Pacific Northwest.

Atlantic menhaden research will emphasize a tagging program to determine migrations, stocks, and other biological factors to explain the decline in abundance in recent years, and relate the decline to changes in the environment or to the fishery.

Explorations to find new concentrations of sea clams will be continued between Cape Hatteras, N.C., and the eastern tip of Long Island, N.Y., at predetermined sampling stations located 1 mile apart.

Unutilized stocks of pelagic and demersal fish and shellfish will be further studied in the Gulf of Mexico and off the southeast Atlantic coast, with particular

emphasis on hardshell clams, calico scallop, shrimp, and off-season industrial fish.

Available information on the abundance of all major fish populations along the entire Continental Shelf and slope will be compiled on a seasonal and geographic basis, for presentation in the form of an atlas.

With the increasing competition for the common property resources of the oceans, virtually every Bureau program is affected in varying degree by international developments. Particular attention during 1967 will be paid to such matters as the elevation of fisheries activities in FAO, the Atlantic tuna conservation problem, the fisheries attaché program, fisheries jurisdiction limits, and the myriad other problems associated with the work of international commissions.

Summary of Fiscal Year 1967 Budget Estimates

The Bureau of Commercial Fisheries budget estimates for fiscal year 1967 include a request for the appropriation from general funds of $28,036,000. This is $8,925,259 less than the estimated appropriation for fiscal year 1966. The 1967 estimate also provides for the use of $10,982,000 from other funds, including $7,314,000 from the permanent appropriation Promote and Develop Fishery Products and Research Pertaining to American Fisheries (Saltonstall-Kennedy) and $3,668,000 from the Pribilof Island fund. Of the $3,668,000, $2,468,000 is for administration of the Pribilof Islands, $1 million is for management and investigations of resources, and $200,000 is for payment to Alaska.

Amounts included in the $28,036,000 appropriation request, and for other funds, are shown in the following table:

	Fiscal year 1966	Fiscal year 1967	Increase or decrease
General funds:			
Management and investigations of resources	$22,148,756	$20,092,000	−$2,056,756
Management and investigations of resources (appropriation of receipts)		(1,000,000)	(+1,000,000)
Special foreign currency	300,000	200,000	−100,000
Construction	1,980,000	495,000	−1,485,000
Construction of fishing vessels (subsidy program)	[1] 7,105,203	3,300,000	−3,805,203
Federal aid for commercial fisheries research and development	4,713,200	3,210,000	−1,503,200
General administrative expenses	714,100	739,000	+24,900
Subtotal, general funds	36,961,259	28,036,000	−8,925,259
Other funds:			
Saltonstall-Kennedy	5,400,000	7,314,000	+1,914,000
Administration of Pribilof Islands	2,464,000	2,468,000	+4,000
Management and investigations of resources		1,000,000	+1,000,000
Payment to Alaska		200,000	+200,000
Subtotal, other funds	7,864,000	10,982,000	+3,118,000
Total	44,825,259	39,018,000	−5,807,259

[1] Includes reappropriation of $2,105,203 unobligated balance from prior year funds.

Prepared Statement

Chairman Hayden. Mr. McKernan, you may present your written statement for the record, if you wish, and summarize it orally.

(The statement follows:)

Mr. Chairman, and members of the committee, before discussing the actual funding components that make up our estimates for the coming fiscal year I would like to sketch for you the current status of the commercial fishing industry and describe briefly some of the work the Bureau is doing to meet industry's needs.

Generally speaking, the economic health of the commercial fishing industry is fair and improving. Last year, 1965, the value of the catch to the U.S. fisherman was about $440 million, a record high and a 13 percent increase over 1964. Translated into retail value this figure exceeds $2 billion.

The volume of our catch last year nudged upward about 2 percent to an estimated 4.7 billion pounds. The sharper increase in value over volume is accounted for primarily by increased catches of such preferred and consequently higher-priced species as shrimp, king crab, and red salmon.

Various factors have contributed to the improving position of the commercial fishing industry, and important among these are several laws enacted by the Congress and funded through this committee.

Mr. Chairman, as you know from our testimony before this committee in past years, one of the long-standing problems that has plagued the fishing industry has been the obsolescence of its fleet. Progress toward alleviating this situation is being made through financial assistance programs enacted by the Congress.

From the vantage point of those of us in the Bureau, the three financial assistance programs we operate appear to be having a noticeable impact on our domestic fisheries, and this effect should increase in the years to come. The fisheries loan fund has provided loans totaling $17 million to approximately 800 vessel operators during the past 8 years. Mortgage insurance has aided the owners of 80 fishing vessels to construct or reconstruct their vessels in the past 5 years, and the demand for this type of financial assistance is expected to continue. Under the old construction differential subsidy program 10 vessels were built—all in New England. Under the new program four vessels are currently under construction. In addition, applications for over 40 new vessels are in various stages of processing. This includes a 262-foot stern trawler factoryship, seven large tuna seiners, a number of shrimp refrigerated trawlers, and multipurpose vessels.

This progress is further illustrated by the New England trawl fishery. In dire economic straits for decades, this industry is now showing evidence of vigor. New vessels, restructuring of industry, and new capital into the New England fishing industry attest to the fact that efforts by industry and Government in recent years have borne fruit. A recent quotation from the August and Setpember 1965 issues of the New England Business Review, published by the Federal Reserve Bank of Boston, states: "For the New England fishing fleet, stern trawling appears to be the technique of the future. New England fishermen are planning a fleet expansion during the next 5 years * * *. For New England as a whole, the Fleet Improvement Act may reverse the decline in the fleet and stabilize the region's share of the market."

Another important piece of legislation passed by Congress, the Public Law 88-309 program, the Commercial Fisheries Research and Development Act, was at least partially funded in 1965 and got off to a good start. As of February 1, a total of 129 project proposals had been submitted by 41 States. Ninety-two of these proposals had been approved at a first-year cost of about $3.2 million. In addition to Federal expenditures under this program the States themselves are matching Government funds in amounts ranging from 25 to 50 percent. This means that nationwide commercial fisheries are receiving unprecedented attention. We estimate that 45 States will participate in the Public Law 88-309 program in this fiscal year.

Two new industrial fisheries, both of which have tremendous potential, were born during 1965. Small-scale commercial harvest was begun on the vast stocks of hake discovered off the west coast during Bureau exploratory fishing cruises. A giant midwater trawl developed by the Bureau has been found to be commercially feasible for use in the hake fishery and single hauls have amounted to as much as 60,000 pounds.

The other new fishery, just now getting underway, is the anchovy fishery off the coast of California. The State in 1965 lifted a longstanding ban on the use of anchovies for reduction and authorized a limited commercial fishery. Bureau scientists estimate the anchovy stocks could support a sustained harvest of 500 million pounds per year.

Concurrent with the hake and anchovy developments, and directly related to them, was a breakthrough by Bureau scientists in the perfection of a chemical extraction process for the manufacture of fish protein concentrate from whole fish. The research that led to the development of this product has been reviewed by a committee of experts from the National Academy of Sciences. This Committee certified in a report to Secretary Udall that the products was wholesome, nutritious, and entirely suitable for human consumption. The Department is preparing a petition to the Food and Drug Administration requesting approval of the marketing of FPC as a food additive. With FDA approval FPC, because of its high protein value and very low cost, should find a ready market both at home

and abroad. It is expected that the hake and anchovy resources which I have mentioned, as well as many other underutilized species off our coasts, would furnish much of the raw material for the commercial manufacture of FPC.

I am sure the committee is aware of President Johnson's reference to world food needs and the role that fish can play in meeting those needs in his February 10, 1966, food-for-freedom message. In this message he said: "The wonders of modern science must also be directed to the fight against malnutrition. I have today directed the President's Science Advisory Committee to work with the very best talent in this Nation to search out new ways to develop inexpensive high-quality synthetic foods as dietary supplements. A promising start has already been made in isolating protein sources from fish, which are in plentiful supply throughout the world."

Mr. Chairman, I have deliberately accented the bright spots in this brief statement today. We have many problems, too, as all of us will find out in the more detailed discussions. Nevertheless, it is a pleasure for me in my ninth appearance before this committee to report some noteworthy gains and to voice some optimism about the future of the commercial fishing industry.

This is not to say that we do not have problems ahead. We are concerned, for example, by the appearance of 300- and 400-vessel foreign fishing fleets off our coasts. Such encroachment makes it imperative that we increase the capabilities of our own fleet and improve its technologies through the application of research.

Quality of fishery products is another problem which demands greater attention. While it is true that we have made good progress in quality improvement in some areas much more needs to be done. There are still inland areas in this country where the housewife seldom can purchase fishery products with that ocean fresh flavor that they could, and should, have.

Our estuaries will continue to pose increasingly complex problems. Pollution and other manmade changes in these important nursery grounds for many species of fish and shellfish will require much greater effort on the part of the Federal Government and the States as well. We obviously will be living with this problem for a long, long time.

Exports of fishery products, while perhaps more of an opportunity than a problem, is an area where more work needs to be done. Exports are rising modestly, but we have only begun to scratch the surface in the development of foreign markets.

A further example of problems we face is the research needed to insure that FPC is put to its most effective use in the diets of underdeveloped countries. Feeding studies and education programs will be needed on a large scale

For fiscal year 1967 the Bureau has prepared what we consider to be a carefully planned and well-balanced program to capitalize on the gains I have cited and also to meet some of the problems.

Our estimates for fiscal year 1967 include a request for the appropriation from the general funds of $28,036,000. This is $8,925,259 less than the estimated appropriation for fiscal year 1966. The 1967 estimate also provides for the use of $10,982,000 from other funds, including $7,314,000 from the permanent appropriation "Promote and develop fishery products and research pertaining to American fisheries" (Saltonstall-Kennedy) and $3,668,000 from the "Pribilof Islands fund." Of the $3,668,000, $2,468,000 is for "Administration of the Pribilof Islands," $1 million is for "Management and investigations of resources" and $200,000 is for payment to Alaska.

The programs conducted under the annual account "Management and investigations of resources" and "S–K" appropriations are basically the same. Amounts included for them in the 1967 estimates total $857,244 more than in 1966.

This increase of $857,244 reflects decreases totaling $928,726 and increases of $1,785,970. Comprising the decreases are a Bureau cost-reduction program for $302,000 and nonrecurring programs for $103,726, both items being under the Bureau's regular annual definite appropriation, "Management and investigations of resources."

Under the permanent complementing Saltonstall-Kennedy (S–K) funds, there is a $523,000 decrease for nonrecurring and reduced programing.

Increases under the regular annual definite appropriation totaling $372,970 consist of $290,000 for program increases and $82,970 to cover full year pay costs for fiscal year 1966 positions. An increase of $1,413,000 under the Saltonstall-Kennedy funding is for program increases and operation and maintenance costs of the Bureau's new and existing facilities, such a laboratories and vessels.

A shift to Saltonstall-Kennedy funding from the regular annual definite appropriation consisting of continuing programs is contemplated for $1,024,000 in 1967, so as to utilize existing customs receipts received from the Department of Agriculture for the fiscal year 1966.

The estimate of $200,000 for a Public Law 480 excess foreign currency program is a decrease of $100,000 under the 1967 appropriation.

The estimate for construction includes $160,000 for construction of a bridge and seawall at the Beaufort, N.C., biological laboratory and $335,000 for the Columbia River fisheries development program.

The $3,300,000 estimate for construction of fishing vessels will result in a decrease of $3,805,203 when compared to the 1966 appropriation.

The sum of $3,210,000 for the Federal aid for commercial fisheries research and development program will result in a decrease of $1,503,200 in that program.

The increase in the "general administrative expenses" estimate includes $24,900 for development of a bureau planning-programing-budgeting system, $18,730, and $6,170 for full-year increased pay costs for fiscal year 1966 positions.

I shall be pleased to discuss the estimates for specific items in greater detail as they come up for discussion in the course of the hearing.

Optimistic Outlook for Commercial Fisheries

Mr. McKernan. Thank you very much, Senator.

It is a great privilege to be here before this committee.

This morning, just very briefly reporting on the state of commercial fisheries in the United States, I would like to be more optimistic than I have been able to be in previous years.

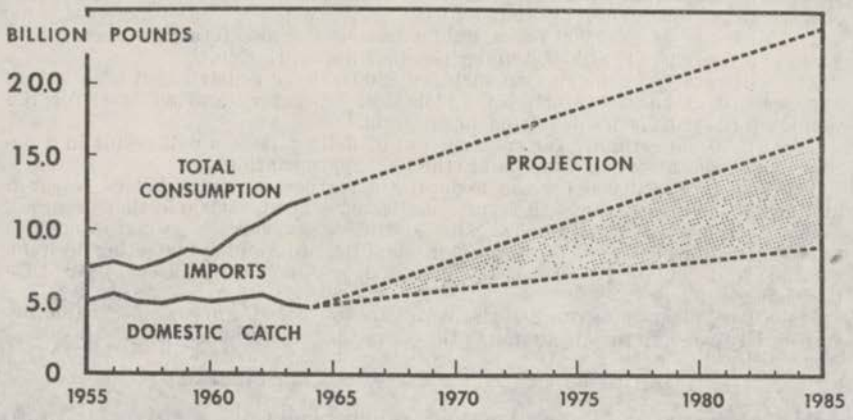
The commercial fisheries industry of the United States is in fair economic condition and it is my view that this condition is improving. The programs that Congress has authorized and this committee has funded appear to me to be making some inroads into the problems of this relatively small but important industry.

Fish Consumption

I just very briefly would like to show you Senators some illustration material. This indicates the general consumption and our projection of consumption for the next few years of commercial fisheries. Commercial fishery products are being used at the rate of about 12 billion pounds per year in the United States and we predict by the year 1985 the consumption will be about 24 billion pounds or about twice what it is at the present.

U.S. CONSUMPTION OF FISHERY PRODUCTS AND PROJECTED NEEDS TO 1985

(ROUND WEIGHT BASIS)

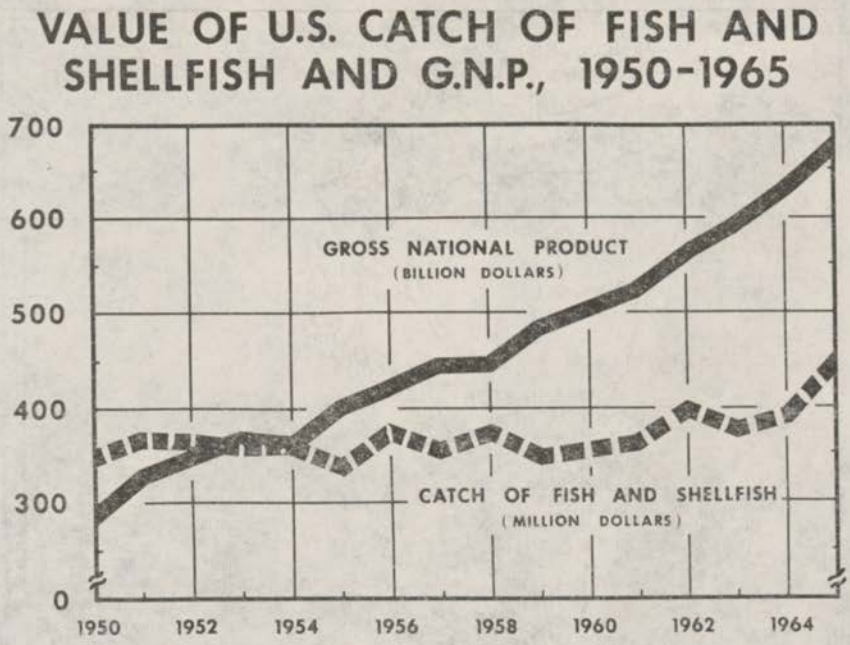


The use of commercial fishery products in the United States has been increasing at about the rate of 6 percent per year for the past 10 years. World consumption, itself, has been increasing very, very rapidly.

Domestic Fishing Fleet

Now, one of the problems of the American commercial fisheries in the past has been that this increase in consumption has been primarily imported fish from foreign countries. The major problem, as I mentioned to you gentlemen in the past, has been that our fishing fleet is outmoded and pretty much obsolete. There is some improvement in this whole picture at the time. Essentially, our goal is to increase the amount of domestically produced fish in the food consumption pattern of the United States during the next several years, and there seems to be a very good chance that we can accomplish this goal.

The value of commercial fisheries in the United States at the fisherman's level reached an alltime high during 1965. It reached a high of about 460 millions of dollars and is beginning to show an upward swing which I think is significant. Only time will tell if this trend

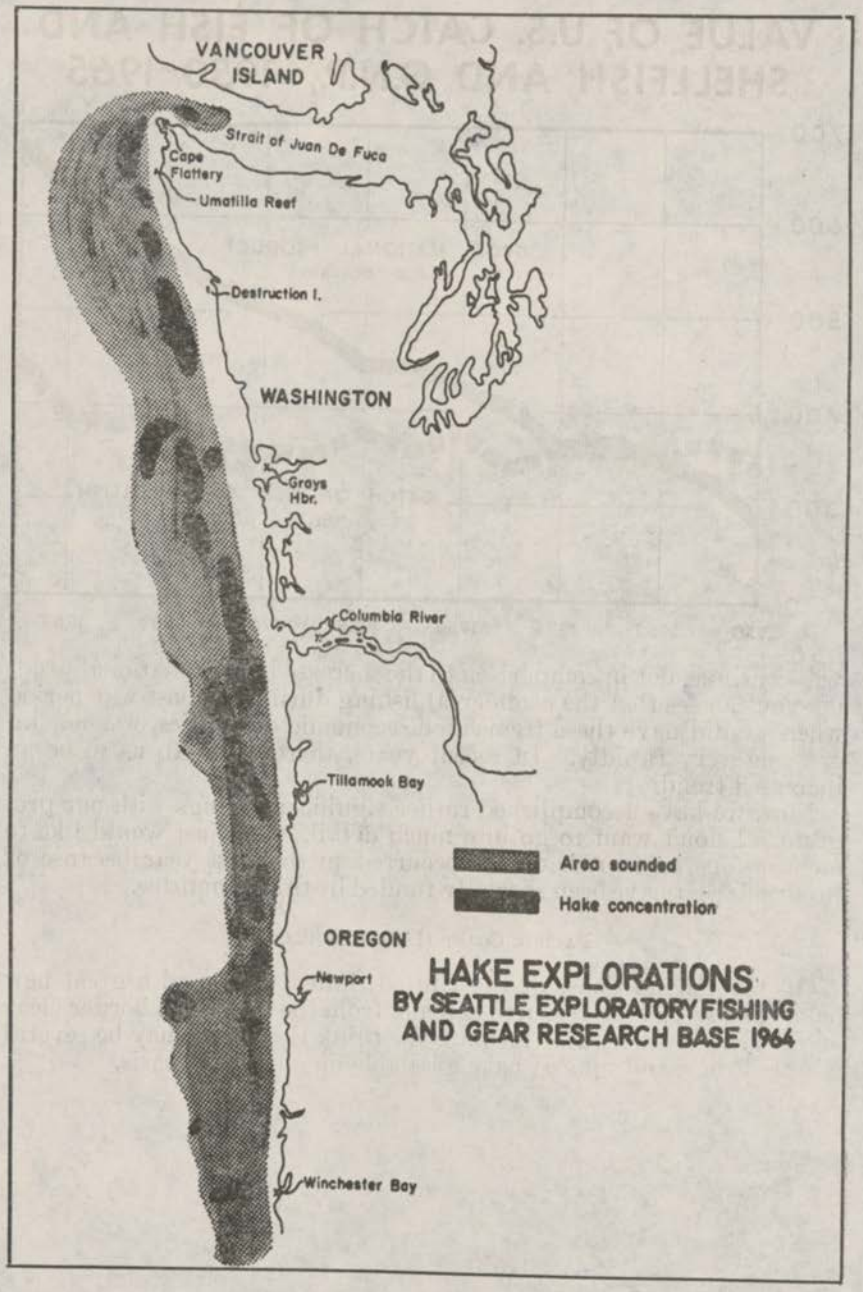


will continue, but in comparison to the increase in gross national product you can see that the commercal fishing during the post-war period when we did have these tremendous economic difficulties, was not increasing very rapidly. In recent years, there seems to us to be an increased trend.

Now, we have accomplished rather significant things with our program. I don't want to go into much detail, but I just would like to mention one or two that have occurred in the past year because of programs that have been specially funded by this committee.

Pacific Coast Hake Resources

Off the Pacific Coast of the United States, we found a great new hake resource. This resource extends from the Canadian border clear on down to southern California. We think that there may be several hundred thousand tons of hake available on an annual basis.



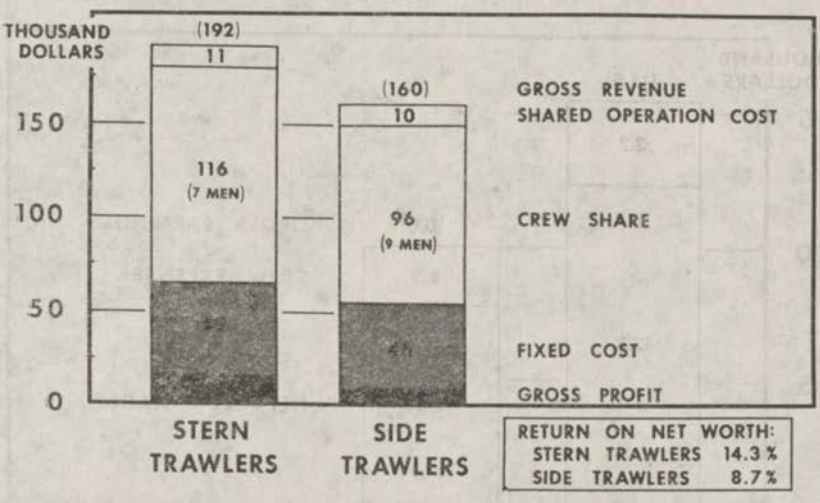
With the increasing world demand for fish meal and industrial fisheries products, a new fishery has started this year utilizing this new hake resource. We think it may be a major fishery and contribute a great deal to the welfare of the industry along the Pacific Coast.

FISHING VESSEL CONSTRUCTION PROGRAM

One of the programs in which this committee has shown considerable interest is our vessel construction program. As I mentioned a little earlier, one of our problems was the obsolete nature of the American fishing fleet. This program was funded to encourage the addition of modern fishing vessels to our fleet. American fishermen are permitted only to utilize vessels constructed in American shipyards and the costs of these vessels are sometimes 50 percent or more higher than the same kind of construction in foreign countries.

The subsidy program has allowed us, to a considerable degree, to equalize the higher domestic construction costs and in doing so it has allowed us to encourage construction of modern vessels. This new upward trend reflects the economic effects of this program.

COMPARATIVE ANNUAL RETURNS AND COSTS ON 80 FOOT STERN AND SIDE TRAWLERS



The two bars on this chart provide comparisons of the relative incomes from a modern stern ramp trawler with a conventional standard side trawler. This larger bar reflects income of a European-type trawler developed after the war. It fishes the big bottom-fish nets over the stern of the vessel rather than over the side as the old traditional trawlers do.

You can see that the incomes from the two comparatively sized vessels was considerably greater in the case of the stern ramp trawler than that of the side trawler. The net return on the net worth of the stern trawlers was 14.3 percent while that of the side trawlers only 8.7 percent.

RUSSIAN FISHING BOATS

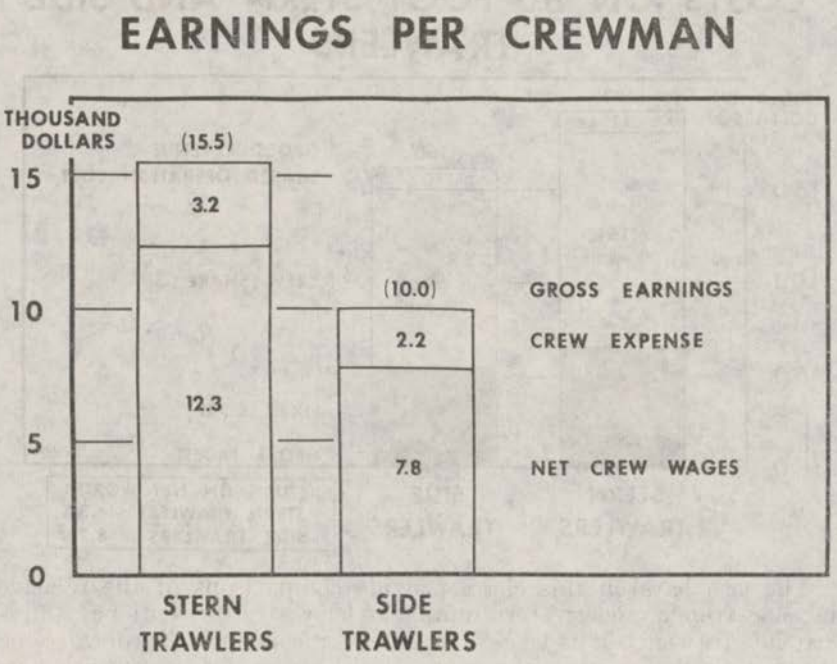
Senator YOUNG. Is it true that the Russians have real modern fishing boats?

Mr. McKernan. Yes, I have some pictures here that I would like to show you later.

In fact, all of the world's modern fishing fleets are using modern trawlers. They are much larger than ours, and many of them are fishing on our side of the ocean.

EARNINGS PER CREWMAN

Now, in connection with the fisherman, himself, this figure shows something about the comparative true wages on the stern ramp trawler. The gross crew wages on such ships are $15,500 per year, while on the side trawlers the average wage is only $10,000. The net crew wages are, in the one instance $12,300 and in the case of the side trawlers the net wages are $7,800. These show that, with the modern trawlers, we are going to be able to encourage young men to come into the American fishing fleet. There is a very great and significant difference in the economic return from these two types of vessels.



FISHERY PRODUCTS AND FISH PROTEIN CONCENTRATE

The modern fishing vessels that are being constructed at the present time and the new resources we are finding and now beginning to exploit, have provided us with the means of developing some new products. Another accomplishment in this past year of which our Bureau is very proud of is the development of a fish protein concentrate. I have spoken to this committee about this protein concentrate before and the committee has been very much interested in its development.

Senator Young. All except me.

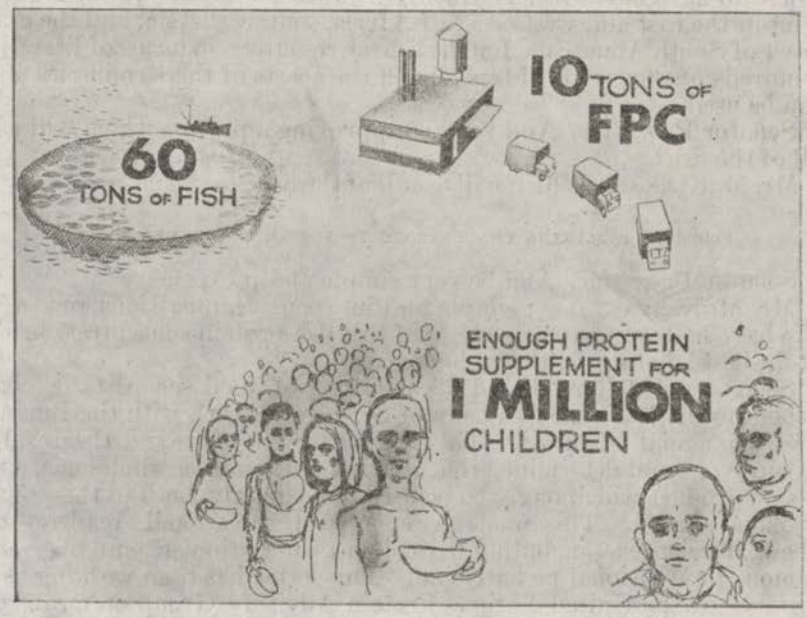
Mr. McKernan. Senator, this product has great potential and use in our great country in another form, it is used by the stock people for feeds throughout the United States at an increasing rate.

Senator Young. We do not want it to take the place of wheat.

USE OF FISH PROTEIN CONCENTRATE

Senator Bartlett. We are going to hide it in our wheat.

Mr. McKernan. It will never be used to take the place of flour but only to make flour more important and more valuable as a food product throughout the world. We would supplement the protein of wheat products by using fish protein concentrate at a very low level.



For example, our nutritionists say that 10 grams or about one-third of 1 ounce of this fish protein concentrate in the daily diets of the undernourished peoples of Africa and southeast Asia would be sufficient to overcome the dietary deficiencies that now occur in a majority of the population.

Senator Bartlett. Say that again.

Mr. McKernan. Ten grams or one-third of 1 ounce per day of this fish protein would overcome the dietary deficiencies suffered by approximately half the world's population today and at a cost of about one-half of 1 cent per day per person. This is the potential of this new development.

Senator Proxmire. Senator Douglas and Senator Saltonstall have urged this on the Senate for a couple of years.

Mr. McKernan. Yes.

Senator Proxmire. What did you say you were trying to do with this program?

PETITION FOR USE AS FOOD ADDITIVE

Mr. McKernan. This past year we have developed a new process and a new product. A petition for its acceptance by the Food and Drug Administration has been submitted and has been published—in fact, it was yesterday it was published—in the Federal Register and within 30 days we are hopeful to work with the Food and Drug Administration and receive their approval for using it as a food additive in the United States and then it is likely that we will use it overseas. We are hopeful that both the process as well as the product can be adapted for overseas use.

Many of the populations of people in the world needing protein the worst do have latent fishery resources off their coasts. In this regard I mean the east and west coast of Africa, southeast Asia, and the east coast of South America. Latent fishery resources, in terms of literally hundreds of thousands of tons, lie off the coasts of these countries and can be used.

Senator Proxmire. And you are approving a process which will use all of the fish?

Mr. McKernan. Which will use all of the fish.

PROCESS OF MAKING CONCENTRATE IS SIMPLE AND INEXPENSIVE

Senator Proxmire. And be very simple and inexpensive?

Mr. McKernan. Yes; simple and inexpensive, nutritious and safe. We have had very extensive tests of this fish protein concentrate made at the best laboratories throughout the country.

Secretary Udall requested a committee of food scientists be convened by the National Academy of Sciences to work with the Bureau of Commercial Fisheries. This committee has reviewed the results of our work and determined that this is a nutritious, a wholesome, and a safe product which ought to be used immediately, both in this country and abroad. This was the report to the National Academy of about 15 scientists, including toxicologists, nutritionists, and one very famous international pediatrician. This latter has been working as a member of the United Nations Protein Advisory Group on means of resolving the problem of worldwide protein deficiencies. In fact, the former chairman of the Protein Advisory Group, was Dr. Paul Gyorgy, of Philadelphia, who is also a member of the expert committee reviewing our work.

We started another program——

NO COMMERCIAL EXPORTS OR MANUFACTURE

Senator Young. May I ask another question before you leave that? Are you exporting some of this now?

Mr. McKernan. Only in very small experimental quantities. We do not have a plant large enough to make this product in the quantities required to permit it to be used for mass feeding experiments.

Senator Bartlett. Are there any plans for such a plant or plants, Mr. McKernan?

A BILL FOR PLANTS FOR FISH PROTEIN CONCENTRATE IN CONGRESS NOW

Mr. MCKERNAN. Yes; we have some plans but we don't have the necessary funds. I have noted that the senior Senator from Alaska has introduced a bill in the Congress on this subject.

Senator BARTLETT. And Senator Magnuson; that is right.

Senator YOUNG. Are there any commercial exports of this product now?

Mr. MCKERNAN. No; there are not. There is no commercial manufacturer of this product. It has been a Government development. Of course, without being able to use this product for human consumption, industry has been unwilling to go into its manufacture.

FISHERY IMPORTS AND EXPORTS

Senator YOUNG. You mentioned a while ago the sizable imports. Do you have any figures on the dollar value of fish that are imported?

Mr. MCKERNAN. Oh, yes. There are about $600 million of fishery products that are imported into the United States. Our exports are beginning to increase. This is another economic benefit from some of our programs, but our exports are just a fraction of the imports.

Senator YOUNG. This would be a way of improving our balance of payments.

Mr. MCKERNAN. We think this new product would be very important in improving our foreign trade picture. There is no question that we will be the first to manufacture and the first to export this material.

Senator BARTLETT. Along the line opened by the Senator from North Dakota, Mr. McKernan, you said $600 million worth of fish is imported into the United States.

Mr. MCKERNAN. Yes.

SIXTY PERCENT OF FISH CONSUMED IN UNITED STATES IS IMPORTED

Senator BARTLETT. What percentage does that constitute of all the fish consumed in the United States?

Mr. MCKERNAN. It is over 60 percent of the fish consumed in the United States at the present time.

Senator BARTLETT. A little over 60?

Mr. MCKERNAN. Yes; a little over 60 percent. In fact, we are producing a little less than 5 billion pounds and total consumption is 12 billion pounds.

Senator BARTLETT. And this despite the fact that the greatest fisheries in the world lie off our coast.

Mr. MCKERNAN. Yes. We have some of the richest Continental Shelf areas, fisherywise that is, in the world.

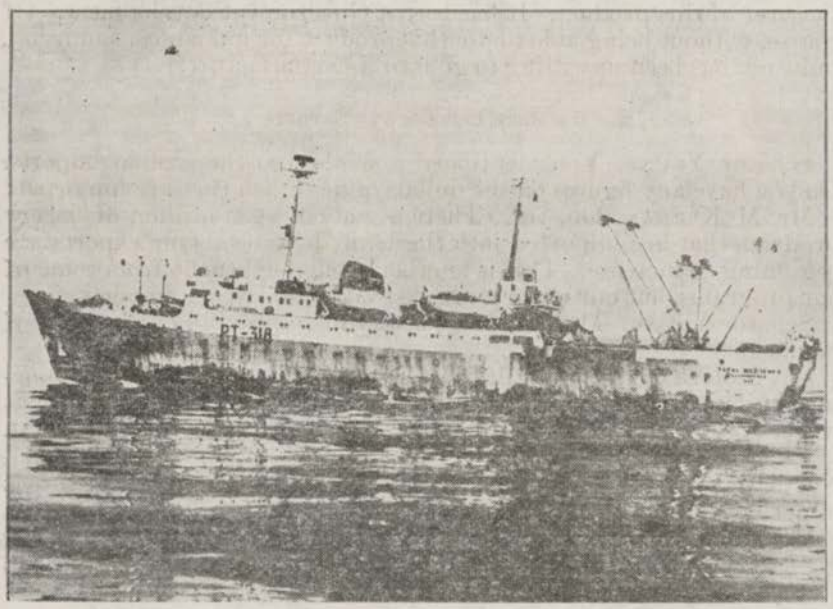
Senator BARTLETT. How do you account for this? How do these fish imports get in so readily?

FOREIGN FISHING VESSELS

Mr. MCKERNAN. As I mentioned before you came in, Senator, during World War II most of the major fishing fleets in the world were destroyed including those of Japan and the U.S.S.R. These nations

put a greater effort in rebuilding their fleets and they have built some of the most modern, most efficient vessels in the world.

Let me show you an example. This is an imposing stern trawler, the ship *Taras Shevchenko*. It has come from its home port clear across the oceans to the coast of the United States. It is a stern-ramp trawler of 3,200 gross tons. It fishes its net off the stern. It can, in fact, process the fish on board the vessel. It can carry great quantities of fish and can take this processed fish right back to the U.S.S.R.



Senator BARTLETT. How long can a ship such as that stay out at sea?

Mr. MCKERNAN. With the support ships the Soviet Union sends out to their fleets, these ships stay out as much as 6 months.

Senator BARTLETT. Does the U.S.S.R. have more than one such ship?

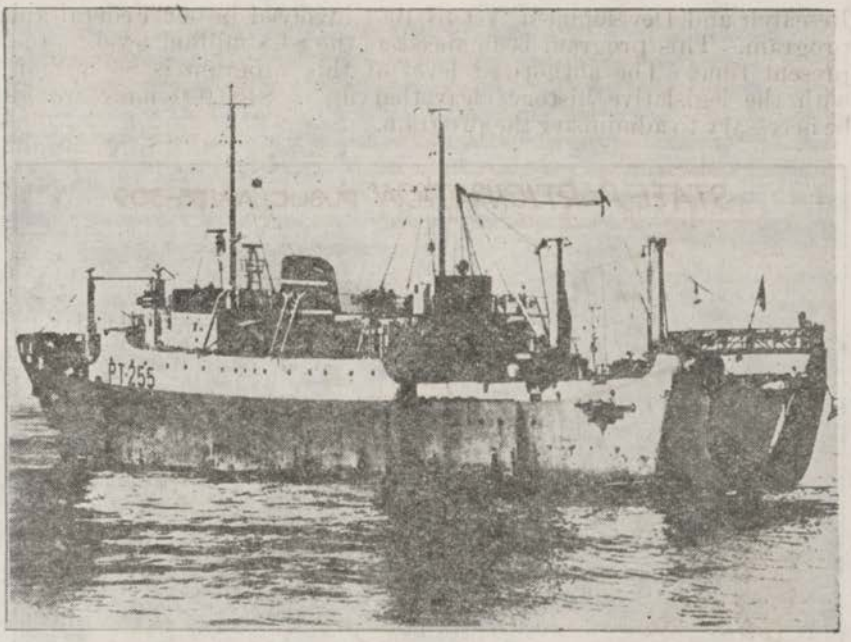
Mr. MCKERNAN. Oh, my, they have many. At the close of 1965, they had 120 vessels of this class. Now, this is only of this particular class. I think I have a picture of another class vessel.

This is the *Pushkin* class vessel of 2,500 gross tons. These vessels fish on Georges Bank in the North Atlantic as well as off the coast of Alaska at the present time. These are extremely modern vessels.

COMPARISON OF UNITED STATES AND FOREIGN FISHING VESSELS

Now, we in the United States are not advocating vessels of this size. The reason is that we have the resources close to our coast. We can, with a smaller much more modern vessel than we have at the present time, compete successfully, in my opinion, for the resources off our coast that now we are not competing for successfully.

Senator BARTLETT. However that may be, do we have one comparable ship in the U.S. fleet?



Mr. McKernan. No. We have no ships anywhere near this as modern in design nor of half this size at the present time.

Ships Needed in Protein Concentrate Program

Senator Bartlett. Mr. McKernan, if we went out in a big way to get the fish that we would need for this protein concentrate, this would open a new fisheries to us, as I understand it, in good measure. What size ship would we require then on the respective coasts?

Mr. McKernan. I would say that in the Pacific Northwest ships of between 100 and 150 feet would be optimum; and on the Atlantic coast between 150 and 200 feet for the northwest Atlantic. Although further tests need to be made of this, from my experience, I would say ships of about that size.

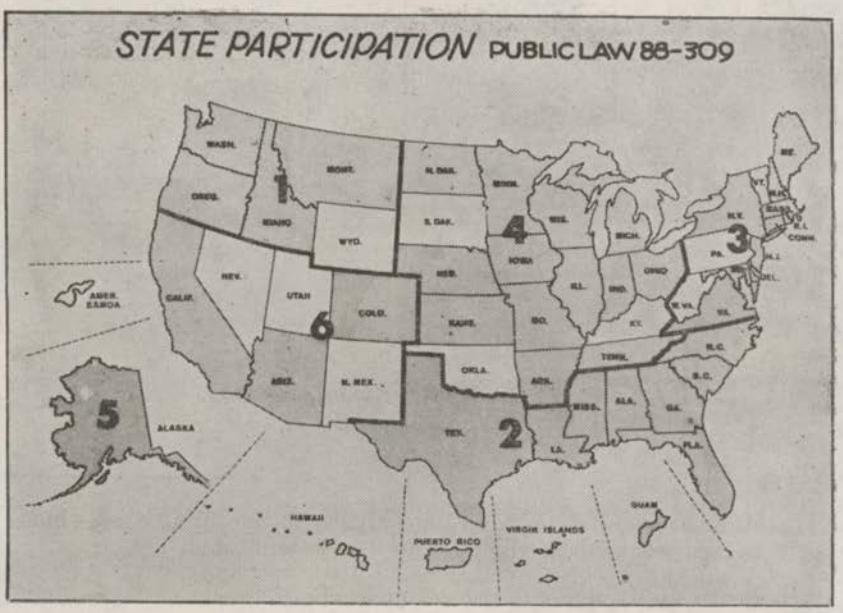
Pacific Coast Hake Fisheries

I also mentioned that just this past year our exploratory work with some of the funds that this committee had provided for us we have located large stocks of hake off the Pacific coast and have started a major fishery right at the present time. These stocks occur from the Canadian border and perhaps further north. We have not explored enough to be certain but they extend down to southern California. This promises, in my view, to be a major fishery which would be of great economic benefit to our fishing industry.

Federal Aid Program for Commercial Fisheries

We have another new program that has just been started this past year. We have 43 States as defined in the Commercial Fisheries

Research and Development Act of 1964 involved in our Federal aid program. This program is financed at the $4.8 million level at the present time. The authorized level of this program is $6 million with the legislative history clear that up to $400,000 more would be necessary to administer the program.



Mr. McKernan. I believe this to be a very important program because it allows the Federal Government and the States—in fact, there is a mandate that the Federal Government and the States work more closely together. It is encouraging commercial fisheries research and development, which will lead to better management of the inland fisheries of the United States. The States shown in white are not yet all participating, but almost without exception they plan on entering the program before the end of this current fiscal year. Some of them, for example——

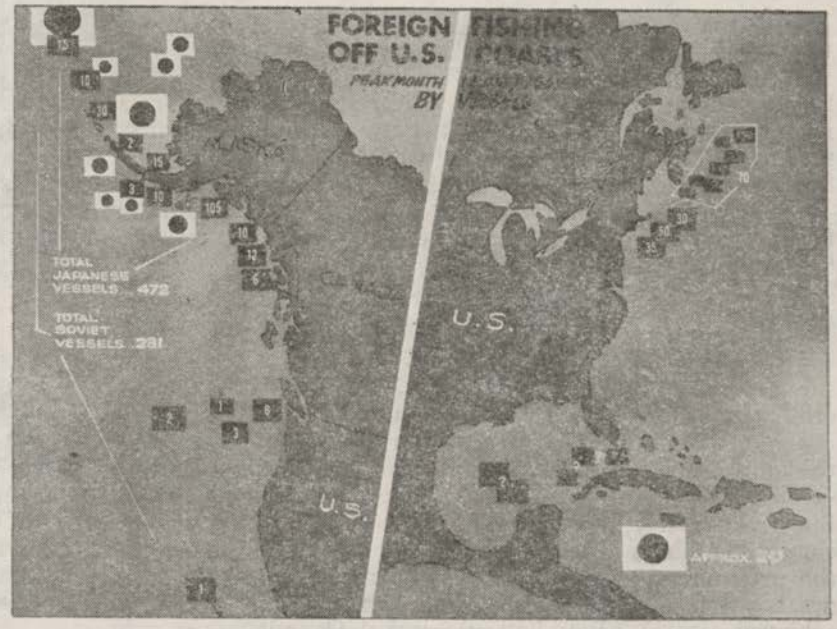
Commercial Fisheries Aid in West Virginia

Senator Byrd. West Virginia.

Mr. McKernan. West Virginia is now planning a project on the Ohio River where we have been working very closely with the State officials in this regard. We have set up ad hoc committees of State fisheries officials and have been talking to them about our programs and theirs, fitting these together into a pattern which can't help but benefit us greatly and, in fact, insure that we are using our money most efficiently. There has already been improvement in communications between the fisheries administrators and our organization as a result of this modest program.

UTILIZATION OF FISHING RESOURCES PROXIMATE TO U.S. COASTS BY FOREIGN FISHING FLEETS

Mr. Chairman, just to add one more point concerning the general problems, I had stated that the commercial fisheries of the United States appear to me to be on the upswing and that programs financed by this committee, in my view, are having a beneficial effect on the commercial fisheries, but we still have a number of problems. A few have come out in questioning during the past few minutes but I am not sure that there is a clear understanding of the extent to which foreign fishing fleets are now utilizing resources close to our own ports and on our own coasts.



Mr. MCKERNAN. In the last few years, there have been about 400 Soviet fishing vessels of the general size and kind that I showed this committee fishing in the eastern North Pacific. They fish sometimes within sight of land; they take groundfish resources. They take halibut, incidentally, in catches and other resources that we are now taking in our fisheries and others that can and promise to be the source of a very major fisheries along the Pacific coast. There are about 250 Soviet vessels fishing intermittently in the Atlantic, many of these fishing on Georges Bank, which, of course, is one of the oldest and most traditional of all of our fishing grounds.

SIZE OF JAPANESE FISHING FLEET IN NORTH PACIFIC

There are about 550 Japanese vessels fishing in the eastern North Pacific, and these fleets are literally taking billions of pounds of fish very close to our coast in areas where our fishermen, given the opportunity, can compete successfully with these fishermen.

Other Foreign Fishing Fleets

There is no question in my mind that other nations are involved, too. The Poles are fishing off our coast at the present time; the Rumanians this past year; we even had two Venezuelan trawlers come up and fish along our Atlantic coast.

We have some 20 Japanese long-line vessels fishing in the Caribbean in areas where our people have found considerable latent tuna resources.

We have recent reports of East German vessels coming in some force, fishing south of Greenland at the present time, and we expect them near our own coastline.

Challenge to Modernize U.S. Fishing Fleet

So, this country does have a challenge; it has a great opportunity because the resources are here. We, I think, know more about these resources than anybody else. They are closer to our ports and closer to the best fisheries market in the world, in the U.S. market, a market that is increasing in size and scope and ability to use fishery resources.

I believe it is important and necessary that we attempt to build our fleet so that we can compete successfully for these resources, at least those off our own coast.

Fish Population Changes in Eastern Lakes

Just very briefly, the Great Lakes investigations of the Bureau have shown considerable success recently. The changes in some of the eastern lakes, such as Lake Erie, have caused a drastic change in the population of fish. Some of these that were traditionally fished both by recreational seekers and commercial fishermen have disappeared. Other species, such as the alewife, have come in in tremendous quantities in the Great Lakes. Now, this is a mixed blessing. It undoubtedly will change the kinds of fish caught in the lakes but, on the other hand, if the programs are instituted to find and use these resources, I think great benefits can be achieved and tremendous production can be achieved, also. We have had success with Canada——

Senator Proxmire. Could I ask a question, Mr. Chairman, at this point?

Chairman Hayden. Certainly.

Senator Proxmire. I am extremely interested in this last point that you had made.

As you know, the Great Lakes fishing industry has suffered very, very substantial losses, perhaps more than the fishing industry in any other section of the country in percentage in recent years.

Mr. McKernan. Yes.

Fishery Research in Great Lakes

Senator Proxmire. Also, some 40 percent of our population lives on or near the Great Lakes and pay half of all the Federal taxes. And yet a very tiny proportion, some 3 percent, of the research by your agency has been designed for the Great Lakes.

Mr. McKernan. Yes.

Senator PROXMIRE. Last year, we were successful in getting $200,000 more appropriated for research on Great Lakes fishing than was requested in the budget. I have received a letter from Gerald Bolda outlining the work that has been done with that $200,000. It is good to know that this year you are going to fund at that level including the $200,000.

Mr. MCKERNAN. Yes.

Senator PROXMIRE. Mr. Bolda outlined further steps. These would require an additional $370,000 and 20 new positions which are not included in this year's budget. These funds would provide for an expansion and improvement of laboratory study and the alewife problem which you just mentioned which is seriously affecting the lakes. The funds would provide for expanding the program on Lake Erie, and so forth.

GREAT LAKES COMMERCIAL FISHERIES RESEARCH PROGRAM

If the chairman will permit, I would ask unanimous consent that a summary of the progress made on the lakes and the need for additional funding could be inserted in the record, if that is possible.

Chairman HAYDEN. That will be done.

(The statement follows:)

The fisheries of the Great Lakes are presently in serious trouble. The outstanding symptom has been the dramatic weakening of the Great Lakes capacity to produce the fishes that supported the active and valuable fishery of the past. They now produce an overabundance of many species that have been used little or not at all by anglers and industry.

Gone from Lakes Huron, Michigan, and Superior are lake trout stocks which yielded an annual average production of 15.5 million pounds worth $7.5 million at dockside. This value based on average figures of 10 and more years ago would be worth about $10 million at today's prices. Reduced to relative insignificance are the fisheries in those lakes for several species of whitefish, perch, walleyes, and burbot. Upset completely is the ecological balance among species that existed there. This disruption of ecological balance has been brought about largely by the invasion and increase in abundance of the prolific alewife. This species was 50 times as abundant in Lake Michigan in 1965 as it was in 1962.

The sport and commercial fisheries of Lake Erie are extremely demoralized and financially unstable. Gone from that lake are the keystones that supported an excellent sport fishery and a steady and lucrative commercial fishing industry. Blue pike, walleyes, whitefish, and yellow perch stocks have dwindled to insignificance or changed character so much that their contribution to the fishery are almost nil. Blue pike production dropped from 6,855,000 pounds, worth $1,316,000 in 1956, to 200 pounds, worth $120 in 1965. The blue pike fishery of 1956 would be worth $4 million today. Walleyes contributed 5,035,000 pounds, worth $1,357,000 to the catch, in 1957 and only 1,520,000 pounds, worth $241,000, in 1964. The 1957 walleye fishery would be worth over $4 million at today's prices.

The cumulative loss to the Great Lakes commercial fishing industry from these resource catastrophes is an estimated $20 million yearly. The loss to the sport fishing industry is estimated to be of about the same magnitude. Additionally, the 1963 botulism outbreak, from which the industry has still not fully recovered, has resulted in estimated losses to fishermen, smokers, and dealers in fresh fish of $20 million to date.

To compound an already serious problem, the more recent explosive increase of the alewife has completely upset the ecological balance of Lakes Michigan and Huron. As a result, the lake herring, chubs, perch, and smelt populations in these lakes have been drastically reduced. Further, there is concern that the attainment of the fullest benefits from sea lamprey control and lake trout rehabilitation may be endangered. The alewife population has reached proportions that have created serious problems at the water supply intakes of the city

of Chicago and at those of other major cities located along the shores of the Great Lakes. This nuisance fish is also affecting recreational use of the lakes—swimming, fishing, and boating. Indeed, the alewife threatens to crowd out of existence most other fish species in the lakes.

The effect of pesticides on the well-being and use of fish from certain segments of the Great Lakes is an additional problem added to the many faced over the years. Evidence is strong that pesticides can prevent successful reproduction of lake trout. This is cause for concern to fishery management agencies, since the first planting of lake trout toward rehabilitation of that species in Lake Michigan occurred in the spring of 1965. Although actual proof does not exist, some mink ranchers claim that Lake Michigan fish fed to mink have caused a drastic decrease in production of young. Approximately 70 percent of the U.S. mink are produced in the Midwest. These mink annually consume 180 million pounds of fish of which between 50 and 60 million pounds are from the waters of the Great Lakes, inland lakes and rivers. The use of Great Lakes fish by mink ranchers has been steadily increasing each year. In 1965, however, sales began to drop. This has been a serious economic blow to the Great Lakes commercial fishing industry.

The stocks of fish in the Great Lakes are grossly affected by rather small changes in the environment. Biological, physical, and chemical imbalances such as introduction of exotic species, pollution, pesticides, climate and water exchange, exert definitive influences on freshwater fish stocks which characteristically fluctuate in response to such change more violently than in the oceanic complex. Since these environmental changes must be clearly delineated, the accumulation of knowledge for the proper use of the Great Lakes fishery resources and its potential is difficult and diversified. However, this very need can and often does provide the facts upon which vast improvements in productive capacity can be based because the environment can be manipulated without excessive investment. We must learn how to manipulate populations of fish to take advantage of the altered environment that will prevail in the future since it is doubtful whether we can ever expect the Great Lakes to return to their pristine condition.

The $200,000 provided by the Congress in fiscal year 1966 has made it possible for the Bureau of Commercial Fisheries to start an attack on some of these critical problems. Results to date have been encouraging. However, a substantially greater effect is needed. A modest expansion in the program of the Bureau of Commercial Fisheries during the coming year will enable it to more effectively deal with these problems. An additional $370,000 and 20 new permanent full-time positions are required. The disciplinary allocation of these funds and personnel ceilings would be as follows:

	Expanded program fiscal year 1967	Permanent personnel requirements
Biological research	$195,000	12
Exploratory fishing-gear research	65,000	3
Technological research	55,000	2
Marketing and economic research	55,000	3
Total	370,000	20

The status of the accelerated program approved by Congress last year follows along with a proposed expended program for fiscal year 1967.

STATUS OF ACCELERATED PROGRAM—BIOLOGICAL RESEARCH (FISCAL YEAR 1966)

The $85,000 for biological research this fiscal year has provided for studies to assess the abundance, distribution, and survival of alewives in Lake Michigan. Experimental trawling has been initiated to determine the distribution and abundance of the various year classes of alewives. An analysis was completed of alewife catch records by industry, exploratory fishing, and biological research vessels. Data show that young of the year alewives were 50 times more abundant than in 1962. The sampling program shows that the alewife is the dominant species in Lake Michigan, and that it will undoubtedly comprise a much greater portion of the total in the total fish population of the future. Some

evidence has been obtained that while alewife abundance increases that of other species decreases—in some species the decrease is drastic.

At the new Ann Arbor laboratory, a conditioned water system was tested and found to be suitable for aquatic organisms. Preparations are being made for laboratory investigations of the feeding and space competition between alewives and native Great Lakes fishes. There are indications that the alewife offers strong competition to several species of fish. A quantitative measure of this competition should be established so as to predict the impact of increased alewife abundance on other species.

Studies of the several species of chubs in Lake Michigan were intensified during the year to establish the size of various age groups, growth rates, and seasonal distribution. The increased knowledge acquired from the research on chubs and alewives will not only aid the States in the management of the fishery but will provide leads that will assist in planning research this spring and summer to alleviate the alewife problems at the Chicago water intakes.

Studies on pesticide content of fish, lake water, bottom sediments, and certain other aquatic organisms have been started now and equipment and techniques have been perfected. Not enough data have been obtained yet to warrant drawing any conclusions.

Proposed expanded program (fiscal year 1967), biological research, $195,000 and 12 permanent positions

Laboratory studies on alewife competition will be expanded and improved. Physiological experiments will be started to delineate competition between alewife and other species.

An expanded program of research on the survival of planted lake trout will be started in Lake Michigan. The first plantings of hatchery lake trout in Lake Michigan were made in the spring of 1965. Survival, growth, movement, and distribution of the lake trout will be followed. In addition, experiments will be conducted in both the laboratory and field on behavior and interrelationship of planted trout and other species occupying the same environment and the factors affecting survival of trout.

The expanded program will provide for intensification of biological research on the fishery resource of Lake Erie. At present research efforts on Lake Erie are confined to the western basin, with infrequent cruises to the central basin of the lake. Lack of funds have prevented any work in the eastern basin and has limited efforts in the main lake area. Year classes of the various species will be determined and followed on a lakewide basis.

Research will be conducted to determine the origin, nature, and bacterial characteristics of the material primarily responsible for the oxygen depletion of Lake Erie. Sedimentation will be measured, the amount of oxygen required to oxidize the newly deposited sediment will be determined, components of the sediment will be classified, oxygen consumption power of the sediment will be measured, the oxygen deficit of Lake Erie will be calculated, and the percentage oxygen deficit will be determined. In addition to the physical-chemical studies listed above, an integral part of the study will be the role of bacteria as the causative agent in producting significant chemical changes in both the overlying water and the sediment. To understand the transformation of organic matter in the Lake Erie Basin, determinations must be made of the rate at which it is synthesizing; the rate of decomposition; the mechanisms of the decomposition process, and the micro-organisms concerned; and the nature of the resulting products. Investigations would be made of bacteria as a key organism in the cycling of oxygen, nitrogen, phosphorous, iron, and carbon through the system.

Low oxygen in Lake Erie (annually occurring in over 4,000 of its 11,000 square miles) is a known and real problem. There are also problems affecting the fish of Lake Erie that are not necessarily associated with low oxygen conditions. The erratic and generally poor success of year classes and/or slow growth of certain Lake Erie fishes may be attributed to a variety of other unfavorable changes in the environment. To explore these, research will be conducted on the following: (1) presence of toxic materials (metals, pesticides, etc.) present in lethal concentrations in spawning and nursery areas that may affect reproduction and/or the development of embryos and fry; (2) is any reduced fertility evident in fishes due to pesticide concentrations; (3) possible smothering of fish eggs by sediment deposition or by low oxygen; (4) determine if food supply is adequate for fish fry during first weeks following hatching; (5) the effect of reduced food supply, particularly bottom living organisms, on growth rates of

fishes; (6) the effect of reduced feeding area (exclusion of fish from large areas due to oxygen deficiency) on growth rates of fishes; (7) determine (in laboratory) if a stress syndrome is induced in certain fish when subjected to overcrowding such as may occur when vast areas of oxygen deficient water forces dense populations into more reduced quarters.

Included here will be costs of modification to the Lake Erie research vessel, *Musky*. These will include changes which will provide more speed to enable her to make more observations and collections. Also, laboratory space will be provided aboard the vessel so that samples of water for chemical analyses may be worked up en route.

STATUS OF ACCELERATED PROGRAM—EXPLORATORY FISHING AND GEAR RESEARCH

The $45,000 for exploratory fishing and gear research this fiscal year provided knowledge to industry concerning seasonal distribution and availability of fish stocks and demonstrated more effective and economical fishing methods. In addition a special gear research and development project to find better ways to locate fish, catch fish, handle fishing gear, and handle catches was staffed and provided with the necessary equipment and laboratory facilities. Already this project is far along in the development of a practical electromotivator system. The practicality is denoted by its simplicity, reasonable value, and safety features. The system will be given tests under production conditions this spring—in the pound net fishery for removing fish from nets faster and at less cost and in the trawl fishery to increase catch rates for alewife, carp, smelt, and suckers. Attention is also being given to assisting Great Lakes fishermen with the use of fish-detecting echo-sounders and other electronic instruments and with the development of more efficient deck gear.

Expanded program, exploratory fishing, $65,000 and three permanent positions

Fishing gear and methods used on the Great Lakes were developed over a century ago for the harvesting of such species as lake trout, whitefish, walleyes, and other valuable food fish. These desirable species are either no longer available or in short supply. Abundant species now available such as alewife, carp, catfish, chubs, sheepshead, and suckers do not lend themselves to capture by traditional gear such as gill nets, pound and trap nets. Furthermore, the cost of catching fish with such gear often exceeds the price received. Fishermen are beginning to realize that they must change their methods of fishing, vessels must be redesigned, and new and more efficient gear employed.

A backlog of 7 years of information regarding available fish populations, effective fishing methods (largely use of otter trawls) and important electronic and mechanical fishing aids will be imparted to the fishermen through a program of technical assistance. Requests for such information are increasing monthly since the demand for alewife, carp, chubs, goldfish, sheepshead, suckers, and many other species not formerly utilized anywhere near to potential capacity has climbed steeply due to construction of new fishmeal plants (three in Wisconsin) and additional supplies of fish required for a processed animal food, canned pet food, and human food. Part of this demand is the result of breakthroughs in technological research where new industrial processes and human food products have been developed.

This technical assistance program will speed up industry's use of available information, assure that limited capital is not wasted or misdirected, and provide close liaison between fishermen during the period of tooling up and early operation. Since these fishing methods are new, and are not a part of outdated State fishing codes, experimental fishing permits are granted to the fishermen with the proviso that close surveillance is maintained during the entire fishing season by the Bureau of Commercial Fisheries. Such fishing is experimental and the fishermen must maintain accurate records. These records extend our data on availability of stocks, depth and seasonal distribution, size ranges, and economic data on cost-profit ratios. The data will eventually lead to bringing fishing regulations up to date. This effort will also contribute materially to the doubling of Great Lakes production by 1972. The additional catch would have a landed value of more than a million dollars and a value at the consumer level of over $3 million.

STATUS OF ACCELERATED PROGRAM—TECHNOLOGICAL RESEARCH

The $43,000 for technology has been used in product-processing development research. The following five discrete areas of activity have been pursued: (1) Increased mechanization of industrial processing, (2) development of new prod-

ucts from problem fish species, (3) investigation and evaluation of new preservation techniques, (4) the development of an active extension phase to convey to members of industry current and forthcoming information to assist in the resolution of industry's problems, (5) enzyme studies and the chemistry of fish flesh.

The following are major accomplishments of product-processing activities:

In 1958, a machine designed to fillet baltic herring was purchased to conduct filleting trials in order to determine the feasibility of producing machine-cut, frozen lake herring fillets for both the retail and institutional trades. Although the success of this venture suffered from (1) a lack of promotional follow-through, (2) inadequate consideration of quality loss in herring products during frozen storage, and (3) the ultimate failure of herring producting in the Duluth area, it did serve to show that herring fillets could be successfully machine-produced both from a production and economic standpoint. This year, with the aid of this project, the machine was returned to its manufacturer for modernization and is currently located on Lake Superior, where it will be utilized in a controlled pilot filleting-breading line supervised by the Bureau under EDA and BCF sponsorship. This line, which will be operated by industry members, will also involve installation of scaling, dipping, breading, freezing, and packaging equipment. Products will be test marketed under Bureau supervision.

Preservation techniques, new to the Great Lakes fishery, being investigated at this laboratory include the introduction of antioxidants to control rancidity during frozen storage. The primary objective is to determine methods for significantly improving the frozen storage capabilities of fresh-water fishery products. Investigations on controlling other quality deterioration factors—such as the off-color development on the cut surface of sheepshead fillets—have been initiated. These will be intensified this spring in cooperative tests with industry.

In regard to controlled atmosphere (CA) research (where nitrogen gas is used to replace oxygen), four storage tests were previously conducted in cooperation with Whirlpool Corp. on yellow perch fillets held at 33° F. in air and CA. Results indicated a twofold extension of shelf life through the use of the atmospheres studied. These tests are now being continued under this project. Product development research initiated under the project are primarily concerned with the utilization of problem species such as carp, sheepshead, and chub toward the production of fillets, blocks, and boneless, skinless, raw material for portion-controlled, frozen reconstituted products.

One significant advancement in the area of industrial fish utilization has involved the development of an experimental reduction process that is designed around the inactivation by heat of the enzyme thiaminase (the antivitamin B1 factor common to most fresh-water fish species). If uncooked, fresh-water fish are fed to animals, vitamin B1 is destroyed causing the animal to develop vitamin deficiencies. In mink, this takes the form of chastic paralysis and results in death. This process converts raw fish (at its highest quality) into a "press cake" type of product that is thiaminase-free and which has much of the original amount of water, oil, and pesticides removed. Also, the press cake is easier to handle, store, and is more uniform in composition than raw fish. Consequently, the press cake is suitable for many more market outlets (mink food, pet foods, fish foods, fishmeal, etc.) than raw fish.

Expanded program, technological research, $55,000 and two permanent positions

The expanded research program will be concerned entirely with enzyme studies and the chemistry of fish flesh as follows.

1. The antimetabolites (antrition destroyers) project would involve studies on the isolation of enzymes, thiaminase, and the cotton-pelt factor. Isolation of these factors is a necessary step in studying their basic biochemical properties. Also, the time and temperature requirements of inactivating these factors in whole fish would be studied. The effect of various chemicals and various physical conditions, like pressure and radiation, would also be determined. This information would be necessary to devise processing systems for fuller utilization of Great Lakes and other inland species.

2. Studies on the autolytic enzyme (enzymes used in digestion) systems of fresh-water fish would involve (*a*) using the natural enzymes of the fish along with added enzymes, heat, and acid treatments to digest (dissolve) the fish into potential animal food or even human food products, such as fish protein concentrate which would be used as a food supplement; (*b*) determining the effect of natural enzymes on the texture and taste characteristics of human

food products—during storage, either chilled or frozen, enzymes damage the flesh of fish. The purpose of these would be to provide additional ways to utilize abundant species and retain the desirable characteristics of fresh and frozen fishery products.

3. The chemistry project would involve tests to determine the nutritive value of fresh-water fish and fishery products. These tests would include water content, oil, minerals, proteins, vitamins, and antimetabolite factors. This would determine the potential value of fish as animal or human food products and uses of byproducts such as oil for industrial use (paint, margarine).

STATUS OF ACCELERATED PROGRAM—ECONOMICS

The $25,000 for economics studies has been used for the following:

1. Analysis has begun on a summary of data on consumption of major species of fish collected by Michigan State University from a consumer panel of families in Lansing. An additional run has been ordered by the region which will make possible the identification of purchases of fresh-water species. These data will be analyzed to determine the effect of family characteristics on purchases of fishery products and to estimate future consumption of fishery products. A reinterview of the panel members is proposed to be carried out this summer to verify conclusions from the original data and collect further information on consumer preferences. About 200 panel members have been located and will be contacted for the interview.

2. A study of costs and efficiency in trawling on Lake Michigan has begun. Accounting format was developed and has been completed for 3 years of operation for a number of trawlers. This will be extended to other trawlers to develop information on effects on catch and costs of various scales of operation and capital-labor combinations.

3. An economic analysis of the fishing industry in Lake Superior is being conducted. Cost studies from production through marketing, and demand studies coordinated with the introduction of new product forms will be used to develop a limited-entry study in the next fiscal year.

Expanded program, marketing and economics, $55,000 and three permanent positions

The economics projects described above will be continued. These studies are tied in so closely with marketing that they are an integral and necessary part of the market development work contemplated below. In addition to the economics studies listed above, research to obtain detailed analysis of present production, processing, distribution, and marketing costs for each major fishery of the Great Lakes will be started. These data will result in recommendations as to methods and procedures to be applied to the various phases of production, distribution, and marketing.

Market development and consumer education related to Great Lakes fishery products will be conducted in the following areas: (1) Development of new and expansion of existing industrial-use markets for underutilized fishes such as alewife, chubs, smelt, lake herring, gizzard shad, carp, and sheepshead; (2) development of institutional markets such as restaurants, hospitals, State institutions, cafeterias, and Armed Forces, for Great Lakes fishery products. Few fresh-water fish are now going into these markets which are now supplied by hundreds of millions of pounds of ocean fish, both domestic and imported; (3) demonstrations and educational programs to stimulate increased use of Great Lakes fishery products by the homemaker; (4) educational programs designed to improve the quality and merchandising of fishery products at the retail level.

Mr. Bolda has presented an accurate summary of progress achieved during the first year of the accelerated Great Lakes program. There are, however, a few additional accomplishments.

Biological research

1966 program.—Research biologists working on Lake Michigan were able to increase our knowledge of the chub and alewife resource. A study of the feeding habits of alewives was undertaken and new information was obtained on the depth distribution of alewives by season of the year and age group.

Expanded program.—The program suggested by Mr. Bolda would provide for additional research on the complex interrelationships among fish species in Lake Michigan and would allow the start of important new projects. During 1965,

1.2 million yearling lake trout were planted into Lake Michigan. This marked the beginning of the trout restoration program in this lake. With the additional funds recommended by Mr. Bolda, we would develop techniques to evaluate the success of this stocking program and we would be able to test methods for improving stocking procedures. Also, various management measures would be studied to determine which ones would provide adequate protection of juvenile lake trout until they reach maturity and spawn.

The serious condition of the fishery resource in Lake Erie requires that a special effort be made to keep abreast of the status of the fish stocks in all areas of the lake. Concurrently, it is necessary to expand studies of the aquatic environment so as to determine the conditions affecting the reproduction, survival, and growth of fish by lake zones.

Economics

1966 program.—The accelerated program has made possible the establishment of regional economists in the Great Lakes region. Economic research undertaken includes an analysis of factors behind trends in fish consumption in the area.

A study of cost and economic efficiency in the Lake Michigan trawl fishery is underway. Indications are that the larger producing units enjoy considerable cost advantage.

Technical and advisory assistance has been provided to fishermen and processors and to a firm developing fish processing equipment for use in the Great Lakes area.

Exploratory fishing

1966 program.—This new program, added by congressional action in fiscal year 1966, will assist in revitalizing the commercial fishery of the Great Lakes. Emphasis was placed on the: (*a*) Development of the most efficient devices for harvesting unutilized species, particularly alewife in Lake Michigan; (*b*) analysis of available information on engineering capabilities for application and devising new fishing systems; (*c*) increase production of low cost fish through exploratory fishing to satisfy demand of 50 million pound-plus fish meal plant capacity (three plants in Wisconsin). Attention is also being given to assist Great Lakes fishermen with the use of fish-detection echo sounders and other electronic instruments, and with the development of more efficient deck gear.

Since project inception at the start of fiscal year 1966, the professional staff has been employed, laboratory space and equipment acquired, fish specimens collected for behavior studies in relation to gear, and development of a practical electromotivator system is well underway. The additional exploratory fishing vessel time made possible by the program was instrumental in extending the alewife fishery through December by putting Lake Michigan trawlers on heavy concentrations of alewife found at 25 to 30 fathoms. Production rates averaged 1 to 2½ tons per hour drag.

Expanded program.—Recent introduction of trawl fishing and refined techniques in echo sounding to locate fish concentrations already have shown the increase in productivity and profitability to the fisherman over the traditional gill nets, pound and trap nets. With the decrease in abundance of the species which previously made up the bulk of the catch, a substantial increase in industrial-type fish has occurred. To make an industrial fishery profitable the catch rate per fishing unit must increase appreciably.

Recent commercial trawl catches in Lake Michigan in water deeper than normally fished have produced up to 5,000 pounds of alewife in 1 hour drags proving the effectiveness of the newly introduced fishing methods.

Considerable interest in this fishing method has been shown by other States, mainly Ohio and Pennsylvania, and may soon lead to encourage trawl fishing in their waters. Before such a fishery is effectively established fishermen have to become familiar with the new fishing methods and invest in the necessary gear and equipment. An expanded technical assistance program would accelerate this fisheries development and assure that fishermen's capital outlay for new gear is not misdirected.

In addition, this embryonic trawl fishery would provide valuable further information on the availability of stocks, depth and seasonal distribution and economic data necessary for continued expansion. Estimates indicate that the production capacity of the Great Lakes could be doubled by 1972 through the development of an effective trawl fishery.

Technology

1966 program.—Technological programs developed as a result of Senate action for fiscal year 1966 include: (1) mechanization of industrial processing; (2) development of new products for problem species; (3) investigation and evaluation of new preservation techniques; (4) initiation of an extension type program to assist industry in resolving their problems, and (5) enzyme studies and the chemistry of fish.

Although these programs were begun only in July of last year demonstrations show that herring fillets can be successfully machine produced both from a production and economic standpoint. Studies have been initiated to learn the causative factor in the discoloration of sheepshead fillets.

Work is also being conducted on ways of extending the shelf life of these fishery products. Scientists working on product development are attempting to perfect a product that will be suitable for many market outlets (mink food, pet foods, fish foods, fish meal, etc.).

Expanded program.—The expanded technological effort of $55,000 (including 2 permanent positions) will be aimed toward learning more about the enzyme systems of fresh water fish and the chemistry of fish with a goal of acquiring data than can be used to improve the quality or usability of these fish. In conjunction with this research, the nutritive value of selected species of fresh water fish will be determined.

The enzyme work on fresh water fish would involve two phases. First, the natural occurring enzymes of fish affect the texture, taste and the general quality of the product. The effect of these enzymes on the characteristics of the product destined for human consumption will be determined with a goal of inhibiting the detrimental changes that occur with many species of fish during refrigerated and frozen storage. Secondly, enzyme systems that can be used to digest the fish into more basic components. Depending on the degree and type of breakdown, these components can be used for animal or even human foods.

The overall goal of an expanded effort would be to provide new ways to use the abundant species of Great Lakes fish and to develop methods to retain or enhance the desirable characteristics of these fish.

Marketing

Expanded program.—The market development and consumer education phase of the proposed expanded Great Lakes research program could be effectively conducted at the annual expenditure of $55,000.

The following program of work would be included:

1. Development of new and expansion of existing industrial-use markets for underutilized Great Lakes species.

Alewife, chub, smelt, lake herring, gizzard shad, carp, and sheepshead industrial markets would be expanded through personal contact with oil, meal, pet food, and other manufacturers which have the potential of using underutilized industrial fish products.

2. Development of institutional markets for Great Lakes fish products.

Encourage use of Great Lakes products in mass feeding institutions through trade contacts, cookery demonstrations, recipe research, purchasing guides, transportation and distribution improvements and Government publications.

3. Demonstrations and educational programs to encourage homemakers to use Great Lakes fishery products.

Develop video tapes, slide presentations, and newspaper educational material, and disseminate nationally to feature Great Lakes products. Conduct fish cookery, fish cookery demonstrations via public service radio and television, extension workshops, and homemaker organizations. Develop new recipes, attractively photographed for distribution to mass media and as consumer publications through the GPO.

4. Educational programs to improve quality and merchandising fishery products at retail.

Encourage new cooperators to utilize Great Lakes products in point of sale material. Organize retailers in joint merchandising efforts. Initiate merchandising clinics to teach proper handling, packaging, and sale of Great Lakes products. Encourage new merchandising methods, and more rapid distribution and handling.

The program would require a home economist to develop, test, and compile recipes for consumers and institutions that feature Great Lakes products.

The home economist would spend 50 percent of her time in research and 50 percent in field demonstrations, television, and other educational efforts.

A fishery marketing specialist would be required to develop field programs with industry, institutions, schools, military, and other cooperators. Approximately 80 percent of his time would be devoted to development and implementation of the above programs in the Midwest. As Great Lakes products become consistent in supply and quality and distribution improves, market development programs will be intensified on a national basis.

FISHING POTENTIAL OF GREAT LAKES

Senator PROXMIRE. I would also like to get your idea on the suggestion by Mr. Bolda. Maybe it would be better to put it in the record.

Mr. MCKERNAN. Perhaps I can just give you a summary of this and then insert for the record, if you permit me to, a more expanded statement.

Senator PROXMIRE. Right.

Mr. MCKERNAN. What you say, I agree with. There is great potential in the Great Lakes. There has been a serious decline in the commercial fisheries because of the decline in such traditional fisheries as those for Great Lakes trout, and a number of other species, such as whitefish and others. We have an opportunity to overcome the present very low economic status of the Great Lakes fisheries, but this does require the development of new kinds of gear; a greater exploration of the environment within the lake inhabited by these species; finding out efficient ways of catching them; profitable ways of processing them; and putting them on our markets in such a way as to provide a profit. I think there is a good potential for doing these things to the material benefit of our Great Lakes fishing industry.

There are many people living around the edge of the Great Lakes who depend wholly, or to a considerable extent, on fisheries for a livelihood or have in the past. Many of these are in very serious economic straits at present, and we have done our very best—within our very limited funds—to help correct this situation to the extent fisheries can do so.

I think great possibilities exist for rehabilitating the lake trout fisheries and then to supplement the use of these important economic fisheries resources, such as the Great Lakes trout, with quantity fisheries, such as fisheries for alewife and herring and other species of that kind.

I will be glad to supplement these remarks.

BUDGET REQUEST NOT INCLUDED IN 1967 BUDGET

Senator PROXMIRE. Did you request the additional $370,000 of the Department?

Mr. MCKERNAN. I don't believe that that was in our original request with the limitations that were imposed upon us.

Senator PROXMIRE. Any part of it in your original request?

Mr. MCKERNAN. I suspect there was part of it and I can't tell you right now how much.

Senator PROXMIRE. Your position, then, is that until the restriction on your funds is lifted, that you would not be able to proceed in this area? This $370,000 is a lot of money, but, at the same time, in view

of the great importance of the Great Lakes and the urgency of its fishing problem, it seems to me it is a relatively modest investment; it is not in the millions; it is not in the billions.

Mr. McKernan. I will not disagree with what you have said.

Senator Proxmire. I would hope that you could take another good long look and consider how much is involved here and the real tragedy which you very well described. I see you recognize fully the serious problems of fishing on the Great Lakes and consider if maybe at least part of that, and we hope all of it, might be requested just as soon as possible.

Mr. McKernan. Thank you.

Senator Proxmire. The case is awfully strong in this area.

Mr. McKernan. We certainly will give this every consideration and do our very best.

Senator Proxmire. Thank you.

Thank you, Mr. Chairman.

Chairman Hayden. Senator Saltonstall had hoped to be here this morning to hear your testimony but had to attend a meeting of the Armed Services Committee. He has asked me to express his pleasure with the progress being made in commercial fisheries, and also that he is very pleased with the breakthrough in fish protein concentrate research and with the ship construction program.

MANAGEMENT AND INVESTIGATIONS OF RESOURCES

1967 Budget Request

Now, I will place in the record the justification statement submitted by the Bureau of Commercial Fisheries for $21,092,000 for the "Management and investigations of resources" in fiscal year 1967. Of this amount, $1 million is requested as a transfer from the Pribilof Islands fund.

(The justification follows:)

Appropriation, 1965	$18,819,900
Second supplemental appropriation, 1965	288,000
Appropriated from "Pribilof Islands fund," Bureau of Commercial Fisheries	2,125,000
Total appropriation, 1965	21,232,900
Transferred to "Operating expenses, Public Buildings Service," General Services Administration	−5,811
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	+120,029
Total available, 1965	21,347,118
Appropriation, 1966	21,838,000
Pay cost supplemental	148,000
Proposed transfer from "Federal aid for commercial fisheries research and development," Bureau of Commercial Fisheries	86,800
Total appropriation, 1966	22,072,800
Transferred to "Operating expenses, Public Buildings Service," General Services Administration	−39,604

Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	+$115,560
Total available, 1966	22,148,756

SUMMARY OF INCREASES AND DECREASES, 1967

Management:	
For increased pay costs for fiscal year 1966 positions	+800
Nonrecurring costs due to program savings resulting from cost-reduction program	−6,100
	−5,300
Marketing and technology:	
For increased pay costs for fiscal year 1966 positions	+21,100
For expansion of technological research on effects of pesticides	+80,000
Nonrecurring costs due to program savings resulting from cost program	−74,400
Nonrecurring costs of repair and maintenance of facilities	−52,400
To round off estimate	−200
Total	−25,900
Research:	
For increased pay costs for fiscal year 1966 positions	+59,370
For expansion of biological research on effects of pesticides	+140,000
Nonrecurring costs due to program savings resulting from cost reduction program	−167,300
Nonrecurring costs of repair and maintenance of facilities	−44,000
Reduction in payment to employees compensation fund	−6,673
Shift in financing of continuing programs to permanent (S–K) account	−1,024,000
To round off estimate	−353
Total	−1,042,956
Research on fish migration over dams:	
For increased pay costs for fiscal year 1966 positions	+1,100
Nonrecurring costs due to program savings resulting from cost reduction program	−19,800
Total	−18,700
Fishing vessel mortgage insurance:	
Nonrecurring costs due to program savings resulting from cost reduction program	−600
Columbia River fishery facilities:	
For increased pay costs for fiscal year 1966 positions	+600
For increased operation and maintenance costs	+70,000
Nonrecurring costs due to program savings resulting from cost reduction program	+33,800
To round off estimate	−100
Total	+36,700
Net decrease, 1967	1,056,756
Budget estimate, 1967	21,092,000
From general funds	20,092,000
From Pribilof Islands Fund	1,000,000
Total	21,092,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental [1]	Transfers [2]	Amount available
1. Management	$457,472	$485,500	$9,000	+$1,100	$495,600
2. Marketing and technology	4,899,684	5,266,600	75,000	+38,000	5,380,400
3. Research	11,832,806	12,234,400	127,800	+27,556	12,389,756
4. Research on fish migration over dams	1,417,380	1,424,800	18,000	+3,000	1,445,800
5. Fishing vessel mortgage insurance	43,249	43,900	1,000		44,900
6. Columbia River fishery facilities	2,275,858	2,382,800	4,000	+5,500	2,392,300
7. Fishery resources disaster aid	399,768				
Unobligated balance lapsing	20,901				
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	−120,029				
Total	21,227,089	21,838,000	234,800	+75,956	22,148,756

[1] A proposed transfer from "Federal aid for commercial fisheries research and development," Bureau of Commercial Fisheries in the amount of $86,800 is included.

[2] Includes transfer to General Services Administration for $39,604 and a comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife in the amount of $115,560.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Management	$457,472	$495,600	$490,300	−$5,300	+$800	−$6,100
2. Marketing and technology	4,899,684	5,380,400	5,354,500	−25,900	+21,100	−47,000
3. Research	11,832,806	12,389,756	11,346,800	−1,042,956	+59,370	−1,102,326
4. Research on fish migration over dams	1,417,380	1,445,800	1,427,100	−18,700	+1,100	−19,800
5. Fishing vessel mortgage insurance	43,249	44,900	44,300	−600		−600
6. Columbia River fishery facilities	2,275,858	2,392,300	2,429,000	+36,700	+600	+36,100
7. Fishery resources disaster aid	399,768					
Unobligated balance lapsing	20,901					
Total	21,347,118	22,148,756	21,092,000	−1,056,756	+82,970	−1,139,726

[1] To provide for increased pay costs for fiscal year 1966 positions.

Analysis by activities (total funds)

Activity	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
1. Management: Direct appropriation (adjusted 1965–66)	$457,472	$495,600	$490,300	−$5,300
2. Marketing and technology:				
Direct appropriation (adjusted 1965–66)	4,899,684	5,380,400	5,354,500	−25,900
(Special foreign currency program)	67,373	140,000	162,627	+22,627
Saltonstall-Kennedy funds	2,113,405	2,239,700	2,225,700	−14,000
Subtotal	7,080,462	7,760,100	7,742,827	−17,273
3. Research:				
Direct appropriation (adjusted 1965–66)	11,832,806	12,389,756	11,346,800	−1,042,956
(Special foreign currency program)	97,899	160,000	172,101	+12,101
Saltonstall-Kennedy funds	2,409,633	2,508,800	4,589,800	+2,081,000
Subtotal	14,340,338	15,058,556	16,108,701	+1,050,145
4. Research on fish migration over dams:				
Direct appropriation (adjusted 1965–66)	1,417,380	1,445,800	1,427,100	−18,700
Saltonstall-Kennedy funds	249,392	204,500	51,500	−153,000
Subtotal	1,666,772	1,650,300	1,478,600	−171,700
5. Fishing vessel mortgage insurance: Direct appropriation (adjusted 1965–66)	43,249	44,900	44,300	−600
6. Columbia River fishery facilities: Direct appropriation (adjusted 1965–66)	2,275,858	2,392,300	2,429,000	+36,700
7. Fishery resources disaster aid: Direct appropriations	399,768			
Total	26,263,919	27,401,756	28,293,728	+891,972
Management and investigations of resources (adjusted 1965–66)	19,081,188	21,798,396	20,092,000	−1,706,396
(Special foreign currency program)	165,272	300,000	334,728	+34,728
Saltonstall-Kennedy funds	4,772,430	4,953,000	6,867,000	+1,914,000
Proposed supplemental due to civilian pay increase: Direct appropriation		148,000		−148,000
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	120,029	115,560		−115,560
Appropriated from "Pribilof Islands fund"	2,125,000		1,000,000	+1,000,000
Transfer from "Federal aid for commercial fisheries research and development"		86,800		−86,800

Bureau activities financed under the "Management and investigations of resources" and the "S–K" appropriations are basically the same. The combined obligational programs under the two accounts, therefore, represent the true level of effort for such activities. The attached table is presented as an aid in evaluating the total estimate for "Management and investigations of resources" in that light. Additional detail is presented in the appropriate activity and subactivity narrative justifications that follow.

Comparison of 1966 and 1967 obligational programs, management and investigation and S–K appropriations

	Management and investigation	S–K	Total
Fiscal year 1966 obligational program	$22,148,756	$5,400,000	$27,548,756
Fiscal year 1967 decreases	(−1,429,073)	(−523,000)	−1,952,073
Cost reduction program	−302,000		
Nonrecurring costs and program reductions	−103,073	−523,000	
Funding of continuing programs	−1,024,000		
Fiscal year 1967 increases	(+372,970)	(+2,437,000)	+2,809,970
Operation and maintenance of ship and shore facilities	+70,000	+776,000	
Interagency Eastropac program		+200,000	
Pesticides research	+220,000		
Atlantic menhaden fishery research		+100,000	
Studies in the use of sonar		+130,000	
California anchovy fishery studies		+72,000	
Atlantic tuna fishery research		+50,000	
Oceanographic studies, Gulf of Mexico		+50,000	
Economic studies		−35,000	
Additional pay costs under Public Law 89–301	+82,970		
Funding continuing programs		+1,024,000	
Subtotal	21,092,653	7,314,000	28,406,653
Adjust to round	−653		−653
Fiscal year 1967 obligational program	21,092,000	7,314,000	28,406,000
Net change in obligational program	−1,056,756	+1,914,000	+857,244

1. Management

Funds	Fiscal year 1965	Fiscal year 1966		Fiscal year 1967		Increase (+) or decrease (−) 1967 compared with 1966		
	Amount available	Position	Amount available	Position	Amount available	Total	Pay cost	Program
Management and investigation	$457,472	35	$495,600	35	$490,300	−$5,300	+$800	−$6,100
S–K								
Total	457,472	35	495,600	35	490,300	−5,300	+800	−6,100

Increases and decreases (1967 compared with 1966)

	Management and investigations		S–K		Total	
	Position	Amount	Position	Amount	Position	Amount
(1) A decrease due to program savings resulting from cost reduction program		−$6,100				−$6,100
(2) An increase for increased pay costs for fiscal year 1966 positions		+800				+800
Total increases and decreases		−5,300				−5,300

Need for increase.—The increase of $800 is offset by a decrease of $6,100 resulting in a net decrease for this activity of $5,300.

The increase needed is (2) $800 for increased pay costs for fiscal year 1966 positions.

Plan of work.—To continue at the present level the cooperation with the U.S. Coast Guard in jointly planning and conducting surface and aerial patrols of high seas waters off the coasts of the United States to assure observance of international fisheries conservation measures by the U.S. nationals and the nationals of other countries where pertinent, and to provide information on foreign fishing trends and movements for use in future treaty negotiations. Continue

to carry out dockside inspections to assure that landings of mixed catches do not include protected species in excess of amounts allowed for incidental catches; continue a trawl net certification program in New England; and continue to collect statistical data on whale catches and on the fishery resources of the Northwest Atlantic Ocean.

2. Marketing and technology

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(a) Economics	$184,145	$251,300	$249,700	−$1,600	+$2,000	−$3,600
(b) Exploratory fishing and gear development	1,497,357	1,823,200	1,766,500	−56,700	+5,500	−62,200
(c) Market news	645,128	647,600	640,800	−6,800	+2,000	−8,800
(d) Statistics	384,066	384,000	379,700	−4,300	+2,700	−7,000
(e) Technology	1,975,857	1,981,400	2,026,400	+45,000	+8,000	+37,000
(f) Foreign fisheries and trade	194,932	204,600	203,800	−800	+400	−1,200
(g) Fishery education and market development	18,199	88,300	87,600	−700	+500	−1,200
Total	4,899,684	5,380,400	5,354,500	−25,900	+21,100	−47,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

(a) Economics

Funds	Fiscal year 1966		Fiscal year 1967		Increases or decreases	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
M. & I.	20	$251,300	20	$249,700		−$1,600
S–K	15	163,100	17	198,100	+2	+35,000
Total	35	414,400	37	447,800	+2	+33,400

Increases and decreases

	Management and investigations		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost reduction program		−$3,600				−$3,600
Subtotal decreases		(−3,600)				(−3,600)
(2) An increase for increased pay costs for fiscal year 1966 positions		+2,000				+2,000
(3) An increase for implementation of a basic economics research program			+2	+35,000	+2	+35,000
Subtotal increases		(+2,000)	(+2)	(+35,000)	(+2)	(+37,000)
Total increases and decreases		−1,600	+2	+35,000	+2	+33,400

Need for increase.—Increase items totaling $37,000 are offset in part by a decrease item of $3,600 resulting in a net increase of $33,400 for the subactivity. The increases needed are—

(2) $2,000 for increased pay costs for fiscal year 1966 positions.

(3) $35,000 for basic economic research. The increase is needed to initiate two economic feasibility studies; namely: (1) The economic feasibility and market potential for irradiated fish and seafood products; and (2) the

economic feasibility and market potential for fish protein concentrate (FPC). Both irradiation and FPC are important potential advances in fish processing. It is necessary to study the demand potential and processing and distribution costs to enable the development of target ex-vessel prices and type of fishing effort needed to develop a successful industry.

Plan of work.—The economics subactivity includes three programs, they are:

(*a*) Economic research,
(*b*) Current economic analysis, and
(*c*) Economic services.

(*a*) *Economic research*

The objective of this research is to provide economic analysis for use in formulating national fishery policy as well as to provide information to assist the commerical fishing industry in making long-range management decisions. This program is organized into two general projects—demand and marketing research and supply and resource use research.

In the demand and marketing research project, studies on demand for fish products will continue. These studies utilize econometric methods to estimate the responsiveness of buyers to changes in price of the products, to changes in the prices of competing goods, and the effect of income and other factors on changes in demand overtime. The findings will be useful to industry in making marketing, investment, and promotion decisions, and will be used in the current economic analysis program. They will be particularly important in the development of programs for fisheries and in the development of appropriate public policy. Studies will be continued on the economics of the market structure of the U.S. fishing industry and in analysis concerned with cost reduction and improved quality and efficiency of marketing firms.

New studies planned in fiscal year 1967 are:

1. Changes and trends in consumption for selected fish and shellfish products by geographical area.—This study will utilize data from the 1955 and 1965 U.S. Department of Agriculture's household food consumption surveys. The purpose will be to note the geographical differences in household consumption of fish and seafood products and to relate these differences to family characteristics, urbanization, and source of supply, and to determine the changes that occurred between 1955 and 1965 in the geographical pattern of consumption. Little information is available relative to consumption patterns for fish products and this information is constantly requested by industry.

2. Controlled studies for determining the effectiveness of alternative methods of promoting selected fish and seafood products.—The Branch of Marketing carries on a continuous educational and promotional program for the purpose of increasing the consumption of domestically produced fishery products. This study will assist the branch of marketing in determining, within the limits of its budget, which media and type of promotional activites produce the maximum results. It also will prove useful to industry in its decisions regarding promotional activities.

The supply and resource use research project will include continued work in fiscal year 1967 on:

1. Economics of the Great Lakes fisheries.—The fishing industry of the Great Lakes has been dealt a severe financial blow in recent years as the result of a series of adverse conditions including the lamprey predation of lake trout, the occurrence of botulism in smoked fish and the decline of some other commercial species. Biological and technological research is in progress to determine the availability and use of lower value species that exist in the Great Lakes. Economic research is needed to indicate the level and nature of fishing effort and structure of a commercial fishing industry to enable it to land these species at a satisfactory price.

2. *Determination of an optimum Great Lakes lamprey eel control program.*—The lamprey population in Lake Superior has been substantially reduced and control is well underway in Lake Michigan. Further reduction of lamprey numbers or possible eradication can be achieved only at higher control costs under present technology. The research on lamprey control has proven that selective chemicals are a technologically feasible means of greatly reducing the lamprey population. The next question is, the economic feasibility of further control of the lamprey, and if so, a determination of what is the optimum level of control? This study will be conducted in conjunction with work underway by the Great Lakes Fishery Commission.

3. *An analysis of the economic aspects of management for the gulf shrimp fishery.*—Various management techniques such as closed seasons and landing size limitations are now utilized by the Gulf States fishery. Alternative management tools and techniques are also possible. This study will establish goals to consider in managing a shrimp fishery and provide guidelines for achieving the desired goals.

New studies planned under the supply and resource use research project for fiscal year 1967 are:

1. *Economic analysis of the relative efficiency of fishing vessels.*—Considerable investment in new fishing vessels will be needed within the next 5–10 years. For this investment to increase the efficiency of the fleet, the investor must have factual analysis of the economic efficiency of alternative sizes and types of vessels that could be used in the industry. Various factors that determine the catch per unit of effort must be studied relative to their effect on the cost and quality of landing fish. This information will aid in determining the optimum size and type of vessel for each specific fishery.

2. *The economics of limited entry in Lake Superior.*—The lamprey population in Lake Superior has been substantially reduced and the lake trout population is being reestablished. Pressure will increase to reopen Lake Superior to trout fishing. An analysis of the optimum size and organization of fishing effort for Lake Superior is needed as a guide to formulating a management program which will assure the maximum sustainable yield, encourage economic efficiency in harvesting the lake trout, and encourage the development of fishing for other species in Lake Superior.

In addition to the above, two general economic feasibility studies are planned for 1967. These studies cut across project lines and will be developed cooperatively within both the demand and marketing research, and the supply and resource use research units, and consist of: The economic feasibility and market potential for irradiated fish and seafood products; and the economic feasibility and market potential for fish protein concentrate (FPC). Both irradiation and FPC pose potential important technological advances in fish processing. In order to assess fully the commercial potentials of these developments, it is necessary to study the complete economic spectrum from potential demand and price on one hand to the biological resource potential and cost on the other hand. Both of these studies will estimate the demand potential, the processing and distribution costs, and enable the development of a target ex-vessel price and the type of fishing effort needed to establish a successful industry.

(*b*) *Current economic analysis*

This program aims to keep industry and Government abreast of current economic development throughout the fishing industry. It is organized into three basic projects:

1. Shellfish industry;
2. Food fish (fin-type) industry; and
3. Industrial fishery products industry.

Factors affecting both the supply and demand conditions in all three industries are subject to seasonal and long-term change. Wide monthly, quarterly, and annual fluctuations frequently occur in landings and imports. Prices received by an industry for its products also fluctuate widely, especially in the short run. In addition, there are frequent changes in the prices of products that are supplementary or complementary to fisheries. Firms in the fishing industry require a full knowledge of these changes in order to adjust inventory and pricing policies for optimal operations. Rational inventory and price adjustments, for example, can be an especially effective tool in avoiding serious cash flow problems for fishery production and processing firms.

The current analysis program involves:

1. Assembly of data from a variety of sources;
2. Evaluation of data for accuracy and relevance; and
3. Presentation of data for public and Government use.

Analysis and other information are presented mainly in periodic situation and outlook reports issued by each for the three projects. These reports are prepared quarterly, with one issue devoted to a comprehensive annual review. These reports detail the changes in supply and demand factors, evaluate these changes, and make short run projections. Other media used in the distribution of information an analyses developed in the Branch include: special (unscheduled) reports, articles in journals and trade magazines, presentations at Government and industry meetings.

Consumers can also benefit from this program by the more stable retail prices and fishery supplies that result.

(c) *Economic services*

This program is designed to carry out the responsibilities delegated to the Bureau in relation to cooperatives and transportation. Surveys of fishery cooperatives are conducted to determine compliance with the Fishery Cooperative Marketing Act of 1934. Educational and problem-solving services are provided to fishermen interested in organizing a cooperative. Periodically, directories of fishery cooperatives, associations, and unions are revised and made available. Liaison is performed between the Department and Federal, State, and private agencies and organizations on matters dealing with cooperatives.

Through the transportation project the fishing industry is assisted in the improvement of transportation facilities and rates for fishery products by working directly with the individual carriers or groups of carriers, and by representing various segments of the fishing industry before the transportation regulatory bodies with respect to rates, charges, tariffs, practices, and services. Research work is also conducted on collection and analysis of financial and traffic data and study of the methods used in movement, terminal handling, and storage to support the procedural work, isolate problems, and make recommendations for improvement.

(b) *Exploratory fishing and gear development*

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
M & I	102	$1,823,200	102	$1,766,500		−$56,700
S–K	33	373,000	36	426,000	+3	+53,000
Total	135	2,196,200	138	2,192,500	+3	−3,700

Increases and decreases

	Management and investigations		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost reduction program		−$25,000				−$25,000
(2) A decrease for nonrecurring costs of repair and maintenance of facilities		−37,200				−37,200
(3) A decrease due to termination of North Carolina fisheries exploration program				−$15,000		−15,000
(4) A decrease in cost of program administration				−17,000		−17,000
Subtotal, decreases		(−62,200)		(−32,000)		(−94,200)
(5) An increase for increased pay costs for fiscal year 1966 positions		+5,500				+5,500
(6) An increase for operation and maintenance, vessel *Delaware*			+3	+64,000	+3	+64,000
(7) An increase for operation and maintenance of exploratory fishing base, Seattle, Wash				+21,000		+21,000
Subtotal, increases		(+5,500)	(+3)	(+85,000)	(+3)	(+90,500)
Total, increases and decreases		−56,700	+3	+53,000	+3	−3,700

Need for increase.—Increase items totaling $90,500 are more than offset by decrease items in the amount of $94,200, resulting in a net decrease of $3,700 for the subactivity.

The increases needed are—

(5) $5,500 for increased pay costs for fiscal year 1966 positions.

(6) $64,000 for operation and maintenance (O. & M.) costs for the vessel *Delaware*. This vessel is used for exploratory fishing operations off the New England and Middle Atlantic States and for development of improved gear in harvesting the fishery resources of these areas. The estimated O. & M. costs for 1966 and 1967 are $210,000 and $274,000, respectively. The increase is to provide $30,000 for the wages of three additional crew members needed to expand the workday at sea from 12 to 24 hours to meet program needs; $20,000 for repairs and maintenance of hull and superstructure; and $14,000 for replacement of wornout components in the electrical trawl winch systems.

(7) $21,000 for operation and maintenance of the Seattle, Wash., exploratory fishing base. The estimated O. & M. costs for 1966 and 1967 are $63,000 and $84,000, respectively. The increase is to provide $8,500 for more adequate maintenance of buildings and grounds, ADP processing of accumulated exploratory fishing data, and installation of a centrex system. The sum of $12,500 is needed to modify existing power facilities and to improve the capability of the workshop by providing better working arrangements and additional power and hand tools.

Plan of work.—Operation in exploratory fishing will continue to develop information about new fishing grounds, and to assess the geographical extent and seasonal availabilities of fishery resources of importance to the U.S. commercial fishing industry. On the Atlantic coast, systematic tuna and swordfish explorations to determine their seasonal distributions and abundance will be extended to areas where little previous investigation has been conducted. Previous explorations have shown that swordfish are available to longline gear only during nighttime and tuna during daytime. These findings indicate that exploratory operations must be conducted on a 24-hour basis in order to achieve maximum effectiveness. Attainment of program objectives, namely providing information on new fishing grounds for the ever increasing U.S. longline fleet have been delayed by inability to operate the *Delaware* on a 24-hour basis. The requested increase will also provide 24-hour operation of the *Delaware* during important gear development efforts which have been hindered through lack of continuity. This will increase the productivity of fishermen through production with less manpower.

Studies to evaluate the commercial potential of the Pacific coast hake populations as well as the commercial availability of scallops off Washington and Oregon, will be continued. The newly emerging commercial Pacific hake fishery will be given the technical assistance and scientific data on Pacific hake population distributions which are needed by the industry to plan effective fishing tactics. Explorations of the commercial shrimp potential off coastal Alaska will be concerned with completing general distribution assessments between Dixon entrance and Cape St. Elias.

Explorations to find new concentrations of sea clams will be continued between Cape Hatteras, N.C., and the eastern tip of Long Island, N.Y. Unutilized stocks of pelagic and demersal fish and shellfish will be further studied in the Gulf of Mexico and off the southeast Atlantic coast, with particular emphasis on hard shell clams, calico scallop, shrimp, and off-season industrial fish. Direct assistance in the commercial development of these resources will be provided to the industry. Available information on the standing crop of all major fish populations along the entire Continental Shelf and slope will be compiled and defined, for presentation in the form of an atlas.

In the Great Lakes, continued explorations in Lake Michigan will emphasize the finding of new trawling grounds and availability of commercially important fish species. Similar explorations will be conducted in Lake Superior. In the Missouri River reservoir systems, studies to determine seasonal locations and abundance as well as availability to various fishing methods of underutilized fish stocks will be continued.

Gear research and development activities will continue on improvement of current and new techniques for harvesting and handling commercial fish stocks. An underwater motion picture system, presently under development, capable of operating at depths over 200 fathoms, will be used to study reactions of deepwater marine organisms to the different types of fishing gear. Such studies will permit the commercial harvest of these deepwater fish stocks. Studies designed to further mechanize long-line gear used for swordfish and tuna, and to develop more efficient dredges and deck handling equipment for the sea clam fishery will be undertaken.

(c) *Market News*

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
Management and investigations	53	$647,600	53	$640,800	----------	−$6,800
S-K	----------	37,000	----------	37,000	----------	----------
Total	53	684,600	53	677,800	----------	−6,800

Increases and decreases

	Management and investigations		S-K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost reduction program	----------	−$8,800	----------	----------	----------	−$8,800
(2) An increase for increased pay costs for fiscal year 1966 positions	----------	+2,000	----------	----------	----------	+2,000
Total increases and decreases	----------	−6,800	----------	----------	----------	−6,800

Need for increase.—The increase item of $2,000 is offset by a decrease item of $8,800 resulting in a net decrease, for this subactivity of $6,800.

The increase needed is (2) $2,000 for increased pay costs for fiscal year 1966 positions.

Plan of work.—To continue at the present level to collect, compile, publish, and disseminate data on fishery landings, receipts, prices, stocks, packs, market conditions, trends, imports and exports, rail and truck movements, and information on developments in this country and foreign countries affecting our fishery industries.

As requested by industry and Government, to adjust market coverage in order to keep abreast of changes and new developments in the marketing of fishery products. Information collected is distributed by daily, monthly, annual, and other periodic reports; through newspapers, periodicals, and radio; and by telephone, wire, and personal contacts.

Work is performed by Bureau employees. Information is used primarily by the domestic fishery and allied industries, fishery researchers and economists, and Government agencies. Information is not available from any other source.

(d) *Statistics*

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
Management and investigations	38	$384,000	38	$379,700	----------	−$4,300
S-K	35	332,000	35	332,000	----------	----------
Total	73	716,000	73	711,700	----------	−4,300

Increases and decreases

	Management and investigations		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost reduction program	.....	−$7,000	.....	.....	.....	−$7,000
(2) An increase for increased pay costs for fiscal year 1966 positions	.....	+2,700	.....	.....	.....	+2,700
Total increases and decreases	.....	−4,300	.....	.....	.....	−4,300

Need for increase.—The increase item of $2,700 is offset by a decrease item of $7,000 resulting in a net decrease for this subactivity of $4,300.

The increase needed is (2) $2,700 for increased pay costs for fiscal year 1966 positions.

Plan of work.—To continue the collection, tabulation, and dissemination of information for fisheries of the United States on (1) the volume and value of the catch of each species by types of gear, area of capture, and point of landing; (2) the number and quantity of operating units (fishermen, fishing craft, gear, wholesale and processing plants, and shoreworkers) employed in the fisheries; (3) the volume and value of processed fishery products; (4) monthly freezings and stocks of frozen fish; (5) monthly production of fish meal and oil, fish sticks and portions, and breaded shrimp; (6) the publication of monthly State landing bulletins; (7) release of monthly foreign trade statistics; and (8) the conduct of staff activities relating to statistical matters.

(e) Technology

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
M. & I.	110	$1,981,400	113	$2,026,400	+3	+$45,000
S–K	27	604,000	27	502,000	.....	−102,000
Total	137	2,585,400	140	2,528,400	+3	−57,000

Increases and decreases

	Management and investigations		S-K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost reduction program		−$27,600				−$27,600
(2) A decrease for nonrecurring costs of repair and maintenance of buildings		−15,200				−15,200
(3) A decrease resulting from reduction in the processing and preservation program of studies relating to thiaminase activity in mink food derived from freshwater fish				−$13,000		−13,000
(4) A decrease resulting from reduced effort in studies relating to nutritive value of fishery products				−40,000		−40,000
(5) A decrease resulting from termination of contract studies				−11,000		−11,000
(6) A decrease for reduced effort on botulism studies				−50,000		−50,000
(7) To round off estimate		−200				−200
Subtotal, decreases		−43,000		−114,000		−157,000
(8) An increase for increased pay costs for fiscal year 1966 positions		+8,000				+8,000
(9) An increase for expansion of technological research on effects of pesticides	+3	+80,000			+3	+80,000
(10) An increase for increased costs of operating and maintenance of facilities at Ann Arbor, Mich.				+12,000		+12,000
Subtotal, increases	+3	+88,000		+12,000		+100,000
Total increases and decreases	+3	+45,000		−102,000	+3	−57,000

Need for increase.—Increase items totaling $100,000 are more than offset by decrease items in the amount of $157,000, resulting in a net decrease of $57,000 for the subactivity.

The increases needed are—

(8) $8,000 for increased pay costs for fiscal year 1966 positions.

(9) $80,000 to expand technological research studies under the Bureau's pesticides research program. The increase will be used in research studies to determine the levels of pesticides in fishery products and where indicated to develop methods of reducing such pesticides in fishery products used for human consumption. Studies will monitor the occurrence of pesticide residues in commercial fish and shellfish and in commercially packed consumer products thus providing background data for use in establishing tolerance of these residues.

(10) $12,000 for increased costs of operation and maintenance of facilities at Ann Arbor, Mich. The increase is required to cover increased costs of operation and maintenance, on a full-year basis, of the technological laboratory portion of the new facilities at Ann Arbor, Mich. These costs include utilities, building and grounds upkeep.

Plan of work.—Technological research will be directed into three major program areas during the coming year. These are: (1) quality research, (2) utilization research, and (3) fish protein concentrate or nutritional research.

Research on the quality of fish and shellfish is designed to overcome consumer resistance to fishery products. Quality improvement research will include initiation of work to develop official standards of grades of quality for several fishery products.

Work will be continued on a comprehensive sanitation and handling manual for the smoked fish industry in cooperation with the U.S. Public Health Service. The information to be used in the manual will be derived from research on the growth of *Cl. botulinum*.

Studies will be accelerated on research to determine the levels of pesticides found in commercial fishery products as well as to develop means to reduce pesticide levels in these products, when found, to safe levels of tolerance.

Engineering studies on mechanization of the fishing industry at sea and ashore will continue, inasmuch as the slow manual procedures now used to unload, fillet, and process fish contribute to the loss of product quality.

Work on the use of natural enzymes in fish muscle as indexes of quality will also continue. Means will also be sought to reduce adverse changes in long-stored frozen fish through the exploitation of newly developed theories on the interaction of fatty acids and proteins.

New improved means of preserving fish will be studied as part of the Bureau's effort to maintain and improve quality. These include unique refrigeration techniques such as direct immersion freezing in freon 12, and radation pasteurization.

Utilization research is designed to promote an overall increase in the domestic catch of fish and shellfish by developing new products and uses for these fish. Stress is being placed on the utilization of Pacific hake and shark, with human as well as animal food products being considered in both cases.

Utilization of fish oil from many species of fish, including menhaden, herring and shark, will be encouraged through continued fundamental studies on the components and chemistry of these oils.

Nutritional studies of fishmeal will be aimed at demonstrating the unique value of fishmeal proteins in poultry feeds and to encourage its continued and increased utilization.

Information on the overall chemical composition of the 150 marketed species of fish and shellfish is needed by dietitians and doctors for recipe and diet development, and by food processors who use fish as an ingredient in mixed products. Work in this area will be accelerated.

Detailed plans and procedures for the manufacture, by solvent extraction procedures of a wholesome and nutritious fish protein concentrate (FPC) will be made available to the fishing industry during the coming year. In-house and contract studies to secure information on the nutritional value and wholesomeness of FPC produced by chemical methods in the Bureau's new 100-pound per day model plant will be carried forward. Information will be developed on the use of FPC in various foods such as bread, diet foods, and candy. This effort will significantly increase overall markets for fishery products in the diets of the people of the United States as well as in all other parts of the world.

Status of program.—Technological research during the past year has resulted in the development of two unique methods for processing and preserving fish and shellfish. These new techniques hold the promise of a major revolution in traditional methods of fish handling and processing now employed in the United States. Their adoption may well mark the turning point toward an economic recovery of the depressed segments of the fishing industry.

The first of these major accomplishments has been the completion of detailed plans and procedures for the commercial manufacture of fish protein concentrate (FPC), using chemical extraction methods and employing Atlantic red hake as a raw material. The resultant FPC is a stable, nutritious food product, which contains from 80 to 85 percent high quality animal protein. Fifteen major domestic food manufacturers have expressed an interest in incorporating high quality FPC into their products. These include baked goods, candy, cereals, nondairy baby foods, and dietary foods. Meanwhile, interest in incorporating FPC in the diets of millions of protein-starved people of developing countries throughout the world has been expressed by organizations such as the Agency for International Development, United Nations Children's Fund, World Health Organization, and the Food and Agriculture Organization of the United Nations. Research leading to the completion of this one processing procedure for FPC manufacture has been made possible through the use of a recently installed model scale unit, at the Bureau's Technological Laboratory in College Park, Md., capable of producing 100 pounds of FPC per day. Contractual studies have shown that the FPC produced by the first method developed is completely wholesome and nutritious, and can be produced for less than 20 cents per pound. This last would indicate that an individual adult could obtain his entire daily requirement of protein at a cost of less than 4 cents per day.

The Bureau's FPC program has been under continual review by the Marine Protein Resources Development Committee of the National Academy of Sciences. This committee has published the opinion that FPC manufactured from whole fish by the Bureau's process is a wholesome and nutritious product, suitable for human consumption.

The second major processing procedure developed by the Bureau during the past year is the irradiation-pasteurization of fishery products. Research on this

preservation technique is carried out through the use of a marine products development irradiator (MPDI), capable of irradiating 1,000 pounds of fish per hour. The MPDI was constructed by the Atomic Energy Commission, adjacent to the Bureau's Technological Laboratory in Gloucester, Mass., and is being made available, on a restricted basis, to industry for semicommercial production tests of irradiated fishery products. Research, carried on by Bureau employees using the MPDI, is aimed at demonstrating the commercial feasibility of the process. It is also being used to secure information necessary for formal approval by the Food and Drug Administration of irradiation as a commercial process.

(f) Foreign fisheries and trade

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
Management and investigations	18	$204,600	18	$203,800	.....	−$800
S–K	1	20,000	1	20,000	.....	.....
Total	19	224,600	19	223,800	.....	−800

Increases and decreases

	Management and investigations		Position	Amount	Position	Amount
	Position	Amount				
(1) A decrease due to program savings resulting from cost-reduction program	.....	−$1,200	.....	.....	.....	−$1,200
(2) An increase for increased pay costs for fiscal year 1966 positions	.....	+400	.....	.....	.....	+400
Total increases and decreases	.....	−800	.....	.....	.....	−800

Need for increase.—The increase item of $400 is offset by an increase item of $1,200 resulting in a net decrease for this subactivity of $800.

The increase needed is (2) $400 for increased pay costs for fiscal year 1966 positions.

Plan of work.—Intelligence reports from all available sources on international fisheries activities and developments will be provided on a current basis to policymakers in Government and end users in industry. Cooperation will be maintained with the Department of State for the collection of foreign fishery information from the more than 300 foreign service posts and in supplying guidelines to embassy and consulate officials relative to U.S. policies and activities in international fisheries affairs. From these posts, as well as from foreign publications and other sources, regular and special analytical and interpretive reports will be prepared relating to impact of foreign and international fishery developments on the achievement of U.S. objectives for use in formulation of foreign policy and in the conduct of negotiations.

Utilizing available information on foreign fisheries industries and Government policies, analytical studies will be made and services provided relative to foreign trade and tariff problems; data will be prepared for use in trade agreement negotiations; and recommendations will be developed with respect to programs, policies, and legislation affecting the fisheries sector of international trade and commerce.

The Bureau will continue to participate in programs and activities involving various international organizations concerned with fisheries. Participation in negotiations will continue on a bilateral and multilateral basis with respect to conservation and utilization of common property world fisheries resources, jurisdictional problems involving exploitation of fishery resources off coastal States, and international trade problems and agreements. International problems reaching situations of crisis or near crisis, such as depletion of Antarctic whales,

conservation of red salmon resources of the Bristol Bay area, reduction in supplies of Atlantic tuna, and marine pollution, require continual international action and initiative by the Bureau. These problems will intensify as world fisheries activities increase.

In view of the increasingly critical world food situation, the Bureau will continue to cooperate with, and participate in the programs of, international organizations such as FAO in matters dealing with marine food resources. Staff members will prepare policy papers for and recommend at such meetings, national and international action with respect to research relating to human nutrition, to harvesting, utilization and management of marine and fresh-water fishery resources, and to matters relating to technical assistance programs.

(g) Fishery education and market development

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
Management and investigations	3	$88,300	3	$87,600		−$700
S-K	48	710,600	48	710,600		
Total	51	798,900	51	798,200		−700

Increases and decreases

	Management and investigations		S-K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost-reduction program		−$1,200				−$1,200
(2) An increase for increased pay costs for fiscal year 1966 positions		+500				+500
Total increases and decreases		−700				−700

Need for increase.—The increase item of $500 is offset by a decrease item of $1,200 resulting in a net decrease of $700 for this subactivity.

The increase needed is (2) $500 for increased pay costs for fiscal year 1966 positions.

Plan of work.—The Bureau of Commercial Fisheries will continue its program to insure effective utilization, distribution, and consumption of domestically produced fishery products and to improve the economy of industry. Educational materials including a recipe booklet featuring fishery products for low-income families will be produced in cooperation with the President's Consumer Advisory Committee. Other materials will be issued throughout the year and made available for public sale through the Government Printing Office. Emphasis will be given the mass feeding market through contact with trade representatives.

A color motion picture produced in cooperation with the Maine Sardine Council will be released. Production is planned for three additional color motion pictures in cooperation with interested industry segments.

Information will be obtained in selected foreign countries to determine the types and species of fishery products that are competitive, have growth potential, and lend themselves to market development and expansion.

Arrangements will be made by the Bureau of Commercial Fisheries for domestic producers and processors to participate in selected foreign food fairs where there is a potential market for U.S. canned, frozen, and processed fishery products.

A fishfarm bulletin will be released containing recipes, nutritional values, handling, and purchasing guidelines. Information will be distributed to fish farmers of midwestern markets concerning the sale of live fish for stocking

ponds. Industry segments will be evaluated to acquire economic and marketing information and to discover developing trends in production and marketing for underutilized species.

3. Research

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
(*a*) Coastal and offshore research	$10,487,931	$10,638,200	$9,612,500	−$1,025,700	+$48,370	−$1,074,070
(*b*) Inland fisheries	353,885	505,400	502,300	−3,100	+2,500	−5,600
(*c*) Shellfish	933,582	1,158,156	1,150,000	−8,156	+7,800	−15,956
(*d*) Designing fish protective devices	43,008	45,000	45,700	+700	+700	
(*e*) Employees' compensation fund payments	14,400	43,000	36,300	−6,700		−6,700
Total	11,832,806	12,389,756	11,346,800	−1,042,956	+59,370	−1,102,326

[1] To provide for increased pay cost for fiscal year 1966 positions.

(a) Coastal and offshore research

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
M. & I.	621	$10,638,200	626	$9,612,500	5	−$1,025,700
S-K	121	2,178,900	154	4,247,400	33	+2,068,500
Total	742	12,817,100	780	13,859,900	38	+1,042,800

Increases and decreases

	Management and Investigations		S-K		Total	
	Position	Amount	Position	Amount	Position	Amount
(1) A decrease due to program savings resulting from cost reduction program	.....	−$145,800	.....	.....	.....	−$145,800
(2) A decrease for nonrecurring costs of repair and maintenance of facilities	.....	−44,000	.....	.....	.....	−44,000
(3) A decrease due to reduction of contract salmon research work	.....	.....	.....	−$60,000	.....	−60,000
(4) A decrease resulting from the combining of Auke Lake studies with red salmon research work	.....	.....	.....	−24,000	.....	−24,000
(5) A decrease resulting from a change in effort on oceanographic studies	.....	.....	−2	−124,500	−2	−124,500
(6) A decrease to round off the estimate	.....	−270	.....	.....	.....	−270
Subtotal decreases	.....	−190,070	−2	−208,500	−2	−398,570
(7) An increase for increased pay costs for fiscal year 1966 positions	.....	+48,370	.....	.....	.....	+48,370
(8) An increase for expansion of biological research on the effects of pesticides on the commercial fisheries and fishery products	+5	+140,000	.....	.....	+5	+140,000
(9) An increase for participation in a comprehensive interagency study of the relation of the atmosphere, ocean current, basic productivity, and fishery resources of the Eastern Tropical Pacific (Eastropac)	.....	.....	+6	+200,000	+6	+200,000
(10) An increase for research on the Atlantic Menhaden fishery	.....	.....	+6	+100,000	+6	+100,000
(11) An increase for studies on the use of sonar in commercial fishing	.....	.....	.....	+130,000	.....	+130,000
(12) An increase for studies on the California anchovy fishery	.....	.....	.....	+72,000	.....	+72,000
(13) An increase for studies on the Atlantic tuna fishery	.....	.....	.....	+50,000	.....	+50,000
(14) An increase for oceanographic studies in the Gulf of Mexico	.....	.....	.....	+50,000	.....	+50,000
(15) An increase for increased costs of operating and maintaining existing and new ship and shore facilities	.....	.....	+23	+651,000	+23	+651,000
Subtotal increases	+5	+188,370	+35	+1,253,000	+40	+1,441,370
(16) To provide for shift in financing of continuing programs to permanent (S-K) account	.....	−1,024,000	.....	+1,024,000	.....	.....
Total increases and decreases	+5	−1,025,700	+33	+2,068,500	+38	+1,042,800

Need for increase.—Increase items in the amount of $2,068,500 are offset in part by decrease items totaling $1,025,700 resulting in a net increase for this subactivity of $1,042,800.

The increases needed are—

(7) $48,370 for increased pay costs for fiscal year 1966 positions.

(8) $140,000 for expansion of biological research on the effects of pesticides on commercial fisheries. Expansion of the pesticides program will provide for studies to monitor the occurrence of pesticide residues to commercial fish and shellfish in their natural environment and in commercially packed consumer products. This will provide background data for use in establishing tolerance levels for these residues for the protection of seafood producers and consumers.

The Bureau's biological research on the effects of pesticides upon commercial fish and shellfish resources is divided into four broad categories: (*a*) monitoring the occurrence of pesticide residues in the environment, (*b*) physiological studies of the effects of pesticides upon life processes, (*c*) bioassay studies of the lethal and sublethal effects under controlled laboratory conditions, and (*d*) surveillance of the effects of pesticides before, during and after pesticide use programs.

Studies show that many of the most commonly used pesticides can be harmful to important commercial fish and shellfish, their food organisms and associated species. Studies to determine the presence of pesticides and their effects in the natural environment have been initiated at selected locations, with representatives species and pesticides. To date, coverage has been limited because of limitation on research funds. These studies should be expanded to permit investigation of more locations, species and pesticides.

The $140,000 increase requested would be useful to intensify the pesticide monitoring program and would involve sampling of fish and shellfish at regular time intervals and under various environmental conditions, analysis of these samples to determine various pesticide residue levels, and collection of other physical, chemical, and biological information on the environment.

Studies will also be initiated to trace the movement of pesticides in marine estuaries to determine how these compounds reach commercial fishery species.

Justification for the $80,000 increase needed for technological research studies appears under the technology subactivity.

(9) $200,000 for a comprehensive oceanographic interagency study in the eastern tropical Pacific. This increase is required for the Bureau's participation in an oceanographic study termed Eastropac, which is a comprehensive, cooperative investigation of the interrelations of atmosphere, ocean currents, basic productivity, and fishery resources of the eastern tropical Pacific. Overfishing of yellowfin tuna in the eastern Pacific has emphasized the urgent need for assessment of the tuna resources of the region and the location of new sources of supply for U.S. fishermen. Peru, Ecuador, Colombia, and Chile have expressed interest in cooperating in this program as have several U.S. agencies and universities. Planning for the program is already underway; BCF has $50,000 in fiscal year 1966 for this purpose. Full scale field work will start early in 1967 if funds become available. The increase is required to hire a staff for this program and to cover vessel costs for two 55-day cruises.

(10) $100,000 for menhaden studies. These funds are needed for research on the Atlantic menhaden fishery to obtain urgently needed information to manage this most important resource, which has declined drastically in recent years. This will help to explain fluctuations in abundance, migration, and distribution, exploitation rates, where and at what size menhaden should be harvested for greatest maximum production, and whether or not the resource is being overfished.

(11) $130,000 for sonar research and development. Though the United States is more advanced than any other country in military application of sound ranging (sonar) to detect targets, there has been little effort expended to develop this capability for peacetime use, especially in the fishing industry. A move toward improving the U.S. capability in the use of sonar was started in 1964 by contract to Straza Industries, San Diego, for development of CTFM (continuous transmittance frequency modulated) sonar. The sonar developed by Straza is now undergoing field tests by the Bureau's Tuna Resources Laboratory, La Jolla.

Results of a recent conference by the staff of the Tuna Resources Laboratory with Dr. Fred Speiss, well-known physicist and sonar specialist at Scripps Institution of Oceanography, confirm the desirability of continued support of sonar development in the field of fisheries. The requested increase of $130,000 will

be used to support contracts with industry to develop concepts and prototype units both for commercial fishing and for research purposes.

(12) $72,000 for Pacific anchovy studies. In November 1965 the California Commission of Fish and Game revised the State regulation to permit the start of an anchovy reduction fishery in California. The anchovy resource has a tremendous potential. It is estimated that the species could support an annual catch of 500 million pounds. In view of the high demand for fishmeal as a supplement in livestock feeds, it is expected that the new fishery will expand as rapidly or State regulations permit. It is very important, therefore, that certain essential information required for the management of the fishery and the conservation of the resource be gathered from the very beginning of the fishery. With the increase requested the Bureau would expand some of its present programs or undertake new studies on the biology and population structure of the Pacific anchovy. For example, additional information is required on the fecundity of the species if the egg and larval data are to be extrapolated to obtain estimates of adult fish biomass. The Bureau will work closely with the State in the conduct of this work.

(13) $50,000 for Atlantic tuna studies. In view of the growing interest on the part of industry, it is imperative that the Bureau expand its studies on the Atlantic tuna resources. Since the yellowfin, the principal tuna of the eastern Pacific, is showing signs of being overfished, the industry is looking to other oceans and other species for new sources of supply. The present fishery is small but we expect it to expand rapidly in the next few years. In order to advise the industry and determine the effects of fishing on the resource, we need information on the migrations and population structure of the different species, their distribution in respect to the Gulf Stream, seasonal variations and general magnitude of the resource. An increase of $50,000 would allow us to expand our tuna tagging studies in the western Atlantic, which would be conducted under contract with the Woods Hole Oceanographic Institution.

(14) $50,000 for gulf oceanography studies. This increase is needed for oceanographic studies in the Gulf of Mexico to begin sequential studies of salinity, temperature, and other oceanographic conditions and to relate these to spawning, movements, and other aspects of shrimp life history. This information is necessary to enable prediction of shrimp abundance and fluctuations and to efficiently manage this resource.

(15) $651,000 for increased costs of operating and maintaining existing and new ship and shore facilities. These facilities are as follows:

(*a*) *"Miller Freeman," $420,000.*—This new research vessel costing in excess of $3 million, being constructed for use in the North Pacific and Bering Sea, is scheduled for completion by December 1966. Annual cost of operation and maintenance of this vessel is estimated at $650,000. The estimated cost for operation and maintenance of the vessel in fiscal year 1967 is $520,000, offset by $100,000 available for operation and maintenance of the vessel in fiscal year 1966. This results in a net increase of $420,000 for operation and maintenance costs for the 6- to 7-month period. Of the $420,000, $144,500 is for wages and related costs for officers and crew; $57,000 for fuel, lubricating oils, and mess supplies; $173,800 for outfitting, including winches, laboratory equipment, loran and radio equipment, quarters' furnishings, and rigging; $31,400 for drydocking, survey, installation of underwater equipment, and for necessary repairs needed after cruise; and $13,400 for contingencies and miscellaneous costs for taking delivery of the vessel.

(*b*) *Miami, Fla., $56,000.*—This increase is needed to provide for increased operation and maintenance costs for the first full year of operations of the new laboratory since its move from Washington, D.C., in November 1965. A net amount of $60,000 was provided in the fiscal year 1966 to cover increased operation and maintenance costs for the approximately 7-month period that the new facility will be in operation during that year. The additional funds are needed for the additional 5 months of operation in fiscal year 1967. The $40,000 provided in fiscal year 1966 for moving expenses incident to the transfer has been treated as a nonrecurring item.

(*c*) *"David Starr Jordan," $36,000.*—It was estimated, a connection with the fiscal year 1966 budget, that costs for operation and maintenance of this vessel could be held to $271,000 in fiscal year 1966. That estimate was based on wage costs prevailing at the time, and anticipated employment needs. The present estimate for operation and maintenance costs for the fiscal year 1966 is $307,000. The $36,000 increase is due to a major upward revision of applicable wage rates

that became effective March 26, 1965, and the cost of employing an electronic specialist to operate and maintain the advanced electronics and sonar equipment aboard the vessel. Absorption of these increased costs in 1966 will be possible because the vessel will not be operated for the full year due to delay in completing construction. The $36,000 increase requested for 1967 is to cover the increased wage costs and additional costs of operating and maintaining the electronic and sonar equipment during the first full year that the vessel will be in operation.

(*d*) *Gulf vessel, $9,000.*—The new oceanographic research vessel for use in the Gulf of Mexico is scheduled for completion late in the fiscal year 1967. The annual costs for operation and maintenance of the vessel is estimated at $112,000. The $9,000 requested is to provide for operation and maintenance costs for the period that the vessel is expected to be available in fiscal year 1967.

(*e*) *"Undaunted," $38,000.*—This converted vessel which was acquired from surplus, will require an engine overhaul and repair to deck equipment in fiscal year 1967. The increase includes $14,000 for this overhaul, $9,500 for deck and miscellaneous equipment, and $14,500 for fuel and mess supplies.

(*f*) *"Albatross," $50,000.*—The estimate of $50,000 includes $10,000 for installation of a governing system; $7,000 for replacement of navigational and fish-finding equipment; and $33,000 for rehabilitation of housing which encloses winch and boom, for repair of gantry ram, for an increase capacity of hoisting equipment, and replacement of winch.

(*g*) *"Murre II," $33,000.*—This estimate includes $17,000 for increased wages for vessel crew and $16,000 for supplies due to increased use of vessel at sea.

(*h*) *Stanford, Calif., $10,000.*—This increase is needed to renovate space to make it available for laboratory use.

(16) Shift in financing of continuing programs to permanent (S–K) account. Since 1955, the amounts derived from gross customs receipts from fishery products have ranged from $4.2 to $5.4 million per year. The actual transfer from the Department of Agriculture was $6.6 million for the most recent year instead of an estimated $5.4 million. The increase is attributable to a change in the methods of calculating import duties: $1,024,000 will be used to fund research contracts previously funded under the "Management and investigation of resources" appropriation.

Plan of work.—Continued exploitation of traditional American fishery resources by other countries, particularly the U.S.S.R. and its satellites and Japan, and to a lesser extent by Canada, places an even heavier responsibility on Bureau scientists to accelerate their studies of population processes. The need for information on the status of these resources and for sufficient data and understanding of the marine ecosystem to predict the outcome of rapidly increasing rates of exploitation has led to increased emphasis on studies of population dynamics and the necessarily large, well-organized, and coordinated studies of the ecosystem.

In the North Atlantic area, our research projects concerned with herring and ground fishes (e.g., cod, haddock, and redfish) are developing procedures that will provide rapid and accurate assessment of the status of stocks. Biostatistical ADP programs are being improved to enable rapid evaluation and decision by U.S. commissioners (to ICNAF) as to our country's position with regard to any management proposals made.

Trends in oceanographic conditions (biological as well as physical) drastically affect the biomass of many species. It is necessary to understand these trends and to develop our policies accordingly. A major international cooperative program has been proposed by the United States for the ICNAF area and preliminary studies to determine the logistic requirements are underway.

Spawning populations of herring will be sampled throughout the Gulf of Maine, with substantial emphasis on Georges Bank. Data on age composition and racial characteristics are being collected and analyzed in an effort to relate spawning groups to immature stocks along the coast. Information on annual spawning will be compared with its intensity and distribution in previous years. Gill netting for adult herring is being attempted to determine areas of inshore spawning in the Gulf of Maine.

In the Middle Atlantic, increased research effort has been placed on resolving problems concerning the management and prediction of the stocks of menhaden. The development of appropriate biostatistical programs to provide the requisite data for population dynamics research is proceeding at an increased pace. Work on the menhaden mark and recapture program will be intensified to augment

information on growth, mortality, population structure, and migrations now being derived from fishery statistics and morphometric comparisons. These experiments will provide the prerequisite data for subsequent studies on maximum yields, prediction, as well as that needed to determine the recent cause, or causes for the decline in this fishery. Menhaden subpopulation studies will be intensified, involving the use of biochemical techniques, including serology.

The oceanography program in the Gulf of Mexico will be expanded to investigate environmental conditions which affect annual fluctuations in shrimp. Plans are underway to accelerate analysis of hydrographic data already collected. The present experimental shrimp biology program has as its major objectives (1) to determine effects of environmental factors, such as salinity, temperature, light and food, on growth, survival, distribution, etc., (2) to study animals associated with shrimp for a better understanding of the significance of competition, predation, and parasitization, and (3) to seek physiological differences between species whose physical similarity makes them difficult to distinguish by physical characteristics.

Recent successes in raising larval brown and white shrimp from the egg permit more intensive laboratory studies in physiology, behavior, and response to environmental stimuli and growth rate. The information obtained will be related to comparable studies in the field. The study of parasites and diseases of shrimp is especially urgent in view of the rapid environmental changes being brought about in coastal areas. Such changes may stimulate evolutionary processes among pathogenic organisms, some of which might ultimately become potentially dangerous to man.

Since estuaries represent the doorway to man's ultimate goal of farming the sea, additional emphasis will be directed toward increasing the productive capacity of estuaries. Most commercial fish and shellfish species, including 7 of the 10 most valuable species, are dependent to a greater or lesser degree on estuaries during some phase in their life cycle. Estuarine research programs will continue to collect and analyze that basic biological, chemical, and physical data needed for a better understanding of these fishery resources and their coastal environment. In the Gulf of Mexico, additional emphasis will be directed toward (1) obtaining information on the effects of environmental alteration of biological communities, and (2) establishment of principles whereby these areas may be controlled to the benefit of the marine resources.

For several major estuarine areas, emphasis will continue to be placed on (1) standardization of routine field procedures, (2) studies on the characteristics of important nursery areas, and (3) development of a suitable system for cataloging available data which can then be assembled, organized, and summarized for each estuary.

Experimental methods for estimating population size of blue crabs will be investigated. Larval blue crabs will be reared for studies on the effects of environmental factors. A field program will get underway to test a sampling program designed to measure year to year abundance and fluctuations of adult crabs. Life history studies will be continued with emphasis on growth rates and natural mortality.

Evaluation of the acute toxicology of pesticidal chemicals occupies a substantial part of the pesticides program. Completed facilities for the ultraviolet sterilization of the sea water supply will permit routine culturing of molluscan larvae and their phytoplankton food for use in pesticide bioassay. The pesticide monitoring program will be extended to include additional commercial fishery harvest areas on both coasts.

In the Eastern Pacific, research on the distribution of adult pelagic fish, especially anchovies, will be intensified utilizing Simrad equipment on the new research vessel, *David Starr Jordan*. Anchovy tagging techniques are being investigated in an effort to further reduce tagging mortality. If and when an anchovy fishery materializes, a monthly survey of fish larvae in the California current region will be carried out to establish a basis for describing the condition of the stock at the beginning of the fishery.

When the historical series of sea temperature charts being developed by our Stanford Laboratory has been completed, monthly average charts will be prepared for a given base period, probably 1950–59. Anomaly charts for each month of each year will then be computed and prepared for the entire period 1949–62. If the pilot program for obtaining temperature-depth data proves the feasibility of collecting oceanographic data from ships of opportunity, the use of the expendable bathythermograph system would be extended to other ships on other shipping lanes. Plans for shark research in the Eastern Pacific are for continued taxonomic study but the tagging programs are to be reduced.

In the Central Pacific research will continue on the behavior and sensory abilities of tuna and related fish. The definition of subpopulations of tunas through blood-group studies will continue. The Pacific trade wind zone oceanography program has completed the field portion of a design and planning phase of full-scale investigations to be conducted when funds permit. The next year will be spent analyzing and writing reports on the data obtained in the pilot study. The Bureau will explore further the research applications of a submarine and will attempt to broaden its experience in this area through the charter of available submersibles.

Biologists will be collecting data required for research on reproduction, age, and length needed for stock assessments at the west coast whaling station; and mark whales for studies of migration and population evaluations. The Bureau will cooperate with the Scientific Committee of the International Whaling Commission in appraisals of the North Pacific baleen whales and sperm whales. Two permanent employees will work full time on these activities which includes the charter of whale catcher boats for 150 days to carry out whale marking and tagging.

The new research vessel *Miller Freeman* is scheduled to conduct high-seas research in the North Pacific Ocean and the Bering Sea. Intensified studies of commercially important groundfish species are planned, and complex oceanographic cruises requiring the stability and capability designed into this vessel will be carried out. Additional biological and oceanographic support for the U.S. position in the International North Pacific Fisheries Commission will be available through the information gained from these and allied studies carried out using this research vessel.

Information on the age at capture which will produce the maximum yield of salmon and on the loss of fish from gill nets (used extensively in the high-seas salmon fishery) are studies which will receive high priority. The effect of the Japanese high-seas fisheries on the North American runs of salmon will continue to be monitored.

King crab studies along the Alaska Peninsula and in the Bering Sea will be expanded to complete the definition of the geographic ranges of stocks of king crab contiguous to Kodiak Island and to keep pace with the westward expansion of the fishery.

With the completion of field tests, an oceanographic free-floating buoy system will be established in the North Pacific Ocean in 1967. Plans call for a release of a number of buoys off Adak and Japan. The buoys will be tracked as they drift across the North Pacific Ocean and interrogated at intervals for information on temperature and salinity of the ocean from the surface to depths of 300 meters. Use of buoys rather than vessels to collect basic oceanographic information makes possible simultaneous monitoring of an extensive area of the ocean otherwise impractical because of the high costs of vessel operations.

The development and application of advanced analytical methods to solve biological and oceanographic problems is continuing. Automatic data processing equipment has been placed aboard the research vessel *George B. Kelez* to permit efficient processing of data aboard ship and rapid transmission of information to shore. Operation of this vessel, especially with improved facilities for communication, help materially in improving the Bureau's ability to forcast salmon runs.

Work of the Ichthyological Laboratory, Washington, D.C., will consist chiefly of museum study in their quarters in the U.S. National Museum where adequate library facilities and important comparative collections are available to the staff. Some study in other museums, both domestic and foreign will be necessary. The staff will continue to participate in existing field programs of the Bureau and other agencies when appropriate to their own work.

(b) Inland fisheries

Funds	Fiscal year 1966		Fiscal year 1967		Increases or decreases	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
M. & I.	31	$505,400	31	$502,300	.....	−$3,100
S–K	13	167,400	13	176,400	.....	+9,000
Total	44	672,800	44	678,700	.....	+5,900

Increases and decreases

	Management and investigations		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost reduction program	.....	−$5,600	.....	.....	.....	−$5,600
Subtotal decreases	.....	−5,600	.....	.....	.....	−5,600
(2) An increase for increased pay costs for fiscal year 1966 positions	.....	+2,500	.....	.....	.....	+2,500
(3) An increase for increased costs of operation of research vessel *Cisco*	.....	.....	.....	+9,000	.....	+9,000
Subtotal increases	.....	+2,500	.....	+9,000	.....	+11,500
Total increases and decreases	.....	−3,100	.....	+9,000	.....	+5,900

Need for increase.—Increase items totaling $11,500 are offset, in part, by a decrease item of $5,600, resulting in a net increase of $5,900 for this subactivity. The increases needed are—

(2) $2,500 for increased pay costs for fiscal year 1966 positions.

(3) $9,000 for operation and maintenance costs for the vessel *Cisco*. This vessel is used for research operations in the Great Lakes. The estimated O. & M. costs for 1966 and 1967 are estimated at $24,000 and $33,000 respectively. The increase is to provide for additional costs of repairs and maintenance, and operating supplies, such as lube and fuel oil, due to the increased use of vessel on research work.

Plan of work.—The explosive increase of the small and prolific alewife has upset the ecological balance of Lake Michigan. As a result, lake herring, chubs, and smelt which have dominated the stocks, and constituted over three-fourths of the commercial catch in the 1950's, have been drastically reduced or seriously affected.

To fill in our gaps of knowledge of alewives, special efforts will be directed to studies of the ecology of this species and the competitive feeding and behavioral relationships between it and other fishes. Additional studies will be made of the environmental requirements of alewives and associated species. Knowledge gained from this work will provide the needed background information to guide efforts to rehabilitate the more desirable fish stocks.

The Lake Erie fishing industry is in distress because valuable fishes such as cisco, whitefish, sauger, and blue pike have become commercially extinct in recent years. The last remaining "high-value" species, the walleyes, has declined to a low level of abundance. To determine the factors causing these declines, emphasis will be placed on studies of the environmental requirements of "high-value" species. Also, plans are underway to extend field observations and collections of biological data to the central and eastern basins of the Lake.

In Oahe Reservoir, S. Dak., research will be continued on the distribution, abundance, and life history of commercial fish stocks. Special attention will be given to assess the size of the various year-classes of buffalo fish and the migratory pattern of this species in the reservoir.

(*c*) *Shellfish*

Funds	Fiscal year 1966		Fiscal year 1967		Increase or decrease	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
Management and investigations	63	$1,158,156	63	$1,150,000	.....	−$8,156
S–K	17	162,500	17	166,000	.....	+3,500
Total	80	1,320,656	80	1,316,000	.....	−4,656

Increases and decreases

	Management and investigations		S-K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost reduction program	----------	−$15,900	----------	----------	----------	−$15,900
(2) A decrease due to reduction in effort of the shellfish mortality research program	----------	----------	----------	−$15,500	----------	−15,500
(3) A decrease resulting from rounding off the estimate	----------	−56	----------	----------	----------	−56
Subtotal, decreases	----------	−15,956	----------	−15,500	----------	−31,456
(4) An increase for increased pay costs for fiscal year 1966 positions	----------	+7,800	----------	----------	----------	+7,800
(5) An increase for operation and maintenance of Beaufort, N.C., laboratory	----------	----------	----------	+8,000	----------	+8,000
(6) An increase for operation and maintenance of Milford, Conn., laboratory	----------	----------	----------	+11,000	----------	+11,000
Subtotal increases	----------	+7,800	----------	+19,000	----------	+26,800
Total increases and decreases	----------	−8,156	----------	+3,500	----------	−4,656

Need for increase.—Increase items totaling $26,800 are offset by decrease items in the amount of $31,456 resulting in a net decrease of $4,656 for this subactivity. The increases needed are—

(4) $7,800 for increased pay costs for fiscal year 1966 positions.

(5) $8,000 for operation and maintenance of the laboratory at Beaufort, N.C. The estimated O. & M. costs for 1966 and 1967 are $122,000 and $130,000, respectively. The increase is to provide for increased costs in the maintenace of buildings and grounds.

(6) $11,000 for increased operation and maintenance costs for the first full year of operations at the Milford, Conn. shellfisheries research center. This new facility is scheduled for completion in April 1966.

Plan of work.—In radiobiology investigations, work will continue on program objectives of developing and applying radioisotope techniques to fishery biology which include: (1) obtaining answers to critical questions asked about the potential dangers of radioactive contamination in estuarine and marine environments; (2) investigating techniques of controlled irradiation for selective breeding and predator control; (3) measuring the efficiency of energy transfer in conversion of radiant energy from the sun into food for marine life and for humans; and (4) determining dynamic principles that control circulation patterns of estuaries and other essential areas in marine environments. The use of a small estuary at Camp LeJeune has been obtained as an outdoor laboratory for such studies.

Research in molluscan shellfisheries is directed toward providing scientific information necessary for increased production in both natural and artificial environments. Obtaining an assured supply of seed (young oysters and clams) is one of the most urgent needs of the shellfish industry. Continued research on the behavior of larval molluscs and their physiological requirements and tolerances is essential to an understanding of the success or failure of setting and distribution of these species. Expansion of facilities at our Milford laboratory will permit additional work on shellfish culture techniques to provide a scientific basis for recommendations to commercial shellfish hatcheries. Cost accounting records will be maintained at these new hatchery facilities so that the economic feasibility of a full-scale commercial operation may be determined and economically sound methods can be developed.

Commercial shellfish hatcheries are being recognized by the industry as one of the approaches that must be taken to revitalize this declining industry. Our research will also provide information to the industry and the States on methods for controlling diseases, fouling, predation, and on optimum conditions for rapid growth of shellfish to market size. The ability to raise stocks of known parentage will hasten the development of disease-resistant strains and the production of races having desirable characteristics, such as tolerance to pollution, low salinities

and other environmental factors now generally unfavorable to shellfish. More rapid growth, uniform standards of size and quality, and the ability to reproduce at lower or higher temperatures are other desirable qualities to be bred into shellfish of the future. Tests of the new biodegradable detergents will be conducted to determine possible toxicity to various shellfish larvae.

Genetic studies will be undertaken with the small coot clam, Mulinia lateralis, which, under laboratory conditions, may produce as many as six generations in 1 year. This will hasten our understanding of the basic hereditary characteristics of mollusks and aid research on the commercial varieties.

The purpose of the studies in shellfish mortality is to develop an understanding of the major causes of natural mortality in shellfish populations, particularly through disease and predation. Because disease has played such a dominant role in the widespread mortalities in Delaware and lower Chesapeake Bays in recent years, much of the program is devoted to studies of life cycles, transmission, and pathogenicity of principal parasities. Interest is centered on understanding the impact of disease on shellfish populations, and on the development of methods to predict and control disease outbreaks. Now that the infectious stage of the organism believed to cause the destructive MSX outbreaks has finally been discovered, emphasis will be placed on artificially infecting oysters under laboratory conditions. Surveys for micropathogens suspected of contributing to mass shellfish mortalities along the east and west coasts of the United States will be undertaken. Material from infested waters in foreign countries will be examined as part of this expanded program.

Experiments will continue to determine whether or not marine animals found in association with shellfish act as carriers or alternate hosts for disease agents. Oyster tissue culture experiments are in progress to develop a method of screening for marine viruses that may kill shellfish

Plans for the Shellfish Advisory Service call for continued contacts with members of the industry and State agencies to assist them in problems of management and utilization of shellfish resources. Future plans call for the publication of extension-type reports and circulars and frequent contacts with State and Federal laboratories to keep abreast of research developments. Active cooperation is planned with several State fishery extension programs.

The growing surf clam fishery now accounts for about 61 percent of all clams harvested by U.S. fishermen. Knowledge of growth rates, rates of recruitment to the fishery, mortality, and variations in year-classes strength is of extreme importance for management of this fishery to avoid overfishing.

Special marking experiments will be designed for mortality and population dynamic studies. Analysis of fishery statistics such as catch and fishing effort will supplement such studies. Laboratory experiments in hatching and rearing, behavior, and physiological reaction to temperature and salinity ranges will be emphasized.

The inshore lobster fishery is exploited at or near its maximum. Increased interest in fishing for offshore lobster stocks by American and foreign fisheries has raised fears that the stocks are being overexploited. Basic biological information necessary for establishing management principles of this valuable resource and information on the relation between offshore and inshore lobster stocks need to be obtained.

Extensive systematic biological sampling will be carried out on the offshore populations. Marking and tagging methods are being developed and will be applied to studies of growth, migration, age and size composition, fishing and natural mortality as soon as a truly feasible technique is developed. The study of other animals associated with lobsters, including parasites, will be continued. Preliminary studies suggest that some of these may be useful as biological tags to indicate origin of stocks.

Offshore cruises will be continued to tag or mark lobsters and to sample populations. Oceanographic data will be analyzed for possible clues as to how offshore and inshore populations might intermingle. Serological, biochemical, and morphometric methods will be used to study the genetic relationships of offshore and inshore stocks.

The use SCUBA for observing lobsters in their natural environment will be continued. Studies will also include observations on environmental requirements, characteristics of lobster environemnts, and suitable habitat as a limiting factor in lobster abundance. The effect of creating artificial habitat will be explored.

Many of the studies to be undertaken by the States under Public Law 88-309 will be on shellfish or coastal fin fish resources. There will be active liaison with the States to avoid duplication, and to encourage good State programs.

(*d*) *Designing fish protective devices*

Funds	Fiscal year 1966		Fiscal year 1967		Increases or decreases	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
Management and investigations	6	$45,000	6	$45,700		+$700
S-K						
Total	6	45,000	6	45,700		+700

Increases and decreases

	Maintenance and invest gations		S-K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) An increase for increased pay costs for fiscal year 1966 positions		+$700				+$700

Need for increase.—An increase of $700 is needed for increased pay costs for fiscal year 1966 positions.

Plan of work.—The work programed for the Fish Facilities Section located in Portland, Oreg., is—

1. To develop functional plans and designs for fish protective devices at water development projects. These facilities may cost millions of dollars and include such items as: Fishways, traps, collection systems, barriers, screens and louvers, skimmers and gulpers, and artificial spawning and rearing areas. The devices may be temporary to permanent facilities, and at most projects both types are necessary.
2. Review of plans for facilities with construction agencies and State fish and game agencies.
3. Inspection of facilities under construction to insure that they are being built as designed.
4. Periodic inspection of constructed facilities to insure that they are being operated properly and function efficiently.
5. Planning in advance for new projects, participation in Federal Power Commission hearings, participating in evaluation studies at completed projects, observing model demonstrations, and acting as consultants.

(*e*) *Employees compensation fund*

Funds	Fiscal year 1966		Fiscal year 1967		Increases or decreases	
	Permanent positions	Amount available	Permanent positions	Estimate	Permanent positions	Estimate
Management and investigations		$43,000		$36,300		−$6,700
S-K						
Total		43,000		36,300		−6,700

Increases and decreases

	Management and investigations		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease in payment to the employees' compensation fund, Bureau of Employees' Compensation as required under sec. 209, Public Law 86–767, to cover the cost of benefits paid in the fiscal 1965 due to injuries or deaths of Bureau of Commercial Fisheries' employees		−$6,700				−$6,700

4. Research on fish migration over dams

Funds	Fiscal year 1965 amount available	Fiscal year 1966		Fiscal year 1967		Increase (+) or decrease (−), 1967 compared with 1966		
		Positions	Amount available	Positions	Estimate	Total	Pay cost [1]	Program
Management and investigations	$1,417,380	65	$1,445,800	65	$1,427,100	−$18,700	+$1,100	−$19,800
S–K	246,495	1	204,500	1	51,500	−153,000		−153,000
Total	1,663,875	66	1,650,300	66	1,478,600	−171,700	+1,100	−172,800

[1] To provide funds for fiscal year 1966 positions.

Increases and decreases (1967 compared with 1966)

	Management and Investigations		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost-reduction program		−$19,800				−$19,800
(2) A decrease due to completion of contract studies on effects of impoundments of juvenile salmonids and disease on fish migration				−$153,000		−153,000
Subtotal decreases		−19,800		−153,000		−172,800
(3) An increase for increased pay costs for fiscal year 1966 positions		+1,100				+1,100
Subtotal increases		+1,100				+1,100
Total increases and decreases		−18,700		−153,000		−171,700

Need for increase.—The increase item of $1,100 is offset by decrease items totaling $172,800 resulting in a decrease of $171,700 for this activity.

The increase needed is (3) $1,100 for increased pay costs for fiscal year 1966 positions.

Plan of work.—Proposed research will be reviewed with participating State and Federal agencies to eliminate duplication and to establish program priorities.

1. The collection of downstream migrants from rivers to prevent their entering impassable impoundments will receive major effort. The ability of a newly developed velocity matching traveling screen to collect young migrants under the actual flow and debris condition of the Snake River will be tested on a prototype scale. A marking study will measure the effect of transportation on the homing ability of the collected fish.

2. Prototype tests to assess mortality of juvenile salmonids in specific areas of Kaplan turbines will be completed. Development of feasible methods of bypassing fish from dangerous areas by modification of turbine intake ceilings will continue.

3. Examine timing and rates of migration of fingerling salmonids at key sites from the headwaters to the estuary of the Columbia River. Passage of juveniles through the estuary will be assessed in relation to runoff and chemistry of the river.

4. Effects of temperature and the changing biological environment on passage and survival of salmonids will be assessed in relation to foreseeable conditions in the Columbia Basin. Emphasis to focus on means of controlling high temperatures that will result from impoundment of the river and discharge of nuclear reactors.

5. Review present production potential of former salmon producing areas now obstructed by dams, such as that above Grand Coulee Dam. Reassess fish passage to and from these areas in light of new fish passage techniques. Experimental demonstration of feasibility of putting these areas back into salmon production. Assess potential of river run impoundments for salmon production.

Except for a few contracts awarded to State fishery agencies, all of this research work will be conducted by Bureau personnel. These scientists are stationed at the fish passage research headquarters, Seattle, Wash., and at several biological field stations, strategically located within the Columbia River Basin at such points as Portland, Oreg., North Bonneville, Wash., and Pasco, Wash.

Funds appropriated for research on fish migration over dams will also be used to construct and install experimental facilities incidental to these investigations.

5. Fishing vessel mortgage insurance

Funds	Fiscal year 1956 amount available	Fiscal year 1966		Fiscal year 1967		Increase (+) or decrease (−), 1967 compared with 1966		
		Positions	Amount available	Positions	Estimate	Total	Pay cost	Program
Management and investigations	$43,249	3	$44,900	3	$44,300	−$600	----------	−$600
S–K	----------	----------	----------	----------	----------	----------	----------	----------
Total	43,249	3	44,900	3	44,300	−600	----------	−600

Increases and decreases (1967 compared with 1966)

	Management and investigations		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost-reduction program	----------	−$600	----------	----------	----------	−$600

Plan of work.—This program provides for the insurance of mortgages given to aid in the construction, reconstruction, or reconditioning of fishing vessels. The funds loaned are provided by banks or other private lending institutions and their loans on mortgages are insured by the Bureau. An insurance premium is paid by the borrower which goes into a revolving fund along with investigation and commitment fees paid by the borrower. This fund will be used to pay any claim which may occur provided the mortgage or loan goes into default. In this circumstance the collateral will be taken over by the Bureau and can be liquidated with the funds obtained being returned to the revolving fund. Work necessary to the administration of this program is performed by the Bureau with legal assistance furnished by the Office of the Solicitor, a unit of the Office of the Secretary.

Status of program.—The act of July 5, 1960, authorized the Secretary to insure mortgages given to finance the construction, reconstruction, or reconditioning of fishing vessels under the terms of the Merchant Marine Act of 1936, title XI, as amended. This allows mortgages of up to 75 percent of the actual cost to be insured in a manner similar to the familiar home mortgage insurance of the

Federal Housing Administration. As of December 31, 1965, a total of 94 applications for $8,564,495 have been received. Seventy-four ($5,487,187) of these have been approved and are being processed. The number of applications will increase substantially during the current and succeeding fiscal years as most vessels constructed under the subsidy program will also require mortgage insurance to assist in the financing of their construction.

Status of mortgage insurance applications

	Applications number	Received dollars	Applications number	Approved dollars	Applications number	Pending [2] dollars
Fiscal year:						
1961	5	585,000	3	195,000	2	39,000
1962	12	1,719,560	7	1,154,356	6	595,000
1963	14	1,593,180	13	839,119	7	1,358,000
1964	24	998,874	25	1,050,620	2	995,000
1965	22	2,573,378	15	1,611,872	7	1,932,342
1966 [1]	40	4,000,000	40	4,000,000		
1967 [1]	40	4,000,000	40	4,000,000		

[1] Projected.
[2] At end of fiscal year.

Mortgage insurance applications received by area (from fiscal year 1960 through Dec. 31, 1965)

	Alaska	North Atlantic	South Atlantic and gulf	California	Pacific Northwest	Total
Number	5	14	61	2	12	94
Amount	$75,596	$1,646,759	$3,509,024	$1,262,000	$2,071,125	$8,564,495

A total of $100,000 has been collected in premiums and fees, and deposited in the Federal ship mortgage insurance fund, fishing vessels, from the time the mortgage insurance program was initiated, through June 30, 1965. Actual deposits through fiscal year 1965, and estimated deposits for 1966 and 1967 are as follows (in thousands of dollars):

1961 actual	3	1965 actual	38
1962 actual	9	1966 estimated	83
1963 actual	20	1967 estimated	116
1964 actual	30		

6. Columbia River fishery facilities

Funds	Fiscal year 1965 amount available	Positions	Fiscal year 1966 amount available	Positions	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
						Total	Pay cost [1]	Program
Management and investigations	$2,275,858	13	$2,392,300	13	$2,429,000	+$36,700	+$600	+$36,100
S–K								
Total	2,275,858	13	2,392,300	13	2,429,000	+36,700	+600	+36,100

[1] To provide funds for fiscal year 1966 positions.

Increases and decreases (1967 compared with 1966)

	Management and investigations		S-K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) A decrease due to program savings resulting from cost-reduction program		−$33,800				−$33,800
(2) A decrease to round off estimate		−100				−100
Subtotal, decreases		−33,900				−33,900
(3) An increase for increased pay costs for fiscal year 1966 positions		+600				+600
(4) An increase for increased operation and maintenance costs		+70,000				+70,000
Subtotal, increases		+70,600				+70,600
Total, increases and decreases		+36,700				+36,700

The programs conducted under this activity are grouped under five general categories, as follows:

	Available, 1966	Estimate, 1967	Increase (+) or decrease (−)
Fish hatcheries	$1,843,300	$1,913,300	+$70,000
Screen maintenance	114,000	114,000	
Stream maintenance	45,000	45,000	
Appraisal of project results	334,000	300,200	−33,800
Program supervision	56,000	56,500	+500
Total	2,392,300	2,429,000	+36,700

Need for increase.—The increase of $70,600 is offset in part by a decrease of $33,900 resulting in a net increase for this activity of $36,700.

The increases needed are—

(3) $600 for increased pay costs for fiscal year 1966 positions.

(4) $70,000 for increased operation and maintenance costs of hatcheries. The increase is needed for the operation and maintenance of 21 hatcheries to provide a funding level of $1,913,300 for 1967. Six of these stations are federally operated (under contract with the Bureau of Sport Fisheries and Wildlife) and the remaining 15 are operated under contract with the fish and game agencies of Oregon (OFC and OGC), and Washington (WDF and WDG).

The $70,600 increase includes (1) salaries and wages, (2) fish food, and (3) rehabilitation. These are shown by agency and classification in the following table:

Agency	Salaries and wages	Fish food	Rehabilitation and general operations	Total
Bureau of Commercial Fisheries		$8,500	$7,000	$15,500
Oregon Fish Commission	$22,100	17,000	−8,000	31,100
Oregon Game Commission	4,000			4,000
Washington Department of Fisheries	11,000	2,000	1,000	14,000
Washington Department of Game	4,000	2,000		6,000
Total	41,010	29,500		70,600

The increase for the Bureau is predicated on normal increment raises. Washington Department of Fisheries and Washington Department of Game are scheduled for a 4.4 percent increase in basic salaries in fiscal year 1967, and the Oregon Game Commission and the Oregon Fish Commission are scheduled for 9 percent increases.

The increase of $29,500 for fish food will result in the added production of over 100,000 pounds of fish. Substantial added production is planned by the Oregon Fish Commission (+59,000 pounds) and the Bureau (+30,000 pounds). This gain in poundage of fish will be accomplished with no added facilities and is made possible by the reuse of water, improved diets, and more efficient scheduling of pond space.

The 21 hatcheries are scheduled to rear a total of 1,893,000 pounds of salmon and steelhead at an average cost of $0.936 per pound based on direct recurring hatchery expenses. This is $0.025 lower than the $0.96 cost in 1966. Improved diets, pathology, and rearing techniques have made this reduction in cost possible.

Plan of work.—The operation and maintenance of facilities constructed under the Columbia River fishery development program for the most part will be conducted by contracts with the fish and game agencies of Idaho, Oregon, and Washington, and the Bureau of Sport Fisheries and Wildlife. The Bureau will continue its work on the evaluation of hatcheries, and in so doing will also contract with fish and game agencies in Alaska and California. The Bureau of Sport Fisheries and Wildlife, by agreement, will operate six salmon hatcheries.

Operation and maintenance funds to be contracted to the States are as follows:

Alaska	$25,000
California	11,000
Idaho	57,000
Oregon	719,000
Washington	748,000

The States of Alaska and California will recover marked Columbia River fish in their ocean fisheries. A good number of these fish were observed in the catch in fiscal year 1966.

The State of Idaho will operate 250 fish screens and 4 fish ladders. They will also evaluate the return of adult salmon from hatchery plants made in the Clearwater River in 1963.

The Oregon Fish and Game Commissions will operate 6 salmon hatcheries and 1 steelhead station, 404 fish screens, and 25 fish ladders. Oregon biologists will also sample all commercial and sport fisheries for the recovery of Columbia River hatchery-marked fish.

The State of Washington will operate 6 salmon and 2 steelhead hatcheries, 57 fish ladders and 23 fish screens, and will assist in the hatchery evaluation program by the recovery of marked fish.

Canadian biologists are assisting in the recovery of marked Columbia River fish from their waters on a voluntary basis at no cost to the United States.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
Fishery resources disaster aid	$399,768					

Fishery resources disaster aid.—This program, authorized by section 4(b) of the Commercial Fisheries Research and Development Act of 1964, was funded under the "Management and investigations of resources" appropriation in 1965. The program was funded in 1966, and funding for 1967 is budgeted, under the "Federal aid for commercial fisheries research and development" appropriation.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$21,326,217	$22,148,756	$21,092,000	−$1,056,756
Comparative transfers from other accounts	−120,029	−115,560		+115,560
Unobligated balance lapsing	20,901			
Transferred to "Operating expenses, Public Buildings Service," General Services Administration (77 Stat. 436 and 78 Stat. 665)	5,811	39,604		−39,604
Appropriation	19,107,900	21,838,000	20,092,000	−1,746,000
Proposed supplemental for civilian pay increases		148,000		−148,000
Proposed transfer from "Federal aid for commercial fisheries" for civilian pay increases		86,800		−86,800
Appropriated from "Pribilof Islands fund"	2,125,000		1,000,000	+1,000,000
Obligations by objects:				
11 Personnel compensation	10,123,963	10,617,000	10,946,000	+329,000
12 Personnel benefits	699,382	745,000	768,000	+23,000
21 Travel and transportation of persons	601,191	633,000	616,000	−17,000
22 Transportation of things	125,481	170,000	132,000	−38,000
23 Rent, communications, and utilities	713,125	757,756	756,000	−1,756
24 Printing and reproduction	178,348	166,000	166,000	
25 Other services	5,678,874	6,144,000	4,925,000	−1,219,000
26 Supplies and materials	1,602,569	1,681,000	1,574,000	−107,000
31 Equipment	1,125,476	1,038,000	1,012,000	−26,000
32 Lands and structures	7,524			
41 Grants, subsidies, and contributions	487,403	220,000	220,000	
42 Insurance claims and indemnities	394			
Subtotal	21,343,730	22,171,756	21,115,000	−1,056,756
95 Quarters and subsistence charges	−17,513	−23,000	−23,000	
Total obligations	21,326,217	22,148,756	21,092,000	−1,056,756

REORGANIZATION

Chairman HAYDEN. During the past year, the Office of Commissioner, Fish and Wildlife Service, has been reorganized, as a result of which certain functions heretofore accomplished in that Office are now accomplished in your Bureau. Would you please discuss these briefly and indicate the advantages which accrue to your Bureau from this reorganization?

Mr. MCKERNAN. Yes, Senator.

FOREIGN FISHERIES ACTIVITIES

There were two primary programs that were transferred to our Bureau from the Office of the Commissioner. One, perhaps most important, the foreign fisheries activities that heretofore had been split, part of them being in our Bureau and part of them being directly in the Commissioner's shop, those were put in our Bureau.

The advantage of this essentially is that better organization has been achieved and better attention is going to be given because the entire office is now under one head.

Furthermore, better balance in consideration of the domestic and international phases of the fisheries can be achieved with these programs both under the Bureau. Of course, they are also under the Commissioner.

INFORMATION AND EDUCATION ACTIVITIES

The second program is that of information and education. This small activity is now directly in our Bureau and also in the Bureau of Sport Fisheries and Wildlife. The advantages here are that the in-

formation people must be fully aware of the programs as they are being developed and this gives these people an opportunity to be in on decisionmaking at the Bureau level. I think there will be a greater efficiency and better use of our funds, with this change, Senator.

COST REDUCTION PROJECTS

Chairman HAYDEN. Throughout your budget justification, not only for management and investigations of resources, but for the remainder of your budget, you indicate changes from fiscal year 1966 by pointing out increases and decreases. Then you explain the need for the increases in some detail. However, a large number of your decreases are noted only as due to program savings resulting from cost reduction program.

Is it possible for you to be specific about this proposed reduction?

Mr. MCKERNAN. Yes, Senator.

AREAS IN WHICH SAVINGS OCCURRED

Our cost reduction program amounts to about $302,000 and that, of course, as you have pointed out, is spread throughout our justification. It amounts to a decrease of $125,000 in equipment, $110,000 in travel, $24,000 in publications, and $43,000 in supplies. These were simply curtailments of these specific items and we asked our people to effect these economies throughout the various programs.

U.S. RANKING IN FISH CATCH AND VALUE

Chairman HAYDEN. You indicate that the United States ranks fifth in comparison with other countries of the world insofar as annual catch of fish is concerned.

What is the rank of the United States insofar as the value of the fish caught?

Mr. MCKERNAN. It is probably about a third or fourth in relation to relative value, Senator, and if one considers the fishery products consumed within the United States, we might even rate about second, possibly third. The reason for this is, of course, that about 60 percent of the fishery products consumed in the United States are imported from other countries. This is a situation, of course, we are doing our very best to correct. I think with the help of this committee we are making good progress in this area but still there are important parts of our consumption of fisheries that come from foreign countries. This is a very good market and most countries of the world will sell to this market first before anywhere else.

NEW METHOD OF PRESENTING BUDGET REQUEST

Chairman HAYDEN. Your "Management and investigations of resources" budget this year is presented differently in that not only are the appropriated funds shown, but also the Saltonstall-Kennedy funds which will be available.

Would you please explain what you are doing by this means of presentation and indicate the advantages of this type of presentation?

Mr. MCKERNAN. Senator, the Saltonstall-Kennedy funds have, for the first time in several years, increased substantially and, because of

this, we felt it important to show how this affected the programs financed by both sources of funds. We are transferring some of our projects from regular funds to the Saltonstall-Kennedy funds. Otherwise, our justifications would not have been clear.

Funds from the permanent appropriation in the 1967 program increased from 5.4 to 7.3 million, and this big change in amount made it necessary, we felt, to explain it in our budget justification. That was the reason.

Status of Convention on Pacific Tuna

Chairman Hayden. In your justification statement, you indicate that among your responsibilities is the implementation of international treaties. One of the treaties which you mention is the convention regarding Pacific tuna, indicating that conservation regulations under this convention have not yet been implemented.

Would you please advise the committee of the status of your activity under this convention, as well as indicating when the implementing regulations will be ready?

Mr. McKernan. Yes.

One of our top officials in the Bureau is the Government member of this Commission, Dr. J. L. McHugh, and our activities at the present time are of an advisory capacity both on research and management of the tuna resources of the eastern tropical Pacific. Funds are appropriated directly to the Commission for its research work in monitoring the status of stocks and the effects of fisheries on the stocks.

Now, we have not been able to get all of the nations who are significantly fishing tuna in the eastern tropical Pacific to agree to accept the recommendations of this Commission. Essentially one nation, Peru, fishing to a small yet significant degree, has not agreed to accept these regulations.

U.S. law does not allow the implementation of these conservation regulations until all nations who are significantly fishing the resource have agreed to follow and carry out similar conservation measures.

Chairman Hayden. Is the United States obtaining those agreements?

Mr. McKernan. We are working with the Department of State and are doing our very best to get them to agree. So far, however, we have been unsuccessful. We think it is very necessary to accomplish this, however.

Economic Research Studies

Chairman Hayden. You indicate that one of your increases will be for initiating two economics research studies, one on irradiated fish and seafood products and the other on fish protein concentrate.

Will you accomplish these studies with your own employees or will you do them by contract with public or private institutions?

Mr. McKernan. We will undoubtedly contract for the majority of these particular studies with perhaps a minor amount done by our own staff. Some will be done by our own staff. To the extent possible, we will contract.

DEVELOPMENT OF FISH PROTEIN CONCENTRATE

Chairman HAYDEN. What is the status of your fish protein concentrate development?

Mr. KcKERNAN. I have described that to some extent to the committee. We think great progress has been made and a good product has been produced by the extraction method which essentially uses a chemical to absorb water and oil from the protein, leaving the protein separated and then with simple centrifuges the solids and the fluids are separated and dried and very high protein material is produced.

Now, we have not made much progress yet in another very important and promising area, that of producing fish protein concentrate by what we call a biological method. This would use either some chemical enzymes or microbiological organism to, in a sense, digest the fish and thereby facilitate the separation of the water and oil from the protein. We think this latter process might in the long run produce products of greater value then the process that we have now developed. However, much research remains to be done before we can make the most effective use of these potentially rewarding areas for our fishing industry.

On the other hand, the one we have now developed was the quickest and, perhaps, the easiest one to develop, so we went ahead on a crash basis to develop this first.

APPROVAL OF CONCENTRATE FOR HUMAN CONSUMPTION IN UNITED STATES

Chairman HAYDEN. Has the type of product you have developed been approved by the Food and Drug Administration for human consumption in the United States?

Mr. McKERNAN. It has not been approved yet, Senator, but a petition is before the Food and Drug Administration at the present time requesting that approval.

Chairman HAYDEN. How much do you propose to spend on this activity this year?

Mr. McKERNAN. About $465,000 is what we have budgeted for 1967.

FISH PROTEIN CONCENTRATE

Chairman HAYDEN. Mr. Ezra Levin, president of the VioBin Corp. has furnished a statement regarding fish protein concentrate which will be printed at this point in the record.

(The statement follows:)

The Bureau of Commercial Fisheries in its briefing statement of August 10, 1964, dealing with FPS lists a number of methods for producing FPC. Starting on page 48, it refers to the VioBin Corp., General Foods, Lever Bros., J. Howard Smith, United Nations project in Quintero, Chile; Emil Vogel of Munich; Canadian process by Guttman; Fishing Industry Research Institute; C. V. Bruera, Lima, Peru; Astra of Stockholm, Sweden, among many others.

The Bureau of Commercial Fisheries decided that it needed public funds to develop a new process to make FPC at a low cost for the purpose of, first, showing how the United States could help the world's starving population, and, second, to help the U.S. fishing industry. At this time a process was already established in the United States on a commercial scale. I quote the engineer who is now in charge of the Bureau of Commercial Fisheries project:

"The most outstanding, independent contribution of this country until today has been the development, by the VioBin Corp. of Monticello, Ill., of a process of azeotropic dehydration and extraction of lipids from comminuted fresh fish.

Plants are in operation capable of converting large volumes of fresh fish into fish flour."

Since the Bureau of Commercial Fisheries began its program with regard to FPC, it has or will have expended $1,740,000 by the end of this fiscal year. In the fiscal year 1966, $465,000 were appropriated and now they have requested $465,000 for 1967. What do they have to show for all this money? A pilot plant has been developed to produce FPC in exactly same manner as the Canadian process by Guttman and Vendenheuvel, published in 1957.

No engineering feasibility has been presented, although promised. No independent engineering company in this country who has examined the process is willing to recommend that private capital put up a plant using the process. The cost of the final product will be from two to three times that of the product that has been produced commercially for 10 years in the United States.

A similar process has failed, after the investment of large sums of money (several million dollars) by Astra in Sweden.

There are two questions to be asked before money is appropriated.

1. What was the emergency when the original appropriation was made that made it necessary to compete with private enterprise?

2. Why should more money be given to the Bureau of Commercial Fisheries now that its work is finished, and it has analyzed the various processes that are available for private capital to use in producing FPC?

We all know how appropriations tend to perpetrate themselves. Now we are faced with escalation. The Bureau of Commercial Fisheries is now suggesting that demonstration plants be built with public funds. A demonstration plant would cost a million dollars. To indicate where this might lead us in spending public funds, note the following reference from Market News Leaflet 3, issued December 1965; by the U.S. Department of the Interior.

"Fish protein concentrate plants: To authorize the Secretary of the Interior to develop, through the use of experiment and demonstration plants, practicable and economic means for the production by the commercial fishing industry of fish protein concentrate; to Committee of Commerce. Would authorize the Secretary to contract with private firms for the construction and operation of large-scale experimental plants capable of producing fish protein concentrate on a commercial basis. It has been estimated that the construction and operation of five plants the size required will involve approximately $5 million. Congress appropriated during the past 2 years several million dollars for the development of a sample fish protein concentrate product in a small-scale model plant capable of producing 100 pounds daily. The basic experimental work has been carried out by the Bureau of Commercial Fisheries with the cooperation with the National Academy of Sciences. The United States has taken the lead in developing on a small scale an acceptable fish protein concentrate. The next step is to prove its economic feasibility.

"S. 2720 (Bartlett and one other) introduced in Senate October 22, 1965; to Committee on Commerce. No action."

ACCELERATED OCEAN ENGINEERING PROGRAM—PACIFIC NORTWEST

Chairman HAYDEN. Last year Congress provided funds, unbudgeted, to permit you to establish an ocean engineering program and to begin research to vitalize the Great Lakes fishing industry.

Would you please submit for the record statements as to the accomplishments which you have made during the past year with the funds provided?

Mr. MCKERNAN. Yes. I will be glad to submit those for the record, Senator.

This program is aimed at upgrading and improving contemporary fishing systems which will provide an economic means for expansion and development of fisheries off the Pacific Coast States. Initial emphasis has been placed on the refinement and development of techniques for harvesting midwater species, particularly Pacific hake off Oregon and Washington as well as development of effective gear for harvesting large prawn shrimp in Alaska.

Experiments to develop midwater trawling gear which could be used effectively by the small multipurpose vessels on the Pacific coast were carried out aboard a commercial vessel during a 3-month charter. These efforts were successful and two commercial vessels, utilizing the same type of gear and techniques developed during the experimental work, are experiencing excellent hake fishing in Puget Sound. One of these vessels is only 50 feet long. The vessels have been catching a full load in only a few hauls during 1 day's fishing. The fish are being canned for pet food and total production has exceeded 2¼ million pounds since they started fishing in November.

The funds also made possible the 100-day charter of a commercial vessel for simulated production-type fishing trials off Washington and Oregon to provide information on the amount of hake which could actually be produced from offshore waters by a commercial vessel utilizing a large midwater trawl. Even though catches were not up to expectations, due to the almost complete absence of hake between the Columbia River and Destruction Island, 1¾ million pounds of hake were captured and landed at a reduction plant in Warrenton, Oreg.

In addition, methods of detection, catching of fish, and unloading provided vital information which will be needed for the development of a commercial fishery. With the exception of the decreased availability of hake, all other phases of the experiment went extremely well. They showed that the large midwater trawl developed by the Bureau was extremely rugged and that the electronic system used for positioning the net functioned well.

Based on the information gained from all facets of this accelerated program, plans are underway to construct a reduction plant for Pacific hake in Grays Harbor, Wash.

Various types of shrimp pots have been designed and constructed as one approach for developing an efficient method of harvesting large prawn shrimp in Alaskan waters. These shrimp inhabit rocky areas and cannot be taken with conventional shrimp trawls. Experimental test fishing operations indicate several types of pots may have commercial application pending further development. Laboratory studies concerned with the reaction of Alaska prawns to various types of pots, tunnel entrance designs, and baits are continuing. Results of the studies will be applied to experimental fishing operations scheduled for the late spring of 1966.

PESTICIDES RESEARCH

Chairman HAYDEN. One of the increases which you list is $80,000 to expand technological research on the effects of pesticides.

Would you please comment on this for the committee?

Mr. MCKERNAN. Yes, Senator.

There are two problems that we face. One is the effect of pesticides on the fish, itself; and, two, the amount of pesticides which accumulate in the bodies of fish and are thereby transported into the fishery products. We expect to study this latter phase or latter problem with the $80,000 requested for technological research. This means that we would try to establish whether or not these pesticides are accumulating in the flesh of the fish or in the internal organs. We will study how to either remove these pesticides from the fish products, by developing new processing techniques, or if there are certain specific centers of pesticide concentration in the fish, devise means first to locate, then excise these areas prior to further processing into a form for human (or animal) food. Of course, we are also seeking to ascertain whether or not in the future these might be a hazard to public health or whether they might be a hazard to the resource itself.

BOTULISM RESEARCH

Chairman HAYDEN. Have you completed your research on botulism?

Mr. MCKERNAN. No. We are progressing very well on this. However, Senator, we have assembled one of the best staffs in the world

on this particular subject. We are making tests every day to ascertain ways of controlling botulism in fish and fishery products. Good progress has been made, in my view, but the total problem is formidable.

The one very interesting development has been the use of some different test animals. Being fisheries people, of course, we are seeking fishery animals for test animals for botulism and we have found a very inexpensive way of using small and cheap goldfish as test animals instead of mice and rats. This, we think, will cut down our costs and are very easy, of course, to keep in our laboratories where we have water available.

Coastal and Offshore Research

Chairman Hayden. One of your larger program increases is for coastal and offshore research.

Would you please discuss briefly the increases which you propose?

Mr. McKernan. In our offshore research, we are working on both coasts. One important program is the one on the Atlantic coast on menhaden. Here there has been almost a resource disaster in that the menhaden catch has dropped by about two-thirds in the last 3 years. The populations simply have not reproduced successfully and we don't know whether this has been caused by the fishery; we don't know whether pollution perhaps has caused this because menhaden are dependent upon the estuarine in inshore areas for part of their life history.

So we are asking for funds to study this in some detail to separate out the effects of man through a change in the environment on the one hand and on the other hand perhaps simply natural fluctuation in environment.

Sonar Research

There are programs on the development of new equipment such as sonar research. We are trying to take advantage of the work that has been done by the Navy on sonar research and to develop techniques for using this wonderful equipment to see underneath the surface of the ocean. In other words, if we could locate fish and fishery schools more efficiently, why, we could catch them more economically, of course.

There have been some very wonderful developments, of course, in much larger packages and systems for Navy vessels, and we are doing some research to try to adapt these for commercial fishing vessels. We think that this has great promise.

One kind of sonar, Senator, that we have been working on shows a continuous trace of schools and we think we might even be able to identify the species of fish underneath the water at some distance for several miles; the size of these fish, the size of the schools, the direction that the school is going and the speed of this school. This would be of tremendous advantage if it works out practically and successfully.

Pacific Ocean Tuna (Eastropac)

We are also planning on additional work on developing the resources of tuna in the eastern Pacific Ocean with a number of other agencies. We are planning and executing a rather large investigation called

Eastropac; that is, eastern tropical Pacific. It promises to show us where large concentrations of other species of tuna, such as skipjack, which are not fished as heavily as we think could be in the eastern Pacific. We are starting investigations with the State of California and some of the Latin American countries into oceanography in this area. Those are examples of what we intend to use this money for.

Atlantic Menhaden

Chairman Hayden. How much do you plan to devote to menhaden studies; and where in the Atlantic do you intend to carry on the desired research?

Mr. McKernan. The research will be headquartered at our Beaufort, N.C., laboratory. Our total program in Atlantic menhaden will be in the order of magnitude of $310,000 and it will encompass tagging experiments and other life history experiments that will allow us to identify the effects of the fishery on menhaden and the effects of changing environment on menhaden. We will try and see whether or not we can find out what has caused this very serious decline in the last 3 years.

Disease Affecting Delaware Bay Area Oysters (MSX)

Chairman Hayden. For some years now Congress has provided funds, sometimes without a budget estimate, for research on a disease affecting oysters in Delaware and the lower Chesapeake Bay region. What is the status of these studies, and has a reason for the disease been discovered?

Mr. McKernan. Yes. A very significant advance was made this past year at our laboratory in Oxford, Md., when we identified the disease, itself. When I appeared before this committee before, we simply called it an MSX, multinucleate sphere of unknown origin. We have now described this as a protozoan of the general order haplosporidia. We have also identified species and now we are starting work to try to find ways of controlling this and, in a sense, of curing this very serious disease.

We have also been working with the States through our Public Law 88–309 funds to develop disease-resistant oysters in the Chesapeake Bay and Delaware Bay, and progress is good in this area, too, although we have not completed it at the present time.

Pacific Coast Oyster Disease

Chairman Hayden. Last year $150,000 was added to your budget to initiate a mortality study of oysters on the Pacific coast. What have you been able to do with those funds?

Mr. McKernan. We have contracted some of these funds to the States and have developed a program with the States that is proceeding very well. Contracts have been completed with the University of Washington, the Washington Department of Fisheries, the Oregon Fish Commission, California Fish and Game, and also with Battelle-Northwest, Inc. We are collecting samples of oysters and are attempting to identify here again the disease which has affected these organisms.

Interestingly enough, Senator, the Pacific coast oyster industry depends for its young on seed oysters from the Orient. Now, in bringing those seed oysters in, we have inadvertently brought in a number of organisms and sometimes diseases by these transfers from the Orient.

I recall some years ago we brought in some oyster seed which had a small clam on it and these clams have grown and developed both in southeastern Alaska and the Pacific Northwest where large populations of these Asiatic clams have developed.

This new disease in the Pacific oyster may well result from an inadvertent transfer of this disease in the oyster seed, what we call cultch, coming in from the Orient. So, it will probably be several years before we are able to identify or do anything about this but first, of course, if we can identify it, then we can certainly prevent any more of it from coming in because we can prevent importation of oysters from areas in the Orient that might have this. It is very important that we identify this quickly and act immediately on the results.

Lobster Study in Maine

Chairman Hayden. How much have you budgeted for lobster investigations in Maine; and what is the status of your studies there?

Mr. McKernan. We have been developing work with the States and with our own laboratories. Essentially, our program is divided into two parts, one studying the inshore lobsters and the one studying the offshore resource. The budget is $200,000. We have been trying to find out whether the new fishery fishing off the Atlantic coast and catching very large lobsters—whether or not these are the brood stock for the inshore lobster fisheries. We already have some evidence which suggests that these stocks do not intermingle. We have discovered this by studying the blood serum of the lobsters, and we find that apparently there may be two different races. There may be an inshore race of lobsters, and then there are lobster stocks off the coast which apparently may be of a different race.

When this work is complete, it may solve at least one of the problems for us. We are going ahead and trying to study the growth and reproduction of these offshore lobsters, trying to find out something about the productivity of them and how many can be harvested without damage.

SPECIAL FOREIGN CURRENCY PROGRAM

Justification

Chairman Hayden. For fiscal year 1967 you request the sum of $200,000 for your special foreign currency program. This is $100,000 less than was appropriated to you in fiscal year 1966. The justification for this request will be placed in the record.

(The justification follows:)

Appropriation, 1966	$300,000
Unobligated balance from prior years	134,728
Total available for obligation	434,728
Decreases (1966):	
Marketing and technology	212,627
Research	222,101
Subtotal	434,728
Increases (1967):	
Marketing and technology	162,627
Research	172,101
Total available for obligation	334,728
Less unobligated balance from prior years	—134,728
Budget estimate, 1967	200,000

Analysis by activities

Activity	Fiscal year 1966, amount available	Fiscal year 1967			Total available, 1967, compared to total available, 1966
		Unobligated balances from prior years	Budget estimate	Estimated total available	
1. Marketing and technology	[1] $212,627	$72,627	$90,000	[1] $162,627	—$50,000
2. Research	[2] 222,101	62,101	110,000	[2] 172,101	—50,000
Total obligations	434,728	134,728	200,000	334,728	—100,000

[1] Includes $72,627 unobligated balance brought forward from prior years.
[2] Includes $62,101 unobligated balance brought forward from prior years.

A tabulation by activities, of the countries in which foreign currency programs are proposed follows. (Amounts are shown in their United States dollar equivalent):

Country	Marketing and technology	Research	Total
India		$30,000	$30,000
Israel	$40,000	80,000	120,000
Poland	45,000		45,000
Yugoslavia	5,000		5,000
Total	90,000	110,000	200,000

1. *Marketing and Technology.*—The estimate of $90,000 for 1967 is a decrease of $50,000 compared to 1966.

Plan of work: Funds were provided under this activity for the fiscal year 1966 for technological research, translation projects, and for a foreign trade expansion project. The plan to use funds appropriated under the "Special Foreign Currency" head for the trade expansion project cannot be followed because the

funds cannot be converted to currencies of those countries where needed. It is proposed, therefore, to further the objectives of the marketing and technology programs by utilizing excess foreign currencies for technological research, translations, and exploratory fishing projects in 1966 and 1967.

Four technological research projects are being conducted in Israel that deal with studies of the enzymatic systems that affect the lipid fraction of fish tissue. The information obtained regarding this enzymatic activity in fish tissue very nicely complements domestic research work on changes of products in commercial channels. It is planned to continue the projects in Israel in 1966 and 1967.

After completion in fiscal year 1966 of the nutrition project being conducted in India, it is planned to shift the nutrition work to Poland, where there exists an excellent capability to study the utilization of fishmeal products by hogs and other livestock, and to continue that research in fiscal year 1967.

It is planned to initiate in 1966 and continue in 1967 an exploratory fishing project, titled "Optimum Design of Trawlers for Prescribed Conditions." The project would involve determination of necessary data to be programed into computers to determine the proper types of vessels, design characteristics, and number of vessels needed in various U.S. fisheries to produce optimum catches. Using available statistical information, including catch results, weather conditions, seasonal occurrence of fish on the grounds, and development of additional information, the end result would be a vessel(s) of the optimum speed, shape, size, and cost for each U.S. fishery. The length of layover between trips, days at sea per year, catch per day, the best grounds on which the vessel(s) should work at given times of the year, as well as the anticipated daily catches would also be calculated.

Continuation and expansion are planned of the present research being carried out under fisheries research project "Techno-economic Analyses of Deep Sea Fishing Operations," under contract with the Sea Fisheries Institute of Poland. These studies are to be completed by the end of 1965. They deal with the comparison of several types of fishing and combination fishing-processing vessels, to determine which types are most effective for a particular use. Bureau specialists will determine which phases of the current project need further study and/or modification so that maximum benefits are derived from the vessel capability evaluations. Special emphasis will be placed on factors applying to vessel design, gear, and adaptability to the U.S. fishing industry.

The translation project initiated in 1966, in Israel, to translate Russian scientific literature applicable to work conducted under this activity will be contnued.

2. *Research.*—The estimate of $110,000 is a decrease of $50,000 compared to 1966.

Continued support will be given the Hebrew University of Jerusalem for the project on breeding schemes for the genetic improvement of edible fish. The project with the Sea Fisheries Research Station at Haifa, Israel, dealing with research on increasing production of fish in coastal waters will be continued.

Four projects underway in India at the Universities of Delhi, Calcutta, and Kerala, and the Institute of Science at Bombay will be continued if progress on these projects continues to be satisfactory. Other research proposals and extensions of present contracts from these countries will be evaluated for financing under the program.

The translation project initiated in 1966, in Israel, to translate Russian scientific literature in fishery science, will be continued.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$165,272	$300,000	$334,728	+$34,728
Unobligated balance brought forward		−134,728	−134,728	
Unobligated balance carried forward	134,728	134,728		−134,728
Appropriation	300,000	300,000	200,000	−100,000
Obligations by objects:				
21 Travel and transportation of persons	1,110	2,000	2,000	
22 Transportation of things	70			
25 Other services	164,092	298,000	332,728	+34,728
Total obligations	165,272	300,000	334,728	+34,728

UTILIZATION OF FOREIGN EXPERTS

Chairman HAYDEN. Would you please discuss this program briefly?

Mr. MCKERNAN. Yes, Senator.

Our Public Law 480 program is composed of programs dealing with biology, on the one hand, and with technology on the other. Our idea is to utilize some of the experts in some of these countries in special problems that would benefit our own research in this country. For example, we have carried out some biological studies in Israel that have produced very significant results in advancing our knowledge of selective breeding and the genetics of fish and by using species available and developing techniques. In Israel, we believe we are going to be able to apply these techniques to genetics studies and selection studies of important species in the United States.

We also have been carrying on some work with India, for example, in studying and developing programs where fish protein concentrate could be used in the local diets of the human population. We have been using some fine chemists in India to study some of the structure of lipids and fats found in fishes. All of this, of course, is to advance our own knowledge here in this country and supplement the work that we are doing on similar subjects.

EXCESS FOREIGN CURRENCY AUTHORIZATION

Chairman HAYDEN. There is included in your book of justification statements a section entitled "Excess Foreign Currency Authorization," indicating a proposed use of $4,910,000 for projects, with one exception, similar in nature to those being conducted under your special foreign currency program. The statement will be printed in the record.

(The statement follows:)

The projects under the proposed activities of this authorization, except for the one providing for the construction of a vessel in Poland, are of the same general nature as those conducted under the Bureau's special foreign currency program.

All the work to be conducted under the proposed activities would be performed in the excess currency countries under contract. It is not contemplated that any U.S. currency would be expended in those countries in connection with this work.

Activities to be carried on will be distributed by country as follows (in local currency and equivalent U.S. dollars):

	Currency	
	Local	United States
Poland (zlotys):		
1. Construction of a stern-ramp trawler	84,000,000	$3,500,000
2. Fishery management and productivity studies of rivers, lakes and reservoirs	6,000,000	250,000
3. Hydrographic and plankton survey in connection with oceanographic research	8,640,000	360,000
Total, Poland	98,640,000	4,110,000
Israel (pounds):		
4. Translation of Russian fisheries literature	450,000	150,000
Burma (kyats):		
5. Translation of Japanese fisheries literature	711,000	150,000
6. Translation of Red Chinese fisheries literature	711,000	150,000
Total, Burma	1,422,000	300,000
Ceylon (rupees):		
7. Research on marine crustacea	833,000	175,000
8. Fresh water fisheries research	357,000	75,000
Total, Ceylon	1,190,000	250,000
Yugoslavia (dinars):		
9. Fertilization research of the sea	62,500,000	50,000
10. Effects of industrial waste on aquatic life	62,500,000	50,000
Total, Yugoslavia	125,000,000	100,000

POLAND

1. Construction of a stern-ramp trawler, 84 million zlotys ($3,500,000):

This would involve the construction of a modern, highly automated, freezer-processor stern-ramp trawler to determine and demonstrate the economic feasibility of a commercial high-seas fishing industry in the United States. This vessel would be capable of sustaining intensive, long-range fishing voyages and production-level fishing and freezing operations to demonstrate potential commercial fisheries operations.

Results from the fisheries research project "Techno-economic analysis of deep-sea fishing operations," currently under study by the Sea Fisheries Institute of Poland, would be of value in determining related vessel design requirements. This vessel would in reality be the floating experiment station needed to determine whether under our system of free enterprise the domestic fishing industry can successfully operate self-sustained production units on the high seas. Operations would be designed to yield information on feasible at-sea production and processing methods, as well as assess the economics of such operations.

2. Fishery management and productivity studies of rivers, lakes, and reservoirs, 6 million zlotys ($250,000):

The Institute of Inland Water Fisheries of Poland has a professional staff of more than 50 scientists. They are conducting a number of research projects which are of interest to us. We would like to initiate contracts with these institutes to supplement our effort in the following fields: fishery management of rivers, lakes, and reservoirs; and productivity of lakes. It is estimated that this program will extend over a 5-year period.

3. Hydrographic and plankton survey in connection with oceanographic research, 8,640,000 zlotys ($360,000):

The Sea Fisheries Institute of Poland which also has a large scientific staff is conducting several oceanographic research pojects.

The U.S. delegation of the International Commission for the North Atlantic Fisheries has proposed a cooperative plan of research for the Continental Shelf area between Hudson Canyon and the Nova Scotian Banks. Much of the research will involve regular and frequent coverage of the area to obtain physical oceanographic data as well as plankton samples.

In order to increase oceanographic observations in the area, we propose to establish a foreign currency research contract with the Sea Fisheries Institute in Poland. Such a contract would stimulate greater Polish involvement in the cooperative program and encourage further scientific exchange. It is estimated that this program will extend over a 3-year period.

ISRAEL

4. Translation of Russian fisheries literature, 450,000 pounds ($150,000):

For several years the Bureau has arranged for translations of Russian fisheries literature in Israel under Public Law 480 funds. The translations have proved to be accurate and well edited; the information gained from these studies has been extremely helpful to our work—especially those papers dealing with salmon, herring, and oceanography. An increase in funds would facilitate meeting the demands for more translations of Russian fisheries papers.

BURMA

5. Translation of Japanese fisheries literature, 711,000 kyats ($150,000).

6. Translation of Red Chinese fisheries literature, 711,000 kyats ($150,000):

Funds made available under Pubilc Law 480 have provided translations of Russian and Polish articles on fishery science. These translations have proven invaluable to scientists of the United States working on similar or related fishery problems. The information gained from these translations has aided scientists and negotiators working on controversial fishery problems—such as the current problems associated with the Japanese and Soviet exploitation of the stocks of fish in the eastern Bering Sea and the Gulf of Alaska.

A limited amount of Japanese literature has been translated because of lack of funds. There exists an urgent need to expand this activity.

Virtually nothing is known of the current status of fishery research and the fisheries of Red China. There are indications that Chinese fisheries are expanding rapidly and that they already have attained a position within the top five fish producing nations of the world. Within Burma, many of the people speak and read both Japanese and Chinese. We propose to use these skills in an extensive translation program of Japanese and Chinese fishery literature.

CEYLON

7. Research on marine crustacea, 833,000 rupees ($175,000).

8. Fresh water fisheries research, 357,000 rupees ($75,000):

Staff members of the Fisheries Research Station of the Ceylon Department of Fisheries are conducting research on the biology, behavior and physiology of marine crustaces and the characteristics of the fresh water fisheries. Much of the work carried out at this station is of interest to us and worthwhile projects which would supplement our work could be undertaken if funds were made available to support them. It is estimated that the program will extend over a 5-year period.

YUGOSLAVIA

9. Fertilization research of the sea, 62,500,000 dinars ($50,000).

10. Effects of industrial waste on aquatic life, 62,500,000 dinars ($50,000):

The Institute of Oceanography and Fisheries of Yugoslavia is the headquarters for oceanographic research in the country. Staff members of the institute are conducting research on the productivity of the sea, fertilization of the sea and the life history of inshore and offshore fishes. Three vessels operate from the institute and an excellent collection of fish, crustacea, and mollusks is available for study.

The staff at the Institute for Freshwater Fisheries is carrying out research on the effects of industrial waste water on fishes and the effects of fertilization on production of aquatic fish foods.

Work carried out by these institutes is in fields of interest to this Bureau. We would like to initiate contracts to evaluate the feasibility of marine and fresh water fertilization as a means of increasing fish production. In addition, we would hope to establish contracts to supplement our work on the effects of various industrial wastes on aquatic life. We estimate that $100,000 a year is required for these studies on a continuing basis.

PROPOSED PURCHASE OF MODERN FISHING VESSEL WITH FOREIGN CURRENCY

Chairman HAYDEN. Would you please explain in detail what is proposed under this heading?

Mr. MCKERNAN. Mr. Chairman, our Government is accumulating large sums of foreign currency in a number of countries and some of these foreign currencies are unused at the present time. Poland is one of these countries where large amounts of zlotys have accumulated.

Now, as I mentioned to this committee earlier, one of our problems is the replacement and upgrading of our fishing fleet. The Europeans, especially the Poles, have some very advanced designs of various size fishing vessels and it would be our idea to introduce into this country by this means a vessel of the most modern design possible, with the most modern fishing equipment on it, paid for with this foreign currency. With the detailed plans, and with one of these vessels, we could then test the economic feasibility, by U.S. standards, using our fishermen in various fisheries off our coast.

Since we have no vessels like this at the present time, it seems to us that this might be one way—and a very inexpensive way—from the standpoint of this country to bring to the attention of our fishing industry as a whole the great advantages of these more modern kinds of vessels. Then, for example, if we discovered that perhaps the vessel that we had chosen was not economic, we could anticipate using this fine vessel in our Federal research program to learn more about the oceans and the fisheries off our coasts. So, it seems to me that this country would benefit greatly by the use of these funds in constructing at least one of these experimental trawlers in a foreign country, and I do not agree with those who say that this would adversely affect our own shipyards or our own shipbuilding industry.

COST EQUIVALENT OF FOREIGN VESSEL

Senator BYRD. What would be the cost equivalent in dollars of one of these vessels?

Mr. MCKERNAN. Probably one incorporating all of the equipment would be a vessel perhaps of $8 or $9 million in American funds. Now, one could build a very fine modern vessel here experimentally for less than that. Of course, while I would not like to use the term "lavish," at least we would expect to put on every conceivable advantageous piece of equipment and gear that is available in Europe on such a vessel.

AMOUNT OF POLISH FUNDS AVAILABLE

Senator BYRD. In terms of dollars, how much foreign currency do we have in Poland?

Mr. MCKERNAN. We have into the hundreds of millions of dollars; $491 million, I think. I was going to say about $500 million but I thought I might be wrong. It is very close to $500 million available in Poland.

RESEARCH USE OF FOREIGN SHIPPING VESSEL

Senator BARTLETT. You would not use this ship for research?

Mr. MCKERNAN. Yes; I would very likely so use this ship. Once I had tested the economic feasibility, and shown it to either be feasible or not feasible, I would then use this ship for research, and I would

also probably use it for training of U.S. fishermen. I think it would have a great advantage in training young men for a career in the fishing industry.

Senator BARTLETT. In respect to economic feasibility, what do you test against? Our own generally outmoded fleet?

Mr. MCKERNAN. Not necessarily. For example, it seems to me that by using commercial fishermen and American skippers and captains, one could test against the income that might be derived from investing in one of our outmoded vessels or investing in some other source of food. In other words, one would test whether or not it could be fished and whether or not a profit could be made as a result of fishing as contrasted to present U.S. practices.

Senator BARTLETT. You would expect it to perform very adequately or even splendidly, costing 8 or 9 million bucks and we would have nothing like it here. What if that discovery was made, that it is terrifically efficient, a first-class vessel, superior to anything we have? Then what?

Mr. MCKERNAN. Then I would hope that American industry would construct some of this type of vessel in American shipyards.

OPINIONS OF SHIPBUILDERS COUNCIL ON PROPOSED PURCHASE OF FISHING VESSEL

Senator BARTLETT. Have the views of the Shipbuilders Council of the United States been solicited regarding this?

Mr. MCKERNAN. I have gotten these views—unsolicited.

Senator BARTLETT. They are for or against?

Mr. MCKERNAN. I believe they are, mistakenly, against. I don't believe that this program would have an adverse effect. In fact, I think it might well stimulate the construction of fishing vessels in U.S. yards, and if it did, there would therefore be continuing repair work and ultimately further construction. Our architects could make use of this most modern design. In our view, the Polish marine architects designing their fishing vessels are among the most advanced in the world.

Now, we have some excellent architects—I don't mean to deprecate our own people—but these Polish men have been building their ships now for several years; it is no longer a theoretical matter to them. I think this is one area where this country could learn something from others, and could get some real benefit from the indicated expenditure of these foreign currencies.

Senator BARTLETT. Senator Magnuson and I at one time entertained similar views as to the advisability of bringing into the domestic maritime trade a ship built in Japan, but called the *City of New Orleans*. Our views did not prevail.

I have nothing more.

OPPOSITION TO PROPOSED PURCHASE

Chairman HAYDEN. I have received a letter opposing this from the Iron Shipbuilders. The letter will be included in the record.

(The letter follows:)

BOILERMAKERS, IRON SHIPBUILDERS,
BLACKSMITHS, FORGERS & HELPERS,
Kansas City, Kans., February 24, 1966.

Hon. CARL HAYDEN,
Senate Office Building,
Washington, D.C.

DEAR SIR: It is my understanding that the Senate Appropriations Committee will soon be considering the President's fiscal year 1967 budget request. In doing so, may I respectfully request that you give special attention to the item which would authorize the Interior Department to purchase a stern ramp fishing trawler from Communist Poland.

You will recall, I am sure, that it was only last year that an attempt by the Department of Interior to purchase two fishing trawlers from Communist Poland was shelved because of strong congressional protest. Evidently the bureaucrats within the Department have not given up.

As you well know, the position of the American merchant marine deteriorated alarmingly during the past several years. The failure to maintain a replacement program sufficient to replace a warbuilt tonnage on essential routes, and the progressive starvation of our shipyards is in some quarters, termed a national disgrace.

The escalation of the situation in Vietnam has dramatically emphasized the weakness in our position. Some time ago we were promised guidance from the executive department, concerned to arrest and possibly reverse these trends, but the failure to adopt a unified policy has tended to accelerate the downward trend.

If the position of the Department of the Interior and the proponents of the "build abroad" philosophy is to prevail, it will mean the demise of the American shipyards and eventually the American-flag merchant marine.

For your information I am enclosing a resolution in total opposition to the request of the Department of the Interior and which is in total opposition to the build abroad philosophy, which was unanimously adopted by the Maritime Trades executive board on February 18.

With best wishes, I am,
Respectfully,

PAGE GROTON, *Director.*

RESOLUTION OF THE MARITIME TRADES DEPARTMENT EXECUTIVE BOARD, FEBRUARY 17 AND 18, 1966, AMERICANA HOTEL, BAL HARBOUR, FLA.

INTERIOR DEPARTMENT WANTS COMMUNIST-BUILT FISHING TRAWLER

Whereas history and two World Wars have proven beyond a shadow of a doubt that U.S. shipyards are a vital national asset; and

Whereas history and two World Wars have proven beyond a shadow of a doubt that a strong U.S.-manned, U.S.-flag merchant marine is invaluable to our national security as our fourth arm of defense; and

Whereas the proponents of the "build abroad" philosophy within the Johnson administration are still hard at work peddling their shortsighted schemes; and

Whereas the Department of the Interior has made a request in its 1967 budget for funds to build a stern ramp fishing trawler in Communist Poland: Now, therefore, be it

Resolved, That the Maritime Trades Department executive board in keeping with its resolution on national maritime policy adopted by its executive board at its meeting in New York City on September 16 and 17, 1965, and in keeping with Resolution 217 adopted at the Sixth Constitutional Convention of the AFL–CIO in San Francisco, Calif., in December 1965, resolved to do everything within its power to publicize the callous indifference of the Johnson administration to the plights of our shipyards and merchant marine; and be it further

Resolved, That the Maritime Trades Department executive board call on the President of the United States to censure the Secretary of the Interior for requesting American taxpayer's dollars to have a ship built in Communist Poland under almost slave labor conditions; and be it further

Resolved, That the Maritime Trades Department executive board call on the President of the United States to act before it is too late to take the fate of the merchant marine out of the hands of the Government agencies and ad-

ministrators who are responsible for its decline to the point our Nation is in danger; and be it further.

Resolved, That the Maritime Trades Department executive board call on the President of the United States to act with all possible speed.

(Respectfully submitted by the Iron Shipbuilders International Marine Council of the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers & Helpers).

Adopted unanimously by the MTD executive board on February 18, 1966 at its meeting in Bal Harbour, Fla.

AUTHORITY TO USE POLISH FUNDS

Senator BYRD. Mr. McKernan, what authority do you need to proceed to utilize these Polish currencies for the construction of a vessel?

Mr. MCKERNAN. The authority of the two Appropriations Committees, we believe, would be sufficient.

Senator BYRD. Thank you, Mr. Chairman.

BUDGET REQUEST UNDER SPECIAL FOREIGN CURRENCY PROGRAM

Chairman HAYDEN. Why is this program not included under the regular special foreign currency section of your justification statement?

Mr. MCKERNAN. The President last year decided that because of the accumulation of foreign currency funds, and because various departments were unwilling to use these funds and have them assessed against the departmental budget ceilings, that he would separately select certain programs and sums of money and would allot those to various departments so that these programs would not be assessed on our budget ceilings and be somewhat separate from these.

It is my understanding, and I don't pretend to be an expert in this, Mr. Chairman, that last year the President considered at least coming before the Congress and asking for a lump sum for such programs in various countries. I understand that he was not successful. Perhaps he didn't submit this program, but I think it was publicly known that he was considering it. Now this year he has gone to the various departments and has suggested that they file the programs themselves and this is what we are doing.

ADMINISTRATION OF FOREIGN CURRENCY PROGRAM

Chairman HAYDEN. Will administration of the program be paid for in U.S. dollars?

Mr. MCKERNAN. The administration of the program?

Chairman HAYDEN. Yes.

Mr. MCKERNAN. Well, to the extent that the supervision of the program is involved, it would include U.S. funds.

For example, the salaries of U.S. citizens required to oversee the construction, would be from U.S. currency funds. I don't anticipate those to be too extenisve, but I would admit that there would be some expenditure of U.S. funds. I don't think, for example, travel costs would be in the U.S. funds if it were possible to use counterpart funds.

COSTS OF ADMINISTRATION

Chairman HAYDEN. Can you estimate how many dollars will be required for administration of the program?

Mr. McKernan. I wonder if we could submit that for the record, Mr. Chairman.

Chairman Hayden. Yes.

(The estimate follows:)

RESEARCH

Central office:	
Salaries:	
Program supervisor (part time)	$2,000
Secretarial work	1,000
Miscellaneous supplies, postage, etc	200
Total	3,200
Regions:	
Salaries:	
Project reviewers, 15 part time, at $200	3,000
Secretarial work, 15 part time, at $100	1,500
Miscellaneous supplies, postage, etc	200
Total	4,700
Travel to review projects:	
Salary	1,650
Travel (to be paid from Public Law 480 funds)	------
Per diem (to be paid from Public Law 480 funds when in countries)	50
Miscellaneous travel expense	100
Total	1,800
Total	9,700
Marketing and Technology—Central office: Salary 1 week of GS–14 exploratory fishing specialist	300
Total	10,000

U.S. Vessels To Be Constructed in U.S. Shipyards

Chairman Hayden. Where in the budget is this amount shown?

Mr. McKernan. It is not shown. We would absorb it within our present funds.

Chairman Hayden. Is there not a legal requirement that U.S. vessels be constructed in U.S. shipyards?

Mr. McKernan. Yes; there is. Of course, an experimental vessel built for U.S. Government use could be authorized and could be constructed in this way. In my view, it could be done without setting a new precedent which apparently some of the shipbuilding organizations seem to fear.

Chairman Hayden. It would be legislation that makes the exception? Would you suggest legislation of that kind?

Mr. McKernan. This vessel would not be documented to engage in commercial fishing here, but inasmuch as it is a Government vessel, it is our understanding that we would not require any exceptions to the present legislation.

Benefits to the American Fishing Industry From Use of Vessel

Chairman Hayden. What do you see as a particular benefit to the American fishing industry to be derived from use of this vessel, the use of it?

Mr. McKERNAN. I believe that testing a new type of vessel in our fisheries would stimulate the construction of other such vessels. Perhaps modified, made more economical. Perhaps one might hope that when one tested this Polish vessel economically one can conceive that modifications might be made for improvements by our architects and our own fishing experts once they had an opportunity to go on the vessel and observe its performance. I would venture to say that there would be a better opportunity for the construction of more modern vessels if we had such a test vessel here in the United States, and at no substantial U.S. dollar outlay.

Furthermore, in the long run, of course, such a test vessel will contribute to knowledge, because we will use it for research purposes, both research on resources and research on handling the fish at sea once the demonstration of economic feasibility were completed.

Furthermore, I think we would plan on incorporating training of our fishermen in modern practices for both fish catching and fish handling aboard such a vessel. This Nation does not have such a plan or program underway at the present time.

Senator BARTLETT. May I ask a question there, Mr. Chairman?

Chairman HAYDEN. Yes.

LEGALITY OF SALE OF FISH CAUGHT BY FOREIGN-BUILT VESSEL

Senator BARTLETT. If you are using this ship as you said you would be part of the time, to demonstrate economic feasibility, I assume you would catch some fish once in a while.

Mr. McKERNAN. Yes.

Senator BARTLETT. What would you do with that fish?

Mr. McKERNAN. We would probably operate the vessel through agreement with the industry or through industry combinations, and we would anticipate that these particular fish landings might well go into such products as fish blocks and not be in competition with present U.S. fishermen's landings.

Senator BARTLETT. You would sell it?

Mr. McKERNAN. It would be sold on the market for manufacture into fish blocks.

Senator BARTLETT. On that point, I would like to suggest, just so the record will be positively clear, that you cause the lawyers to have a look at the maritime laws because I think they say that when fish is brought into a U.S. port and sold for commercial use, that it is illegal to do so when the catch is taken aboard a ship built without the United States. I don't think Government ownership would be at issue there; I think it is a blanket provision, but I suggest you might want to check that.

Mr. McKERNAN. We will be glad to look at it.

We would sell products generally that would not be competing with American products. I would like to elaborate on that just a bit.

PRODUCTION AND SALE OF FISH BLOCKS

At the present time, we are using about 200 million pounds of frozen fish blocks in the United States. These are used for the manufacture of such products at fish sticks and fish portions, the famous fish sandwich that has become popular in this area in recent years. About

98 percent of the blocks which go into the manufacture of these products are imported and I think that American industry ought to be producing these blocks. It is not really possible with out present obsolete fleet. This new, modern vessel could be the means of making a new industry, a new fishing industry, and ultimate delivery of new products to the American market; that is, fish blocks—and thereby replace some of this tremendous amount of fish that is being imported into the United States.

So, I don't think it would hurt our present fleet. I think it would be of great advantage to us. At the present time, these vessels are coming over from Europe and Asia and are producing these fish blocks frozen in tremendous quantity and are taking them back to their own home ports, then shipping them back to the U.S. market.

It seems to me with proper equipment here in the United States we could produce these in the United States with our own equipment and vessels. This would be one way of testing that.

Legal Opinion on Sale of Fish Caught by Foreign-Built Vessel

Senator Byrd. Mr. McKernan, if the chairman has no objection and if Senator Bartlett is in agreement, when your lawyers address themselves to the point raised by Senator Bartlett, please prepare a memorandum and submit it for the record on that point.

Mr. McKernan. We would be pleased to, Senator.

Senator Byrd. Thank you, Mr. Chariman.

(The memorandum follows:)

It would be necessary to have legislative authorization to land fish in the United States from a fishing vessel owned by the Federal Government, built in a foreign country, and operated under contract by an American citizen or American firm. The prohibition against the landing of fish in the United States, contained in the second sentence of section 251, title 46 U.S.C., extends only to foreign-flag vessels and since the vessel described above would be an American-flag vessel, it appears at first glance that the prohibition would not apply to such vessel. However, the first sentence of section 251 requires that a vessel be licensed in order to be employed in the U.S. fisheries, and since the transportation of its catch to a U.S. port has been construed by the Bureau of Customs as "fishing" (19 C.F.R. 4.96(a)(4)) the fact is that in order to land its catch the vessel would have to be licensed for the fisheries.

Since a vessel cannot be licensed unless it was constructed in the United States, there would have to be a special legislative authorization for the U.S. documentation of this particular vessel. There are many precedents for congressional approval of the documentation of foreign-built vessels.

Foreign Currency Use and Credit to Commodity Credit Corporation

Chairman Hayden. On March 1, I wrote a letter to the Director, Bureau of the Budget, expressing concern about use of foreign currencies without a corresponding dollar appropriation and a credit in like amount to the Commodity Credit Corporation or to the Treasury. I will place that letter in the record.

(The letter follows:)

U.S. Senate,
Committee on Appropriations,
March 1, 1966.

Hon. Charles L. Schultze,
Director, Bureau of the Budget,
Washington, D.C.

Dear Mr. Schultze: Reference is made to your letter dated January 28, 1966, concerning significant technical aspects of the 1967 budget recommendations.

I am concerned about the recommendations contained in the budget for fiscal year 1967 for the use of excess foreign currencies owned by the U.S. Government without a corresponding dollar appropriation and a credit in a like amount to the Commodity Credit Corporation, or Treasury.

You are familiar with section 507 of the Public Works Appropriation Act of 1966, which provides that foreign currencies may be used by Federal agencies only when reimbursement therefor is made to the Treasury from applicable appropriations of the agency concerned. This same provision has been carried in the appropriation bills for many years and clearly demonstrated the intent of Congress that these foreign currencies be made available only when a dollar appropriation has been made.

Millions of dollars have been appropriated in the past for meritorious programs, which appropriations have thereupon been deposited in the Treasury. While it is true that this is a bookkeeping transaction as far as Federal expenditures and new obligational authority are concerned, nevertheless the practice which has been followed affords a much better opportunity for review and control by the Committees on Appropriations.

It is my belief that your recommendations to use foreign currencies in the manner proposed in the budget without a dollar appropriation and without a dollar figure is unsound and will result in these requests being denied by the Congress although I am sure many of the programs are sound.

For these reasons, I would recommend that the Bureau of the Budget prepare and submit to Congress supplemental budget estimates providing for dollar appropriations in these instances. This will not result in any increase in new obligational authority in the budget since corresponding reductions can be made in amounts required for restoration of capital impairment of the Commodity Credit Corporation, and the Commodity Credit Corporation or Treasury would be receiving an equivalent amount in dollars.

Yours very sincerely,

CARL HAYDEN, *Chairman.*

CONSTRUCTION

1967 BUDGET REQUEST

Chairman HAYDEN. For construction in fiscal year 1967, the budget estimate is $495,000—a reduction of $1,485,000 below the amount appropriated in fiscal year 1966. The justification for your request will be printed in the record.

(The justification follows:)

Appropriation, 1966	$1,980,000
Unobligated balance from prior years	1,506,157
Total available for obligation	3,486,157
Decreases (1966):	
Fishery facilities	2,294,072
Columbia River fishery facilities	1,192,085
Subtotal	3,486,157
Increases (1967):	
Fishery facilities	160,000
Columbia River fishery facilities	335,000
Total available for obligation	495,000
Budget estimate, 1967	495,000

Analysis by activities

Activity	Fiscal year 1966 amount available	Fiscal year 1967			Total available, 1967 compared to total available 1966
		Unobligated balances from prior years	Budget estimate	Estimated total available	
1. Fishery facilities	$2,294,072		$160,000	$160,000	−$2,134,072
2. Columbia River fishery facilities	1,192,085		335,000	335,000	−857,085
Total obligations	3,486,157		495,000	495,000	−2,991,157

The estimate in the amount of $495,000 includes $160,000 for the fishery facilities activity and $335,000 for the Columbia River fishery facilities activity.

1. Fishery Facilities, $160,000

(*a*) Construction of a new bridge and seawalls at the Beaufort (N.C.) Biological Laboratory $160,000

(*a*) *Construction of a new bridge and seawalls at the Beaufort (N.C.) Biological Laboratory, $160,000.*—Of this amount, $75,000 is needed for construction of a 300-foot, two-lane, steel concrete bridge with a sidewalk and approach roads. This new bridge is needed to connect adequately Pivers Island with the mainland. The present wooden bridge, built in 1934, requires almost continual maintenance. The wooden pilings are continually subjected to severe worm damage and need to be replaced approximately every 3 or 4 years. The channel has deepened considerably since the bridge was originally built—from 10 feet to about 25 feet. The present bridge is too narrow, not only for truck and pedestrian traffic, but also for such relatively deep water, and conceivably could collapse at any time, presenting a very serious safety hazard. There is no provision for pedestrian traffic on the present bridge.

An amount of $85,000 is needed for construction of a 600-foot seawall along the west shore, a 400-foot seawall along the east shore, and filling behind each wall. Storms have caused extensive erosion of the east and west shores of the Bureau's land on Pivers Island, beginning at the limits of the present seawall. Degradation has amounted to approximately 35 feet along the east shore and 85 feet along the west shore and is continuing. At least one-half acre of land has been lost. This condition appears to have resulted mainly from recent dredging and spoil deposition on the south end of the island which brought about changes in current pattern and subsequent scouring of the beaches.

Status of program: The Bureau operates 28 major research laboratories and bases and 25 research vessels over 40 feet in length in discharging its responsibilities for research in marine biology and technology. As a result of steadily increasing responsibilities and expanding programs in the past 15 years, many of the shore and vessel facilities have become inadequate. The following reflects the status of program for those projects which have had capital improvements funded beginning with fiscal year 1962 which were completed during calendar 1965 or which were incompleted as of December 31, 1965:

ALASKA

Auke Bay:

1966 acquisition of land. (Negotiations have been commenced for the land acquisition.)	$15,000
1964 design of exploratory fishing vessel for use in the North Pacific Ocean and Bering Sea. (This design has been completed.)	100,000
1964 design of an oceanographic research vessel—replacement for the *Mackinaw*. (This design has been completed.)	15,000
1964 earthquake damage repairs:	
Brooks Lakes: Biological Research Station. (This work has been completed.)	50,000
Kodiak Island: Karluk Lake station, dock, and warehouse. (Construction is underway but has been suspended due to the weather. Scheduled to be completed by June 1966.)	465,000
Olsen Bay: Biological Research Station. (This work has been completed.)	25,000
King Salmon: Biological Research Station. (Scheduled for completion June 1966. Delayed due to isolation and end of construction season.)	100,000
Kasitsna Bay: Biological Research Station. (These repairs have been completed.)	10,000

CALIFORNIA

La Jolla:

1963 construction of the *David Starr Jordan*, replacement for the *Black Douglas*. (This vessel was accepted on Oct. 29, 1965.)	2,500,000
1964 construction of unmanned buoys for the use in the Eastern Pacific Ocean. (The buoys have been completed and are in use.)	50,000

CONNECTICUT

Milford:

1963–64 purchase of land for and design of a shellfisheries research center	230,000
1965 construction of the shellfisheries research center	1,000,000
1966 construction of the shellfisheries research center (2d phase) and purchase of equipment. (The center is under construction by the DeMatteo Construction Co., New Haven, Conn., and is expected to be completed by April 1966.)	95,000

FLORIDA

Miami:

1964 design of a biological research laboratory for the tropical Atlantic	125,000
1965 construction of a biological research laboratory for the tropical Atlantic. (This building was accepted Nov. 8, 1965.)	1,500,000

MAINE

Boothbay Harbor: 1964 design of an oceanographic inshore research vessel for use in the Northwest Atlantic Ocean. (This design has been completed.)	15,000

MASSACHUSETTS

Gloucester: 1962 construction of an exploratory fishing and gear research vessel for use in the northwest Atlantic Ocean—replacement for the *Delaware*. (Construction of this vessel has been halted by a fire at the facility of the contractor, South Portland Engineering Co., South Portland, Maine. Efforts are being made to get the work reinstated.)	$1,250,000
Woods Hole: 1966 alterations and improvements to the research facility. (The engineering design is underway for this alteration.)	100,000

MICHIGAN

Ann Arbor:	
1963 construction of a biological research laboratory	1,356,000
1964 scientific equipment for the biological research laboratory. (The laboratory building has been completed.)	90,000
1964 design of hydrobiological research vessel for use in the Great Lakes. (The plans and specifications have been completed.)	20,000

MISSISSIPPI

Pascagoula:	
1964 design of an exploratory fishing and gear research vessel, replacement for the *Oregon*	100,000
1965 construction of the replacement for the *Oregon* (1st phase)	1,350,000
1966 construction of the replacement for the *Oregon* (2d phase). (Construction of this vessel is underway at the Ingalls Shipbuilding Corp., Pascagoula. The estimated completion date is May 1, 1967.)	650,000

OREGON

Troy: 1965 fish passage facilities—flood damage. (Contract has been awarded. Work is scheduled for completion during this fiscal year.)	62,000

TEXAS

Galveston: 1962–64 construction of an oceanographic research vessel for the Gulf of Mexico. (Bids were opened on Oct. 21, 1964; however, all bids exceeded available funds. A redesign was made and bids readvertised. The bids received are being evaluated.)	350,000

WASHINGTON

Seattle:	
1963 construction of a research laboratory	2,257,000
1966 technological equipment for the laboratory. (This building has been completed and equipment is scheduled to be acquired this fiscal year.)	80,000
1963–64 construction of the oceanographic research vessel, *Miller Freeman*, for use in the North Pacific Ocean and Bering Sea	2,800,000
1965 equipment for the North Pacific Vessel. (This vessel is under construction by the American Shipbuilding Co., Lorain, Ohio. The estimated completion date is December 1966.)	350,000
1964 design of a gear research vessel for use in the North Pacific Ocean. (The design contract was awarded to a naval architect in Seattle. Final plans and specifications are being prepared and are scheduled for completion in January 1966.)	35,000
1966 expansion of laboratory facilities on the research vessel *George B. Kelez*. (Arrangements are being made to have the laboratory facility installed in the vessel.)	40,000

2. COLUMBIA RIVER FISHERY FACILITIES, $335,000

The estimate of $335,000 for this activity is a decrease of $665,000 from 1966. The programs conducted under this activity are grouped under five general categories as follows:

	Fiscal year 1966	Fiscal year 1967	Increase (+) or decrease (−)
(a) Hatchery facilities		$45,000	+$45,000
(b) Management techniques	$240,000	240,000	
(c) Screening diversions	75,000		−75,000
(d) Stream improvement	635,000		−635,000
(e) Program supervision and engineering	50,000	50,000	
Total	1,000,000	335,000	−665,000

(a) *Hatchery facilities.*—No funds were provided for this item in fiscal year 1966. The fiscal year 1967 estimate of $45,000 provides for needed construction at the Cedar Creek hatchery in Oregon. The present main water supply line at the Cedar Creek (Sandy) hatchery is a 20-inch wood-stave conduit 1,280 feet long, connecting with 230 feet of wood-stave laterals 12 inches in diameter. These pipelines were installed in 1951 as a substitute for steel-welded pipes which were unobtainable due to a steel shortage created by the conflict in Korea.

The pipelines are badly decayed and must be replaced. A major rupture of these aqueducts would endanger the entire production of the hatchery. Replacement specifications call for a 24-inch main line with 16-inch laterals. All new pipe would be of concrete cylinder construction with a life expectancy of 50 years. The work will be done under contract with the Oregon Fish Commission.

(b) *Management techniques.*—The $240,000 requested for this item is at the same level as fiscal year 1966. The funds are needed for studies necessary to determine means for improving methods of introducing fish into new areas, marking fish, releasing fish from hatcheries, controlling predators, altering fish habitat, and controlled natural rearing. These studies are of vital importance in view of major losses of natural halibut in the Columbia Basin. They will be carried out on a contract basis with: Idaho Department of Fish and Game (IDGF); University of Idaho (UI); Oregon Fish Commission (OFC); Oregon Game Commission (OGC); Oregon State University (OSU); Washington Department of Fisheries (WDF); University of Washington (UW); and the Bureau of Sport Fisheries and Wildlife (B.S.E. & W.)

DEVELOPMENT OF FISH CULTURAL TECHNIQUES STUDIES IN THE STATE OF IDAHO

(1) Introduction of salmon and steelhead trout into the South Fork of the Clearwater River and the Selway River. To determine the success from utilizing artificially prepared hatching channels for the introduction of salmonids into a new area. IDFG, 1963–69 ($30,000). First measures of the successful introduction of spring chinook salmon occurred in 1965 with 250 adult fish passing the counting facility of Lewiston, Idaho.

Studies in the State of Oregon

(2) Examination of "jack" salmon return and artificial rearing and releasing techniques. To study the correlation of hatchery rearing and release techniques toward an increased return of full-grown adults rather than jack salmon. OFC, 1965–67 ($20,000). Preliminary studies indicate that numerous factors could contribute to precocious development.

(3) Nature of physiological changes of salmonids associated with seaward migration (sockeye and chinook). To examine the physiological activity of fish going through a fresh to salt water cycle in order to determine when fish are ready for release from hatcheries. OGC, 1965–70 ($10,000). This seaward osmoregulatory mechanism continues to be studied.

(4) Nature of biochemical changes of salmonids associated with seaward migration (sockeye and chinook). To examine the biochemical activity of fish going through a fresh to salt water cycle in order to determine when fish are ready for release from hatcheries. OSU, 1965–70 ($10,000). Biochemical analysis of salmon during salt water adaptation continues.

(5) Rearing of salmonids in irrigation ditches or flood plain lakes, to determine the biological and economic feasibility of using irrigation ditches of flood plain lakes as rearing areas for salmonids. OFC, 1967–70 ($10,000). With continued loss of natural habitat the use of alternate areas may provide an acceptable substitute.

(6) Introduction of sockeye salmon into barren areas. To study the feasibility of stocking sockeye salmon in areas devoid of this species at the present time. OFC, 1967–70 ($15,000). Much upper Columbia sockeye habitat has been made unavailable due to water developments. Several reservoirs with fish passage facilities may lend themselves to sockeye introduction.

Studies in the State of Washington

(7) Incubation of salmonid eggs in general and by conventional hatchery techniques. To examine the incubation and hatching results from salmonid eggs placed in gravel and in the usual fish hatchery equipment and then treated in the regular artificial rearing manner. WFD, 1965–67 ($8,000). There is some evidence of increased hatching success and survival by modified hatchery techniques. If preliminary results can be substantiated, more efficient production will result.

(8) Selective breeding of salmon. To study the application of selective breeding techniques to adult salmon returning to a Columbia River hatchery, UW, 1962–69 ($15,000). Spectacular results have been obtained elsewhere that may be applicable to Columbia River stocks.

(9) Recirculation of water for holding or rearing salmonids. To determine the feasibility of using recirculated water with or without heating to hold adult salmon or for the usual rearing of juvenile salmon. B.S.F. & W., 1966–70 ($15,000). Water supplies at hatcheries, in most cases, are at a premium for holding returning adults and rearing juveniles. Reuse of limited water supplies appears to have considerable promise.

(10) Introduction of chinook and coho salmon into barren areas, to determine the feasibility of stocking these species at the present time. WDF, 1967–70 ($15,000). Some streams do not now support chinook or coho salmon. Controlled introductions will be made in accessible barren areas.

IMPROVEMENT OF NATURAL HABITAT STUDIES IN THE STATE OF OREGON

(11) Use of a controlled flow spawning channel for propagation of silver salmon, to determine the efficiency of the channel toward the production of silver salmon. OGC, 1966–1969 ($8,000). Silver salmon have exhibited substantial gains in recent years. Auxiliary production areas will add to production potentials.

(12) Spawning bed improvement. To develop methods and tools for improving the spawning areas including gravel alteration and better production. OGC, 1967–70 ($10,000). Many stream areas are not entirely satisfactory for spawning, and measurable improvement can be achieved by mechanical alteration.

Studies in the State of Washington

(13) Evaluate potentialities of an incubation channel in production operations, to determine if it can be used as a practical supplement to artificial propagation. B.S.F. & W., 1961–69 ($8,000). Substantial results have been obtained at Abernathy Creek with over 78 percent emergent survival. Techniques applicable to other areas will be developed.

PREDATOR CONTROL STUDIES IN THE STATE OF IDAHO

(14) Determination and development of selective toxins for the control of undesirable species of fish. To apply the minimum effective concentration lethal to fish, fish sperm, or fish eggs of toxins which are sublethal to young salmonids in a field test. UI, 1967–70 ($11,000). A selective toxin has been discovered that shows considerable promise and, with proper safeguards, will be used in field trials.

Studies in the State of Washington

(15) Small impoundment predation. To examine the extent of bird, mammal, and reptile predation on fish in small impoundments and methods of elimination. WDF, 1967–70 ($12,000). Methods to reduce or eliminate predation affecting migrant survival will be developed.

CONTROLLED NATURAL REARING STUDIES IN THE STATE OF OREGON

(16) Wahkeena controlled natural rearing. To determinine the biological and economic feasibility of using natural and artificially created lakes and ponds as rearing areas for salmonids—silver salmon. OFC, 1961–69 ($15,000). Measurable results are being obtained to determine the feasibility of continued or expanded operations using controlled natural rearing areas.

Studies in the State of Washington

(17) Ringold Springs controlled natural rearing. To determine the biological and economic feasibility of using natural and artificially created lakes and ponds as rearing areas for salmonids—fall chinook salmon. WDF, 1962–69 ($12,000).

(18) Ringold Springs controlled natural rearing. To determine the biological and economic feasibility of using natural and artificially created lakes and ponds as rearing areas for salmonids—steelhead trout. WDG, 1962–69 ($16,000).

Itemization of estimate

	Actual 1965	Estimate 1966	Estimate 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$9,138,073	$3,486,157	$495,000	−$2,991,157
Unobligated balance brought forward	−4,730,364	−1,506,157		+1,506,157
Unobligated balance carried forward	+1,506,157			
Recovery of prior year obligations	−866			
Appropriation	5,913,000	1,980,000	495,000	−1,485,000
Obligations by objects:				
11 Personnel compensation	91,333	99,000	29,000	−70,000
12 Personnel benefits	5,908	6,157	2,000	−4,157
21 Travel and transportation of persons	11,813	9,000	5,000	−4,000
22 Transportation of things	1,288	4,000		−4,000
23 Rent, communications, and utilities	10,861	12,000	2,000	−10,000
24 Printing and reproduction	1,746	3,000		−3,000
25 Other services	5,349,849	1,355,000	296,000	−1,059,000
26 Supplies and materials	54,330	47,000	1,000	−46,000
31 Equipment	1,298,696	1,594,000		−1,594,000
32 Lands and structures	2,313,047	357,000	160,000	−197,000
Subtotal	9,138,871	3,486,157	495,000	−2,991,157
95 Quarters and subsistence charges	798			
Total obligations	9,138,073	3,486,157	495,000	−2,991,157

BEAUFORT, N.C., LABORATORY

Chairman HAYDEN. Would you please discuss the construction which you propose to accomplish with the $495,000?

Mr. MCKERNAN. There are two major items, Mr. Chairman. One is the construction of a new bridge and seawall at the Beaufort, N.C., Biological Laboratory. At the present time, the old bridge and some of our land is in danger of going into the bay and we need a new bridge and new seawall in order to protect our property and to get our people over to the laboratory. There is $160,000 budgeted for that.

COLUMBIA RIVER FISH FACILITIES

For Columbia River fishery facilities, we have budgeted $335,000, and $45,000 of this is in some new construction at one or two of the small hatcheries on the Columbia River, such as new water supply lines and so forth.

We are also providing funds to continue the improvement of management techniques including more effective methods for introducing salmon into new areas, control of predators, and providing more produc-

tive natural habitat. A total of $240,000 is included for this work which is being done by the State fishery agencies under contract.

WILLIAMETTE FALLS FISHWAY, OREGON CITY, OREG.

Chairman HAYDEN. Last year Congress provided $600,000 for construction of the first phase of the Williamette Falls fishway at Oregon City, Oreg. Recently I have received a letter from the Under Secretary of the Interior asking approval of the committee to expend an additional $90,000 of otherwise unobligated funds from Columbia River fishery development projects for the Willamette Falls fishway. Would you please discuss the reasons why it is necessary for you to propose this additional amount?

Mr. MCKERNAN. Yes, Mr. Chairman. When we got into the details of this project, we found that some of the construction costs were slightly higher than we had anticipated. We turned down all of the bids the first time we put the plans out for bid because they were too high. Then by working with some of the potential contractors we were able to get much more favorable bids although still somewhat higher than the funds provided. We had some additional funds for another project on the Wenatchee River in Washington. By working with the States involved, it was agreed that these funds could be put to the best use in this Willamette project and therefore we requested your permission to do so.

PHASE B CONSTRUCTION

Chairman HAYDEN. I have received a letter from the director of fisheries, State of Oregon and one from the Pacific Marine Fisheries Commission of Portland, Oreg., together with a resolution adopted by that commission, all urging that $2 million be appropriated to you in the coming fiscal year for construction of phase B of the Willamette Falls fishway. I will place this correspondence in the record and ask that you prepare a statement to follow it indicating whether the Bureau of Commercial Fisheries economically can utilize this sum. If so, please outline the construction program which would be accomplished with it.

Mr. MCKERNAN. We will put that in the record, Mr. Chairman.

(The letters, resolutions, and statement follows:)

STATE OF OREGON,
FISH COMMISSION OF OREGON,
Portland, February 25, 1966.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Subcommittee for Department of the Interior and Related Agencies, New Senate Office Building, Washington, D.C.

DEAR SENATOR HAYDEN: It is our understanding that your appropriations subcommittee will soon be considering the budget of the Department of the Interior including that of the Bureau of Commerical Fisheries for fiscal 1967. We urge your careful consideration of the need for including in that budget $2 million for construction of phase B of the Willamette Falls fishway project near Oregon City, Oreg. Because of Presidential budgetary limitations, funds for this project were not included in the present budget, but the Bureau of Commercial Fisheries strongly supports it.

We consider the completion of the fishway to be the most important single project dealing with perpetuation of salmon and steelhead runs in the entire Columbia River system. Construction of this facility will essentially resolve a very difficult upstream passage condition at a natural falls complicated by indus-

trial development. The proposed fishway will increase the spawning and production potential of the Willamette River system above the falls for existing fish runs and permit new runs to be developed. It has been estimated that the annual benefit accruing to the various sport and commercial fisheries along the Pacific coast from this development would approximate $4 million annually.

The present proposal provides for 83.7 percent Federal and 16.3 percent private industry financing for actual construction of this project. The project has been divided into phase A and phase B. The planning and preliminary work have been completed for both phases and a contract has recently been awarded for construction of phase A. To date approximately $1 million has been expended or committed for planning and construction. About 87 percent of it is Federal money. It is estimated that the remaining construction work comprising phase B will cost approximately $2,390,000 if started within the next year. We urge that the $2 million Federal share of this be made available in fiscal 1967 to permit awarding of the contract this year so that the private funds can be committed and the project brought to early completion.

The sooner the project is completed, the sooner will the benefits accrue to all concerned.

You will note that the cost-benefit ratio is extremely favorable. The estimated total construction cost of the project including phase A and phase B is $3,200,000 while the annual expected benefit is about $4 million. We strongly urge your favorable consideration of this request and inclusion of $2 million for the Willamette Falls fishway in the fiscal 1967 budget of the Bureau of Commercial Fisheries.

Sincerely,

ROBERT W. SCHONING,
State Fisheries Director.

PACIFIC MARINE FISHERIES COMMISSION,
Portland, Oreg., February 10, 1966.

HON. CARL HAYDEN,
Chairman, Senate Committee on Appropriations,
U.S. Senate,
Senate Office Building, Washington, D.C.

MY DEAR MR. HAYDEN: The Pacific Marine Fisheries Commission is anxious that funds for the continuation of construction of the Willamette Falls fishway be included in the 1967 fiscal year budget of the Bureau of Commercial Fisheries. The commission has been advised that the House Subcommittee on the Department of Interior and Related Agencies of the Committee on Appropriations will be considering this budget on February 14, 1966.

Transmittal of the enclosed PMFC resolution No. 9, "Willamette Falls Fishway" was delayed until now in order that I might be able to supply you with last-minute information on the status of the fishway. Last year $600,000 was provided in the 1966 budget of the Bureau of Commercial Fisheries to being construction of the fishway or to complete phase A. The bids received during the summer were too high and new bids were requested in December 1965. These subsequent bids were lower but still slightly in excess of the most recent engineering estimates. However, on February 4, 1966, a contract in the amount of $705,338 was let for phase A. The Bureau of Commercial Fisheries, via the Columbia River development program, will contribute 83.7 percent and the Portland General Electric will contribute 16.3 percent of the cost of this phase. It is expected that phase A will be completed in time in 1967 to benefit the spring runs of chinook salmon and steelhead, and later in the same year it will also benefit the coho and fall chinooks which will be returning to spawn as a result of intensive stocking and transportation efforts to enhance the Willamette River stocks of these fish in anticipation of the new fishway.

Present estimates, based on the current trend of increasing construction costs, are that phase B, or completion of the fishway, will cost about $2,400,000. The costs in resolution No. 9 should therefore be ignored. PMFC is anxious that $2 million be provided in the 1967 budget of the Bureau of Commercial Fisheries for the completion of the Wilamette Falls fishway. The remainder of the cost would be supplied by private industry based on the 16.3 percent mentioned in regard to phase A.

Much has been written and said about the Willamette Falls fishway, especially during the first session of the 89th Congress; therefore, out of respect to you because of your large workload, I shall attempt to be brief.

This project has excellent potential for partially offsetting some of the loss of salmon and steelhead habitat caused by the construction of dams on the Columbia River system, and it has an excellent cost-benefit ratio. In a recent article in the Portland Oregonian, the Corps of Engineers was credited with expending $176.5 million as follows for dams on the Columbia River system during fiscal 1965: John Day $65.0 million, Lower Monumental $36.2 million, Little Goose $16.1 million, Lower Granite $11.0 million, Dworshak $9.4 million, Green Peter and Foster $20.2 million, Fall Creek $2.7 million, Blue River $8.4 million, and Libby $7.5 million. Other articles have mentioned large additional amounts for water projects in 1966 and 1967. Certainly, if such funds are available for projects which are frequently detrimental to anadromous fish, $2 million in Federal funds should be available for the Willamette Falls fishway which will enhance the stocks of salmon and steelhead.

In 1965 the Legislatures of Oregon and Washington memorialized the President and Congress to supply funds for the fishway, and Governors Hatfield and Evans also interceded in behalf of the project. In 1966 the citizens of the Pacific Northwest and Governor Hatfield are again urging that the Willamette Falls fishway be funded and completed as soon as possible.

Respectfully,

LEON A. VERHOEVEN,
Exectuive Director.

PACIFIC MARINE FISHERIES COMMISSION RESOLUTION NO. 9: WILLAMETTE FALLS FISHWAY

"Whereas the installation of an efficient upstream passage facility over Willamette Falls on the Willamette River at Oregon City, Oreg., has long been considered as one of the most important potential improvements for salmon and steelhead in the entire Columbia River Basin; and

"Whereas the need for developing the underutilized potential for production of salmon and steelhead in the Willamette River system is becoming more and more urgent because additional dams are or soon will be completed elsewhere in the Columbia River system which will further reduce the already drastically decreased habitat available for anadromous fish production and will cause additional passage problems and associated losses; and

"Whereas the proposed fishway over Willamette Falls will improve the economies of the States of Oregon and Washington by increasing the annual escapement of adult salmon and steelhead by an estimated 240,000 fish which will produce a catch in all fisheries combined with an estimated value of nearly $4 million annually; and

"Whereas this project was initiated under and funds for design were provided through the federally financed Columbia River fishery development program administered by the Bureau of Commercial Fisheries; and

"Whereas the construction of this facility represents an excellent example of State, Federal, and private industry cooperation wherein private industry will contribute about 16 percent of the total construction cost now estimated at over $2,300,000 and it is anticipated that the remainder of the needed funds will be provided by the Bureau of Commercial Fisheries through the Columbia River fishery development program; and

"Whereas the sum of $600,000 was appropriated by Congress in fiscal 1966 for this project and, although no acceptable bids were received for the initial bidding, it is anticipated that reasonable bids will be forthcoming and construction of the first portion of the facility may commence in the spring of 1966; and

"Whereas the Federal appropriation of an additional $1,500,000 in fiscal 1967 is essential to permit completion of this urgently needed facility; and

"Whereas the Pacific Marine Fisheries Commission, an interstate compact commission created by the legislatures of California, Idaho, Oregon, and Washington, and assented thereto by the Congress of the United States and charged with the conservation and enhancement of the fisheries of these States, believes it is essential that the needed funds be provided in the 1967 fiscal year in order to obtain the maximum benefits from the unutilized potential for production of salmon and steelhead in the Willamette River system and from the funds already expended in planning this project, and

"Whereas the returning adults from the large numbers of juvenile salmon that were transplanted to areas above Willamette Falls in anticipation of completion of the new facility will require the proposed fishway to pass above the combined natural and man-made obstruction: Now, therefore, be it

"*Resolved*, That the Pacific Marine Fisheries Commission does hereby respectfully petition the Secretary of the Interior, the Director of the Bureau of the Budget, and the Congress of the United States, and particularly the Appropriations Committees of the U.S. Senate and the U.S. House of Representatives, to assure that the necessary funds are provided in fiscal year 1967 so that completion of the final portion of the urgently needed Willamette Falls Fishway at Oregon City, Oreg., may be accomplished at the earliest possible moment."

The Executive Director of the Pacific Marine Fisheries Commission shall transmit copies of this petition to the Secretary of the Interior, the Director of the Bureau of the Budget, to the members of the congressional delegations of the State of California, Idaho, Oregon, and Washington, the chairmen of the Appropriations Committees, and Commissioner of the Fish and Wildlife Service, U.S. Department of the Interior, and the Governors of member States.

Adopted at annual meeting, Boise, Idaho, November 20, 1965.

Departmental Statement—Fish Passage Facilities

Proper upstream passage at Willamette Falls has long been considered as one of the most significant potential improvements that could be obtained for the salmon and steelhead resources in the entire Columbia River watershed. This natural barrier and the industrial developments located there seriously hinder fish passage into the Willamette system above this point. Existing passage facilities are inadequate during low flow periods, and passage is completely blocked during high flows. Even so, annual escapements above the falls now average about 43,000 salmon and steelhead, consisting of approximately 36,000 spring chinook, 4,000 steelhead trout, 3,000 coho, and 100 fall chinook.

Improvement of fish passage conditions at the falls will make about 10,200 square miles of Willamette Valley watershed drainage available for anadromous fish production, especially for developing runs of fall chinook and coho salmon. It is estimated that the new fishways, including both new ladders, would increase the total escapement of salmon and steelhead by 117,900 fish. This increase is valued at $3,883,000 annually, with the commercial value estimated at $1,576,000 and the sport fishery increment at $2,307,000. The following table gives the increased escapement and value derived from Willamette Falls fishway construction.

Species	Present escapement	Increase in escapement	Increase in commercial catch	Increase in sport catch	Value of increase
Spring Chinook	36,000	6,400	3,700	1,000	$50,000
Fall Chinook	100	100,000	140,000	100,000	3,421,000
Coho (silvers)	3,000	48,500	53,000	8,000	270,000
Steelhead	4,000	23,000	9,000	10,000	142,000
Total	43,000	177,900	205,700	119,000	3,883,000

The value of the increase in commercial and sport fisheries, by species, is shown below.

Species	Commercial	Sport	Total
Spring chinook	$25,500	$24,900	$50,400
Fall chinook	1,401,000	2,020,000	3,421,000
Coho	127,312	142,650	269,962
Steelhead	22,080	119,600	141,680
Totals	1,575,892	2,307,150	3,883,042

The sport fishing values were computed on the basis on angler day value, as outlined in supplement No. 1 to Senate Document 97. The commercial values were based upon the ex-vessel price, that is, the value to the fishermen. The total current annual catch (commercial and sport) of all species derived from the Willamette River system is estimated at 117,050 fish; the increase in catch expected to result from Willamette Falls fishway construction is estimated to be 324,700 fish, thereby making a total annual future catch of about 441,750 fish, nearly four times the present level.

On February 4 the Oregon Fish Commission was authorized to proceed with the award of a contract for the construction of the first fishway at Willamette Falls. The total estimated cost of this first fish ladder is $822,000. Of the total costs, the share of the Federal Government is $690,000 and the share of the Portland General Electric Co. under terms of its Federal Power Commission license is $132,000. In order to finance the Federal Government's share of the total first fish ladder costs that were in excess of the $600,000 over budget allowance granted for this purpose in fiscal year 1966, the Bureau of Commercial Fisheries secured approval from the chairman of the Senate and House Appropriation Committees to transfer to the Willamette Falls fishway project a total of $90,000 of unobligated funds from other Columbia River fishery development projects of lower priority. This ladder will furnish more than 25 percent of the total project benefits, or at least $975,000 annually. The benefits of 1 year exceed the cost of this first fish ladder.

The second fish ladder at Willamette Falls is necessary to complete the planned fish passage system and to enable the potential benefits to be fully realized. The total cost of the second fish ladder is estimated at $2,389,000, of which $2 million (88.7 percent) would be a Federal cost and $389,000 (16.3 percent) would be contributed by private industry (Portland General Electric Co.). The annual benefits from the second ladder are estimated at about $2,908,000 annually. The annual benefits from this ladder would also exceed its cost.

It would be most desirable if Federal funds in the amount of $2 million could be made available in the budget year (fiscal year 1967) so that construction of the second fish ladder at Willamette Falls can proceed without delay. Further delay will not only prevent realization of the full potential benefits from this project but will undoubtedly increase the cost of construction.

Fire Halting Construction of Research Vessel Replacing Old "Delaware" Vessel

Chairman Hayden. On page 116 of your justification you have referred to a fire as halting construction of a new research vessel to replace the old *Delaware* vessel at Gloucester.

Would you explain to the committee the situation created by this fire, and what you feel can be done about it?

Mr. McKernan. Well, this fire placed us in a spot, Mr. Chairman, because the company itself was asked to increase the speed at which they constructed the vessel, and also the company suggested that because of the delays occasioned by the fire it was going to cost more money. We put our lawyers to work on the job and decided that it was in our best interest to negotiate with the contractor and to recognize that there were some increased costs that the Government would have to bear.

Now we have had difficulty with the Comptroller General and with the General Accounting Office in this matter. Recently we have been holding meetings with GAO, the contractor and our own lawyers to try and resolve that problem. That meeting was held as recently as yesterday and another day to try to solve this problem.

Subsidy for Construction of Fishing Vessels

Chairman Hayden. For subsidy payments for the construction of fishing vessels and for administering the program it is estimated that

$3,300,000 will be required in the coming fiscal year. This is a decrease of $1,700,000 under the amount appropriated in fiscal year 1966. The justification for this request will be included in the record.

(The justification follows:)

Construction of Fishing Vessels

Appropriation, 1966	$5,000,000
Reappropriation, Supplemental Appropriation Act, 1965	2,105,203
Total available for obligation	7,105,203
Decreases (1966):	
Subsidy payments	6,719,387
Program administration	385,816
Subtotal	7,105,203
Increases (1967):	
Subsidy payments	2,960,000
Program administration	340,000
Total available for obligation	3,300,000
Budget estimate, 1967	3,300,000

Analysis by activities

Activity	Fiscal year 1966 amount available	Fiscal year 1967			Total available, 1967 compared to total available 1966
		Unobligated balances from prior years	Budget estimate	Estimated total available	
1. Subsidy payments	$6,719,387		$2,960,000	$2,960,000	−$3,759,387
2. Program administration	385,816		340,000	340,000	−45,816
Total obligations	7,105,203		3,300,000	3,300,000	−3,805,203

1. Subsidy payments

Decrease.—The $3,759,387 decrease is based on the premise that the $6,719,387 available for subsidy payments in the fiscal year 1966, of which $2,094,387 was reappropriated from balances of the fiscal year 1965 appropriation together with the $2,960,000 requested for fiscal year 1967, providing a total of $9,679,387, may be adequate to cover anticipated needs for the 1966–67 period. It is estimated that the funds requested for 1967 will provide subsidies for 23 fishing vessels of various types and sizes.

2. Program administration

Decrease.—$35,000 of the decrease of $45,816 results from action under the Bureau's cost reduction program that provides for more efficient utilization of personnel responsible for the conduct of the Bureau's financial assistance programs including the subsidy program. The remaining $10,816 of decrease represents a nonrecurring amount that was reappropriated to 1966 from fiscal year 1965 balances.

It is estimated that $275,000 of the amount requested will be required to reimburse the Maritime Administration for services provided by that agency.

Plan of work.—To continue the program providing for the payment of subsidies equal to the difference in cost between the cost of construction of a fishing vessel in the United States and the estimated cost of the same vessel when constructed in a representative foreign shipbuilding center. The determination of eligibility and general administration of the program is the responsibility of the Secretary. The determnation of the foreign cost and amount of subsidy, approval of the plans and specifications, approval of the low responsive bid for domestic construction, and the supervision of construction, is the responsibility of the Mari-

time Administrator. In connection with the determination of eligibility, public hearings are required on the possibility of the use of the proposed vessel causing economic hardship to efficient vessel operators already operating in the fishery. The work will be carried on in the same manner as previously, with employees who work on this program also being used for similar work on the fisheries loan fund program and the fishing vessel mortgage and loan insurance program.

Status of program.—The U.S. Fishing Fleet Improvement Act authorizes the payment of subsidies equal to the difference in the cost of construction of a fishing vessel in a domestic shipyard and the estimated cost of construction in a representative foreign shipyard, under certain conditions, with a maximum of 50 percent of the domestic cost. The most important of these restrictions is the requirement that the vessel be of advance design, which would make it capable of fishing in expanded areas, using newly developed gear, and that the operation of the proposed vessel would not cause economic hardship to efficient vessel operators already operating in that fishery. The first applications under the new subsidy program were received in December 1964. Between that time and December 31, 1965, a total of 55 applications, involving an estimated $11,638,500 in subsidies have been received. One vessel is already under construction and invitations to bid are outstanding on six others.

Status of subsidy applications as of December 31, 1965

	Number	Amount
New England and Middle Atlantic:		
Applications received	33	$6,141,000.00
Eligibility approved after hearing	15	3,488,000.00
Withdrawn or dismissed before hearing	4	362,500.00
Withdrawn or dismissed after hearing	3	435,000.00
Contracts executed	4	630,252.88
California:		
Applications received	9	3,677,500.00
Eligibility approved after hearing		
Withdrawn or dismissed before hearing	1	77,500.00
Withdrawan or dismissed after hearing		
Contracts executed		
South Atlantic and gulf:		
Applications received	11	762,500.00
Eligibility approved after hearing	8	577,500.00
Withdrawn or dismissed before hearing	1	40,000.00
Withdrawn or dismissed after hearing		
Contracts executed		
Pacific Northwest:		
Applications received	2	1,057,500.00
Eligibility approved after hearing	1	157,500.00
Withdrawn or dismissed before hearing	1	900,000.00
Withdrawn or dismissed after hearing		
Contracts executed		
Total:		
Applications received	55	11,638,500.00
Eligibility approved after hearing	24	4,223,000.00
Withdrawn or dismissed before hearing	7	1,380,000.00
Withdrawn or dismissed after hearing	3	435,000.00
Contracts executed	4	630,252.88

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$394,797	$7,105,203	$3,300,000	−$3,805,203
Unobligated balance lapsing	2,105,203			
Appropriation	2,500,000	5,000,000	3,300,000	−1,700,000
Reappropriation		2,105,203		−2,105,203
Obligations by objects:				
11 Personnel compensation	47,379	67,000	52,000	−15,000
12 Personnel benefits	3,158	5,000	4,000	−1,000
21 Travel and transportation of persons	8,490	8,000	8,000	
22 Transportation of things	1,213	1,000		−1,000
23 Rent, communications, and utilities		7,000	1,000	−6,000
24 Printing and reproduction	773	2,000		−2,000
25.1 Other services	2,302	7,203		−7,203
25.2 Services of other agencies	175,000	275,000	275,000	
26 Supplies and materials	183	2,000		−2,000
31 Equipment	686	1,000		−1,000
41 Grants, subsidies, and contributions	155,613	6,730,000	2,960,000	−3,770,000
Total obligations	394,797	7,105,203	3,300,000	−3,805,203

REDUCTIONS IN FUNDS FOR FISCAL YEAR 1967

Chairman HAYDEN. Will you please discuss the operation of this program for the committee, indicating why a decrease is proposed for the coming year?

Mr. MCKERNAN. Mr. Chairman, we have available in fiscal year 1966 the sum of $7.1 million for the construction of fishing vessels under this act. There has been a total of 56 applications received and there are vessels now being constructed under the act. On the other hand, the obligation of funds has been somewhat delayed so we feel that the program can go forward as we have planned it with this reduction in new obligational authority for fiscal year 1967.

Now it is very likely that in 1968 we will come back and ask for a greater amount of funds but at least we believe that the funds we have asked for in 1967 will accomplish the purpose of the act and will not reduce the level of construction that we have anticipated.

Senator BARTLETT. Mr. Chairman, on that point was this reduction inspired by the Bureau of Commercial Fisheries?

Mr. MCKERNAN. No.

Senator BARTLETT. That is all.

FEDERAL AID FOR COMMERCIAL FISHERIES RESEARCH AND DEVELOPMENT

1967 BUDGET REQUEST

Chairman HAYDEN. For Federal aid for commercial fisheries research and development in fiscal year 1967 you request $3,210,000. Of this amount $2,600,000, $1,500,000 less than was appropriated last year,

is for aid to States; $300,000 is for resources disaster aid under section 4(b) of the Commercial Fisheries Research and Development Act of 1964; and $210,000 is for administration of the program. The justification will be included in the record.

(The justification follows:)

Appropriation, 1965	
Appropriation, 1966	$4,800,000
Transferred to "Management and investigations of resources," Bureau of Commercial Fisheries	−86,800
Total appropriation, 1966	4,713,200

SUMMARY OF INCREASES AND DECREASES, 1967

Aid to States: Decreases in the financing of research and development projects proposed by the States	−1,503,200
Net decrease, 1967	1,503,200
Budget estimate, 1967	3,210,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental[1]	Transfers	Amount available
1. Aid to States		$4,100,000			$4,100,000
2. Resource disaster aid		400,000			400,000
3. Program administration		300,000	−$86,800		213,200
Total		4,800,000	−86,800		4,713,200

[1] Transfer to "Management and investigations of resources," Bureau of Commercial Fisheries.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
1. Aid to States		$4,100,000	$2,600,000	−$1,500,000		−$1,500,000
2. Resource disaster aid		400,000	400,000			
3. Program administration		213,200	210,000	−3,200		−3,200
Total		4,713,200	3,210,000	−1,503,200		−1,503,200

1. Aid to States—Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
Aid to States		$4,100,000	$2,600,000	−$1,500,000		−$1,500,000

Plan of work.—Funds requested for this program will be used to finance, on a cost-sharing basis, research and development projects proposed by the States. The program provides for financing by the Federal Government of up to 75 percent of project cost. State budgets have been grossly inadequate to cope

with the many problems which are their primary responsibility. These State projects will complement the research and development programs of the Federal Government and will increase the total fishery research effort of the United States. Projects funded under this section will involve research, development, coordination, and construction.

The $2,600,000 will be apportioned among the States on a basis determined by the ratio which the average, of the value of raw fish harvested by domestic commercial fishermen and received within the State (regardless of where caught) for the three most recent calendar years for which data satisfactory to the Secretary of the Interior are available, plus the average of the value to the manufacturer of manufactured and processed fishery merchandise manufactured within each State for the three most recent calendar years for which data satisfactory to the Secretary of the Interior are available, bears to the total average value of raw fish harvested by domestic commercial fishermen and received within the State (regardless of where caught) and fishery merchandise manufactured and processed within the State for the three most recent calendar years for which data satisfactory to the Secretary of the Interior are available. No State may receive an apportionment for any fiscal year of less than one-half of 1 percent of funds or more than 6 percent of the funds. The estimate of $2,600,000 is proposed for apportionment as shown on page 908.

So much of the apportionment for any fiscal year which is not obligated during any year remains available for obligation to carry out the purposes of this act until the close of the succeeding fiscal year, and if unobligated at the end of that year, the sum is returned to the Treasury.

It is only by the prosecution of research and development programs involving biological research, technological development, collection of statistical data, market development, technical extension activities, and so forth, that the States can intelligently establish a basis for full and effective utilization of their commercial fishery resources. Continuing progress in the attainment of knowledge should bring us closer to the ultimate objectives of management and use of these fishery resources in a manner that will provide maximum benefits for all the people of the States.

In addition to these direct benefits, there would be important side effects on our international fishery negotiations. Most of our international treaties require scientific facts to support positive actions favorable to U.S. fisheries. Much of the information needed can be obtained through strengthened State research on the high seas species which spend a part of their life cycle within State waters.

Status of program.—The sum of $4,100,000 was appropriated for fiscal year 1966 to initiate this program. The funds were apportioned to the States on July 8, 1965. A total of 119 proposals in the amount of $3,978,316 have been received from 39 States representing both coastal and inland areas. These proposals have requested Federal funding at both 50- and 75-percent levels. Eighty-nine proposals have been approved, and 40 contracts have been awarded. It is expected that at least 45 States will submit a total of 150 or more project proposals during fiscal year 1966.

The value of the proposals received to date is distributed in the following manner: North and Middle Atlantic coast, $1,538,010; South Atlantic and Gulf coast, $1,309,233; Pacific coast and Alaska, $685,727; and inland, $445,346. Projects are distributed in proposals already on file in the following disciplines: Biology, 57 percent; technology, 7 percent; exploratory fishing and gear research, 3.8 percent; marketing, 12.5 percent; construction, 12.5 percent; statistics, 1.8 percent; coordination, 3.8 percent; extension, 0.9 percent; and economics, 0.7 percent.

Although it is too early in this program to report significant progress, some excellent research and development proposals have been received. These range from a massive oyster shell planting program in New Jersey to bring back an industry which was almost eliminated by a serious disease to a study of the factors limiting production of sockeye salmon in lakes in Alaska. The State of Oregon is developing methods for the controlled rearing of Dungeness crabs and the utilization of Pacific hake as human food. New York has well-developed plans for a small research laboratory on Long Island in which their Public Law 88-309 program will be centered. Texas has plans for a medium-sized research vessel to enable them to work in the western Gulf of Mexico on research and development projects. The States of Michigan and Wisconsin are jointly studying the lake trout restoration in Lake Michigan, while Kansas has started

research on the metabolism and digestion of channel catfish, which are becoming so important in the Middle West. Maine has proposed a fisheries extension service, and Florida has initiated a large marketing program utilizing nearly their entire apportionment. Mississippi and California have proposed large-scale oceanographic research projects. Arizona has proposed a resource inventory project, and Colorado has proposed a study on raising bait fishes in the Rocky Mountain States.

Calculated apportionment of funds under the Commercial Fisheries Research and Development Act of 1964 (Public Law 88-309)

[Dollar amounts in thousands]

State or area	Average value of raw fish harvested, 1962-64 [1]	Average value of manufactured products, 1962-64 [2]	Average value of landings and manufactured products, 1962-64		Allocations of funds to States [3]
				Percent	
Alabama	$4,279	$7,425	$11,704	0.87	$27.6
Alaska	52,987	109,377	162,364	12.12	156.0
Arizona	4			.05	13.0
Arkansas	522		522	.04	13.0
California	51,638	172,607	224,245	16.74	156.0
Colorado	9		9		13.0
Connecticut	1,192	578	1,770	.13	13.0
Delaware	1,720	5,977	7,697	.57	18.1
Florida	30,730	46,606	77,336	5.77	156.0
Georgia	3,380	20,949	24,329	1.82	57.4
Hawaii	2,782	6,172	8,954	.67	21.1
Idaho	78		78	.01	13.0
Illinois	693	5,623	6,316	.47	14.9
Indiana	89		89	.01	13.0
Iowa	216	708	924	.07	13.0
Kansas	10			.02	13.0
Kentucky	332			.06	13.0
Louisiana	33,404	53,185	86,589	6.46	156.0
Maine	21,180	36,566	57,746	4.31	136.1
Maryland	11,468	35,719	47,187	3.52	111.2
Massachusetts	40,561	83,378	123,939	9.25	156.0
Michigan	2,441	3,376	5,817	.43	13.7
Minnesota	876	591	1,467	.11	13.0
Mississippi	8,555	23,984	32,539	2.43	76.7
Missouri	40			.28	13.0
Montana	19		19		13.0
Nebraska	37			.01	13.0
Nevada					13.0
New Hampshire	482	594	1,076	.08	13.0
New Jersey	10,527	31,838	42,365	3.16	99.9
New Mexico	14		14		13.0
New York	10,333	38,236	48,569	3.63	114.5
North Carolina	7,275	6,983	14,258	1.06	33.6
North Dakota	27				13.0
Ohio	1,099	11,781	12,880	.96	30.4
Oklahoma	67			.01	13.0
Oregon	7,514	24,817	32,331	2.41	76.2
Pennsylvania	115	14,286	14,401	1.08	34.0
Rhode Island	3,806	3,124	6,930	.52	16.3
South Carolina	3,652	2,301	5,953	.44	14.0
South Dakota	153		153	.01	13.0
Tennessee	1,060			.08	13.0
Texas	30,025	60,101	90,126	6.73	156.0
Utah	47		47		13.0
Vermont					13.0
Virginia	21,659	25,882	47,541	3.55	112.1
Washington	18,669	37,658	56,327	4.20	132.8
West Virginia					13.0
Wisconsin	2,033	3,027	5,060	.38	13.0
Wyoming	7		7		13.0
American Samoa		14,336	14,336	1.07	33.8
Guam	88		88	.01	13.0
Puerto Rico	5,891	52,884	58,775	4.39	138.6
Virgin Islands	158		158	.01	13.0
Total	393,943	946,012	1,339,955	100.00	2,600.0

[1] Ex-vessel value.
[2] Gross amount received by the manufacturer at the point of production.
[3] A maximum of 6 percent and a minimum of ½ of 1 percent are assured under the allocation.

NOTE.—Nevada, Vermont, and West Virginia have been given a minimum allocation although the Bureau has not conducted fishery statistical surveys of these States and does not have a record of their having commercial fishing or manufacturing. If surveys were conducted, it is probable that some commercial fishing or manufacturing would have been found in these States.

Source: U.S. Bureau of Commercial Fisheries, Branch of Fishery Statistics.

Calculated apportionment of funds under the Commercial Fisheries Research and Development Act of 1964 (Public Law 88-309)

[Dollar amounts in thousands]

State and area	Average value of raw fish harvested, 1961-63 [1]	Average value of manufactured products, 1961-63 [2]	Average value of landings and manufactured products, 1961-63		Allocations of funds to States [3]
				Percent	
Alabama	$3,665	$6,922	$10,587	0.82	$40.3
Alaska	49,805	108,154	157,959	12.17	246.0
Arizona	6				20.5
Arkansas	601		601	.05	20.5
California	53,513	175,366	228,879	17.64	246.0
Colorado	1		1		20.5
Connecticut	1,216	725	1,941	.15	20.5
Delaware	2,740	7,423	10,163	.78	38.7
Florida	29,537	38,495	68,032	5.24	246.0
Georgia	3,395	21,428	24,823	1.91	94.6
Hawaii	2,799	6,388	9,187	.71	35.0
Idaho	77		77	.01	20.5
Illinois	662	5,732	6,394	.49	24.4
Indiana	62		62	.01	20.5
Iowa	215	739	954	.07	20.5
Kansas	9			.02	20.5
Kentucky	372			.06	20.5
Louisiana	29,434	46,587	76,021	5.86	246.0
Maine	20,203	38,312	58,515	4.51	223.0
Maryland	11,817	35,605	47,422	3.66	180.7
Massachusetts	39,466	77,926	117,392	9.05	246.0
Michigan	2,578	4,069	6,647	.51	25.3
Minnesota	804	780	1,584	.12	20.5
Mississippi	8,390	25,492	33,882	2.61	129.1
Missouri	36			.29	20.5
Montana	14		14		20.5
Nebraska	39			.01	20.5
Nevada					20.5
New Hampshire	423	542	965	.07	20.5
New Jersey	11,064	32,884	43,948	3.39	167.5
New Mexico	8		8		20.5
New York	9,812	37,088	46,900	3.61	178.7
North Carolina	6,824	6,911	13,735	1.06	52.3
North Dakota	28				20.5
Ohio	1,229	10,759	11,988	.92	45.7
Oklahoma	52	33	85	.01	20.5
Oregon	7,344	23,695	31,039	2.39	118.3
Pennsylvania	134	14,701	14,835	1.14	56.6
Rhode Island	3,665	3,308	6,973	.54	26.6
South Carolina	3,767	1,906	5,673	.44	21.6
South Dakota	137		137	.01	20.5
Tennessee	1,010			.08	20.5
Texas	28,254	60,062	88,316	6.81	246.0
Utah					20.5
Vermont					20.5
Virginia	21,691	23,726	45,417	3.50	173.1
Washington	19,697	39,698	59,395	4.58	226.3
West Virginia					20.5
Wisconsin	2,132	2,848	4,980	.38	20.5
Wyoming	7		7		20.5
American Samoa				1.04	51.6
Guam	88		88	.01	20.5
Puerto Rico	2,273	39,991	42,264	3.26	161.1
Virgin Islands	117		117	.01	20.5
Total	381,212	916,314	1,297,526	100.00	4,100.0

[1] Ex-vessel value.
[2] Gross amount received by the manufacturer at the point of production.
[3] A maximum of 6 percent and a minimum of ½ of 1 percent, are assured under the allocation.

NOTE.—Nevada, Utah, Vermont, and West Virginia have been given a minimum allocation although the Bureau has not conducted fishery statistical surveys of these States and does not have a record of their having commercial fishing or manufacturing. If surveys were conducted it is probable that some commercial fishing or manufacturing would have been found in these States.

Source: U.S. Bureau of Commercial Fisheries, Branch of Fishery Statistics.

2. Resource Disaster Aid—Analysis by Activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Resource disaster aid	----------	$400,000	$400,000	----------	----------	----------

Plan of work.—Section 4(b) of the Commercial Fisheries Research and Development Act of 1964 authorizes assistance to the commercial fishing industry in cases where there is a commercial fishery failure due to a resource disaster arising from natural or undetermined causes, or to prevent such a resource disaster, or for other purposes.

In fiscal year 1966, an appropriation of $400,000 was authorized under this section, with $100,000 specifically directed to the States of New Jersey, Delaware, Maryland, and Virginia for studies to develop a disease resistant strain of oysters in the Delaware and Chesapeake Bays. Inasmuch, as the oyster studies authorized under this section have been determined to be a continuation of the cooperative research authorized under Public Law 87–580, all projects will be funded at a 66⅔-percent level of Federal support.

An amount of $100,000 has been approved to alleviate hurricane damage to the Louisiana oyster industry. This program will consist of a massive shell planting program and will be supplemented by at least $85,000 in State funds.

The balance of $200,000 appropriated in fiscal year 1966, for the fishery disaster aid activity, remains available for carrying out the authorized program.

Status of program.—The $400,000 appropriated for this activity under the "Management and investigations of resources" account for 1965 was used to alleviate a fishery failure affecting the Great Lakes smoked fish industry following a botulism disaster in October 1963.

An amount of $286,000 was used to make indemnity payments to producers and processors of smoked chubs for the removal of an inventory of 1,700,000 pounds of frozen fish which were preventing normal trade operations. The balance ($114,000) was allocated to the States of Minnesota, Wisconsin, Illinois, and Michigan for contract research directly related to restoration of the chub fishery and to prevent a similar failure of the fishery in the future. The use of these funds has restored the chub fishery to the level which existed prior to the botulism disaster.

The $100,000 provided in the 1966 appropriation for studies to develop a disease resistant strain of oysters has been allocated as follows: New Jersey, $25,000; Delaware, $19,000; Maryland, $22,000; and Virginia, $34,000. Project proposals relating to this program have been received from Virginia, Maryland, and New Jersey. These funds, which will be matched by $50,000 of State moneys, will be used to continue the program authorized under Public Law 87–580.

Three States—Virginia, New Jersey, and Delaware—have selected disease resistant brood stocks from MSX epidemic areas and have obtained progeny from these adults. Virginia has already placed progeny of resistant stocks in diseased areas to test resistance of the young oysters. Maryland has obtained brood stocks from a number of areas and is testing for relative disease resistance of each stock in Chincoteague Bay. Therefore, the first phase in development of MSX disease-resistant oysters is well underway. Several generations of oysters must be grown and exposed before a conclusion can be reached that resistance has been developed.

An amount of $100,000 will be used during February, March, and April 1966, to conduct a shell planting program in Louisiana to alleviate oyster bed damage caused by Hurricane Betsy.

3. Program Administration—Analysis by Activities

Subactivity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
(a) Technical administration	----------	$178,200	$175,000	−$3,200	----------	−$3,200
(b) Facilitating services	----------	35,000	35,000	----------	----------	----------
Total	----------	213,200	210,000	−3,200	----------	−3,200

(a) Technical administration

Plan of work.—To provide technical assistance required at the Bureau headquarters and in the field for the administration of the act in accordance with the provisions of an intent of the authorizing legislation and regulations issued by the Secretary of the Interior pursuant thereto. Evaluation of project proposals submitted by State agencies will include consideration of benefits to be derived by the commercial fishing industry; condition of the fishery involved; extent of similar work completed or in progress; competence of project personnel; relationship of costs to benefits; and application of results in the industry. A major emphasis will be placed on coordinating research and development activities of the States, Government, and industry to avoid duplication of effort.

Status of program.—Following the initial (1966) appropriation under the "Federal aid for commercial fisheries research and development" account, a staff was employed to provide for the technical administration of the program funded. Field coordinators have been employed and are on duty at the Bureau's regional offices in Gloucester, Mass.; St. Petersburg Beach, Fla.; Ann Arbor, Mich.; Seattle, Wash.; and Terminal Island, Calif. The Bureau headquarters staff consists of an Assistant to the Director and a secretary.

The technical administration function will be continued in 1967 without addition to the presently authorized staff of 14 employees.

(b) Facilitating services

Plan of work.—To provide facilitating services to insure proper and adequate administration of the commercial fisheries research and development program in accordance with the terms of the legislation and regulations issued pursuant thereto. These services include functional staff work and processing work in connection with budget formulation and execution, financial management, inspection, and contract and property management.

Status of program.—Expansion of the Bureau's administration staff was necessary to provide the facilitating services required in connection with the program funded for the first time in 1966 under the "Federal aid for commercial fisheries research and development" account. The services will be provided in 1966 and in 1967 with the additional four positions authorized—two in contract and property management and two in financial management.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	----------	$4,713,200	$3,210,000	−$1,503,200
Proposed transfer to "Management and investigations of resources," Bureau of Commercial Fisheries, for civilian pay increases	----------	86,800	----------	−86,800
Appropriation	----------	4,800,000	3,210,000	−1,590,000
Obligations by objects:				
11 Personnel compensation	----------	113,000	143,000	+30,000
12 Personnel benefits	----------	8,000	11,000	+3,000
21 Travel and transportation of persons	----------	22,000	22,000	----------
22 Transportation of things	----------	1,000	2,000	+1,000
23 Rent, communications, and utilities	----------	8,000	10,000	+2,000
24 Printing and reproduction	----------	5,000	5,000	----------
25 Other services	----------	444,200	404,000	−40,200
26 Supplies and materials	----------	2,000	3,000	+1,000
31 Equipment	----------	10,000	10,000	----------
41 Grants, subsidies, and contributions	----------	4,100,000	2,600,000	−1,500,000
Total obligations	----------	4,713,200	3,210,000	−1,503,200

PROPOSALS, PROJECTS, AND CONTRACTS

Chairman HAYDEN. You have already answered a number of questions on this subject, but would you please indicate to the committee what has been accomplished with the funds heretofore appropriated for this purpose?

Mr. MCKERNAN. Mr. Chairman, as I mentioned before, we have 146 proposals to date under this program. There have been 105 projects approved and 56 contracts. We have some very important programs going on in cooperation with our own work which involve the conservation and management of the commercial fisheries of this country. One point I didn't mention before that I think is most significant for this committee is that the regulation of fishery resources in this country, the authority for such regulation is vested in the States as I think it ought to be.

Now oftentimes the States themselves have had insufficient knowledge by which to set the conservation regulations. This program is going to give the Federal Government an opportunity to work with the States in developing practical management knowledge by which they can better conserve the resources and insure continued utilization and to some extent development of the fishing resources within the States. I think the potential is very great and its importance is very great also.

OTHER STATES PARTICIPATING IN PROGRAM

Senator BARTLETT. May I ask a few questions apropos of this program, Mr. Chairman?

Chairman HAYDEN. Certainly.

Senator BARTLETT. Are Wisconsin, Arizona, and North Dakota in?

Mr. MCKERNAN. Yes.

5-YEAR PROGRAM

Senator BARTLETT. Now, this is a 5-year program, is it not?

Mr. MCKERNAN. Yes.

Senator BARTLETT. Which was launched when, legislatively speaking?

Mr. MCKERNAN. It was authorized in 1965 and funded first in 1966.

Senator BARTLETT. In the current fiscal year?

Mr. MCKERNAN. Yes.

1966 AND 1967 BUDGET REQUESTS

Senator BARTLETT. How much was the budgetary request?

Mr. MCKERNAN. $2.0 million, Senator.

Senator BARTLETT. Was that the budgetary request or was that the amount finally appropriated by Congress which was not satisfied with the amount of the budgetary request?

Mr. MCKERNAN. This was the amount requested in the budget for fiscal year 1966. The amount funded by Congress was $4.8 million.

1967 FUNDING FOR AID PROGRAM

Senator BARTLETT. Well, then, why is it that you ask for $1½ million less for the next fiscal year for this research and development program of which the States contribute 25 percent, as I recall, than was appropriated for fiscal 1966?

Mr. MCKERNAN. Well, Senator, we have had some restrictions put on our programs, we have attempted to assess priorities and have done the very best we could in retaining those things in our budget which we thought had the highest priority.

We recognize this to be a very important program and yet we felt that if we had funded it higher some projects or some equipment in our own research establishments perhaps could not have been used efficiently if we had taken our budgetary limitations and applied them in some different order.

ORIGINAL BUDGET REQUEST

Senator BARTLETT. Did commercial fisheries ask for the full authorization of the Department of Interior Budget Office?

Mr. MCKERNAN. In the original request; yes.

Senator BARTLETT. Did the Department of Interior Budget Office approve this?

Mr. MCKERNAN. The Department of the Interior did in the early stages approve of this program, that is, before further budgetary limitations were imposed upon the Secretary, according to my understanding, Senator.

Senator BARTLETT. Do you know the Bureau of the Budget whacked away at the request which finally reached the Bureau of the Budget from the Department of the Interior?

Mr. MCKERNAN. I am not sure.

Senator BARTLETT. It was reduced, in any case?

Mr. MCKERNAN. Yes.

Senator BARTLETT. Do you know what amount reached the Bureau of the Budget?

Mr. MCKERNAN. Of course, the Department works with the Bureau of the Budget in forming the request, Senator, and I think the budgetary limitations are pretty well set before the Department formally

gives the Bureau of the Budget the estimate. So, I presume that the final accepted figure was the one that was finally set between the Department and the Bureau of the Budget.

Senator BARTLETT. If we had world enough and time I would pursue this line of questioning but something tells me I know the answer.

STATE PROPOSALS UNDER AID PROGRAM

Do you have a good many applications on hand from the several States?

Mr. MCKERNAN. Yes; we do. We have received 146 proposals to date from the States with a cost of about $4.4 million. We have approved 105 of these projects and there have been contracts actually awarded for 56.

Senator BARTLETT. Does this relate to the applications pending for fiscal 1967?

Mr. MCKERNAN. No; no. This is just applications for 1966 and they are coming in every day as the States work with us toward projects that fit well into regional or national fisheries programs.

Senator BARTLETT. Do you know the Bureau of the Budget specifically ordered that this particular program be cut in the Department of the Interior?

Mr. MCKERNAN. No; I don't know that, Senator.

PROGRAM CAPABILITY

Senator BARTLETT. Do you think that if you had the full $6 million which was authorized under this short program—my goodness, it runs only for 5 years; we lost 1 year in the funding process, as I recall—could you use it?

Mr. MCKERNAN. It could be used.

Senator BARTLETT. To good advantage; to the benefit of the several States.

Mr. MCKERNAN. Yes.

Senator BARTLETT. You have said already you think this is a good program.

Mr. MCKERNAN. Yes, I think it is very good.

Senator BARTLETT. My recollection is that when you testified before the authorization committee, the legislative committee, Senator Magnuson's Commerce Committee, you saw the possibility of building up commercial fisheries in these inland States in many cases; is that right?

Mr. MCKERNAN. Yes, and that is occurring, too.

FULL IMPLEMENTATION OF PROGRAM

Senator BARTLETT. When you came before this very committee last year with the budgetary request of $2 million, which I am sure you didn't do of your own volition and free will, Chairman Hayden asked you your opinion as to whether that was a sufficiently large amount to accomplish the work envisioned when the Research Commercial Fisheries Act was passed. You stated, and I quote: "It does not supply enough to fully implement the program we envisioned." This year you come before us with the request for $3.2 million.

I ask you the same question, then, as Chairman Hayden did last year.

Mr. McKERNAN. No; it does not.

Senator BARTLETT. You could use the whole $6 million.

Now, I want to explore this for a moment. I hate to take so much time but, in my mind, Mr. Chairman and members of the committee, we have come to the very heart, the core, as it were, of the hearings relating to the Interior Department and related agencies.

EFFECT OF REDUCED PROGRAMS ON PARTICIPATING STATES

Now, these States that are participating in this program, that have started to participate, they are bound to make their plans, to formulate their plans. Under a long-term concept over the life I should imagine of the law, 5 years, 4 years, 3 years, whatever may be left at the moment, does this not throw them out of balance completely in respect to those programs, in respect to their appearances before their own legislatures when year after year you are obliged to come in here with such a sharply reduced budget request?

Mr. McKERNAN. Yes; this is a great disadvantage and we foresaw this. This was one reason why during the hearings leading toward the authorization of this bill that we were anxious to have a fixed amount set by Congress so the States could plan.

Unfortunately it was necessary to restrict this to considerably below the authorized program. I do know of States specifically where this is going to cause considerable hardship. I am very sorry about that. I am not even certain, to be perfectly candid with this committee, that I fully foresaw this in setting priorities even within my own limited budget, but it is causing difficulties within the States because the States have planned for and have sometimes gone to great pains to get matching funds. Now, this is going to cause some serious difficulties in these States right in places where we have been trying to help and work most closely with these people.

EFFECT OF REDUCED PROGRAM ON ALASKA

Senator BARTLETT. I would like, Mr. Chairman, to make a recording of how this affects one State that has certain interests in fisheries, namely, Alaska, by asking your permission to place in the record at this point a letter written to Congressman Ralph J. Rivers by Walter Kirkness who heads up the Department of Fish and Game for Alaska.

Chairman HAYDEN. That may be included in the record.

Senator BARTLETT. Thank you.

(The letter follows:)

Hon. RALPH J. RIVERS,
House of Representatives,
Cannon House Office Building, Washington, D.C.

FEBRUARY 15, 1966.

DEAR REPRESENTATIVE RIVERS: This letter will serve to amplify the summary contained in my telegram of February 14, concerning the effects of a reduction in the Public Law 88-309 appropriation for fiscal year 1967.

For fiscal year 1966, Alaska has funded nine research projects and one development project totaling $295,000. Administration costs raised the total to $328,000.

Based on the statutory maximum of $5 million for fiscal year 1967, Alaska's share, including State matching funds, would be $400,000. At this level, all of the 1966 projects were scheduled for increased funding in order to improve their effectiveness and to achieve additional benefits and results.

The suggested total appropriation for fiscal year 1967 of $2.8 million would reduce Alaska's share to $208,000, including State matching funds. This would be $192,000, nearly 50 percent lower than anticipated. At this level of funding it will be necessary to eliminate completely three major projects and drastically curtail four other major projects.

The three vitally important research projects which will have to be eliminated are as follows:

(1) Dungeness crab research, $21,600

The life history and ecological study on dungeness crab in southeastern Alaska has existed for approximately 9 months and in this short period has yielded some welcome additions to the meager amount of known life history data.

The logging industry, of increasing importance in recent years in southeastern Alaska, has introduced new problems to the dungeness crab environment by the practice of rafting and storing logs in bays and sheltered tide flats. These areas constitute preferred habitats for the crabs. The effect of this practice, which results in the deposition of large quantities of bark on the bottom, is under investigation. Elimination of the Public Law 88-309 program would return the dungeness crab fishery to the realm of management without knowledge, of necessity, has been for too many years.

(2) Frazer Lake study, $23,000

Frazer Lake on Kodiak Island was opened to anadromous fish by the construction of a fishway at an impassible barrier in 1963. It has been stocked with red salmon since 1951 as part of a long-range biological assessment program and in anticipation of the construction of the fishway.

Returns of mature red salmon to the system have been promising, with over 5,000 passing over the fishway in 1965. A continuing assessment of the fish plants and returns is vital in order to achieve the maximum potential production of the lake. It is estimated that this will result in an annual catch of more than 1 million salmon valued at $1 million to the area fishermen.

(3) King crab reproduction study, $53,000

At the present time, relatively little is known about many aspects of the breeding and early life history of king crabs, including where the major breeding grounds are, distribution of the pelagic larval stages of crabs and where and how young crabs begin their existence on the bottom.

In 1965, more than 130 million pounds of king crab worth in excess of $25 million in first wholesale value were taken in Alaska. It is vitally important to continue studies on the brood stock of king crabs so that measures necessary to provide protection can be devised.

The study is particularly important at this time, as more and larger fleets of foreign fishing vessels are appearing in close proximity to our coasts. These fleets conduct large scale midwater and bottom trawling operations for other species of fish and shellfish, and in so doing, may be inflicting considerable injury to both breeding and young king crabs.

It is possible that losses to the industry from this indirect threat could total millions of dollars annually.

The initiation of a 5-year study on a poorly understood phase of king crab life history in 1966 and discontinuing the study in 1967 would obviously result in considerable losses, both from the standpoint of wasted money and manpower, and from an inability to keep abreast of the rapidly expanding fishery.

The programs which would have to be drastically curtailed in 1967 are as follows:

(1) Pink salmon run forecast work would be reduced from $80,000 to $40,000. This would seriously hamper a program which holds great promise for estimating total pink salmon returns to the major pink salmon areas of the State. Such estimates, when developed to a point of good reliability, would enable the Department management biologists to better regulate the fishery to provide maximum run utilization to fishermen and the industry.

Major projects now underway at Kodiak, Cook Inlet, Prince William Sound, and southeastern Alaska would be curtailed. Pink salmon normally constitutes the bulk in volume of Alaska's salmon pack; and in years of poor red salmon runs, is the most important in dollar value. In 1965, the wholesale value of Alaska's pink salmon pack was approximately $25 million.

Pink salmon are more widely distributed in Alaska than red salmon, and the welfare of more communities and people is largely dependent on the yearly abundance of this species of salmon. Reliable forecasts of abundance would be of immeasurable benefit and assistance to these people and communities.

(2) The Cook Inlet red salmon study budgeted for $47,000 would be reduced to $24,000 and, accordingly, progress would be decreased on this newly initiated research program. The red salmon runs in Cook Inlet have received no research attention in the past years. They rate second only to the value of the red salmon runs of Bristol Bay for the entire State.

(3) The Kvichak River (Lake Iliamna outlet) sockeye smolt enumeration study was budgeted for $38,600. This will be reduced to $27,300. Past experience indicates the need for improving the enumeration technique to provide reliable run forecasting data which can be used in management and in the negotiations of the International North Pacific Fisheries Commission. In addition, reliable enumeration will provide useful information to fishermen and the industry so that provisions can be made for the expected size of the run.

The Kvichak River red salmon runs comprise the majority of the returns to Bristol Bay for 2 years out of every 5-year cycle.

(4) Shrimp investigations would be reduced from $23,100 to $13,000, which would curtail the program of data analysis and eliminate the field studies on life history and abundance.

In line with the virtual 50-percent reduction in anticipated funding for 1967, the general administrative costs for Public Law 88-309 programs would be reduced $12,000 on a pro rata basis.

The overall effect of the proposed budget reduction on the Public Law 88-309 research programs, which are now just getting underway in Alaska, would be paralyzing and effectiveness of the current programs would suffer. Planning for future years would be placed on a most nebulous footing, and very serious problems would confront the Department with regard to the equitable disposition of newly hired biologists who would suddenly be surplus as a result of reduced programs funding levels.

Your assistance in securing a congressional appropriation for Public Law 88-309 which will be more in line with the statutory limit will be appreciated and will provide benefits to Alaska manifold times greater than the research moneys involved.

Sincerely,

ALASKA DEPARTMENT OF FISH AND GAME.
WALTER KIRKNESS, *Commissioner.*

LETTER SUBMITTED BY GOVERNOR DAN MOORE, NORTH CAROLINA

IMPACT OF REDUCED PROGRAM ON NORTH CAROLINA

Chairman HAYDEN. Letters and statements urging maximum appropriations for this activity have been received by the committee. They will be included in the record at this point.

(The letters follow:)

U.S. SENATE,
COMMITTEE ON THE JUDICIARY,
February 28, 1966.

Senator CARL HAYDEN,
Subcommittee on Interior Appropriations, Senate Committee on Appropriations, Washington, D.C.

DEAR MR. CHAIRMAN: This is to request that your subcommittee give careful consideration to a complete appropriation of $5 million as authorized by section 4(a) of Public Law 88-309, the Commercial Fisheries Research and Development Act of 1964.

Enclosed for your subcommittee's consideration is the copy of a letter from North Carolina's Governor, the Honorable Dan K. Moore, to the Honorable Winfield K. Denton in which the Governor outlines the particular impact any cut in this appropriation would have on North Carolina.

With kindest wishes.

Sincerely yours,

SAM J. ERVIN, Jr.

STATE OF NORTH CAROLINA,
GOVERNOR'S OFFICE,
Raleigh, February 25, 1966.

Hon. WINFIELD K. DENTON,
Member of Congress,
Chairman, House Appropriations Subcommittee on Interior,
House Office Building, Washington, D.C.

DEAR SIR: We recently learned that only $2.6 million has been requested to carry out the program authorized by section 4(a) of Public Law 88-309 (The Commercial Fisheries Research and Development Act of 1964) during the coming year. North Carolina's apportionment would be $33,600, $18,700 less than that available under the current year's apportionment and $30,300 less than the amount authorized by the act.

Public Law 88-309 has already meant a great deal to our seafood industry in North Carolina. With its assistance, and with the firm support of our general assembly, we have been able to initiate a broad program in commercial fisheries research. With State appropriations and the assurance of Federal support, we have hired biologists and developed projects with long-range goals. This program can be of inestimable value to the citizens of North Carolina. This is a long range program, well planned and well executed, and must continue over a period of years to be of most value. We cannot have such a program if we are subjected to yearly fluctuations of this magnitude in the amount of available funds.

I would appreciate your doing everything possible to insure that section 4(a) of Public Law 88-309 is fully funded at $5 million for the coming fiscal year. Crippling this program in the second year of its life through inadequate appropriations would be a disservice not only to our coastal residents, but to all the citizens of our State who participate in the utilization of our coastal fisheries resources.

Sincerely,

DAN MOORE.

LETTER SUBMITTED BY SENATOR PASTORE

EFFECT OF REDUCED PROGRAM ON RHODE ISLAND

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS,
DEPARTMENT OF NATURAL RESOURCES,
Providence, R.I., February 21, 1966.

Hon. JOHN O. PASTORE,
Member of Congress,
Washington, D.C.

DEAR SENATOR PASTORE: As you know, commercial fishing occupies a prominent place in our State's economy, as well as having a great tradition in our history. During the current fiscal year Public Law 88-309 provided much needed Federal funds in the amount of $26,000 for research and development of commercial fisheries. Presently, we have an approved project involving the red crab, a species similar to the west coast crab, that is found off our coast in great abundance but, as yet, has not been marketable. Project commitments already amount to $16,000 a year for the next 3 years.

In the present budget proposal to Congress, Public Law 88-309 funds would be reduced to the extent that Rhode Island would receive only $16,000. All commercial interests would be most grateful if you would use your influence to have the funds restored to the level of the present funding.

Sincerely,

THOMAS J. WRIGHT,
Chief, Division of Conservation.

GENERAL ADMINISTRATIVE EXPENSES

1967 BUDGET REQUEST

Chairman HAYDEN. For fiscal year 1967 you are requesting $50,000 more for "General administrative expenses" than the $689,000 appropriated in the last fiscal year. The justification for your estimate of $739,000 will be printed in the record.

(The justification follows:)

Appropriation, 1965	$704,000
Comparative transfer from "Salaries and expenses," Office of the Commissioner, Fish and Wildlife Service	21,113
Total available, 1965	725,113
Appropriation, 1966	674,000
Pay cost supplemental	15,000
Total appropriation, 1966	689,000
Comparative transfer from "Salaries and expenses," Office of the Commissioner, Fish and Wildlife Service	25,100
Total available, 1966	714,100

SUMMARY OF INCREASES AND DECREASES, 1967

Departmental expenses :	
To provide for increased pay costs for fiscal year 1966 positions	3,070
To provide for a resource planning assistant	18,730
	21,800
Regional office expenses : To provide for increased pay costs for fiscal year 1966 positions	3,100
Net increase, 1967	24,900
Budget estimate, 1967	739,000

Analysis by activities (total funds)

Activity	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
1. Departmental expenses:				
Direct appropriation	$324,869	$337,400	$359,200	+$21,800
Saltonstall-Kennedy funds	132,862	125,500	125,500	----------
Federal aid for commercial fisheries research and development	----------	35,000	35,000	----------
Inspection and grading of fishery products (contributed funds)	14,300	17,900	20,000	+2,100
Fisheries loan fund (administrative limitation)	14,300	14,700	14,700	----------
Subtotal	486,331	530,500	554,400	+23,900
2. Regional office expenses:				
Direct appropriation	374,917	376,700	379,800	+3,100
Saltonstall-Kennedy funds	275,713	284,500	284,500	----------
Great Lakes Fishery Commission (contributed funds)	39,500	39,500	39,500	----------
Subtotal	690,130	700,700	703,800	+3,100
Total	1,176,461	1,231,200	1,258,200	+27,000
General administrative expenses	678,673	674,000	739,000	+65,000
Saltonstall-Kennedy funds	408,575	410,000	410,000	----------
Federal aid for commercial fisheries research and development	----------	35,000	35,000	----------
Great Lakes Fishery Commission (contributed funds)	39,500	39,500	39,500	----------
Inspection and grading of fishery products (contributed funds)	14,300	17,900	20,000	+2,100
Fisheries loan fund (administrative limitation)	14,300	14,700	14,700	----------
Proposed supplemental for civilian pay increases (direct appropriation)	----------	15,000	----------	−15,000
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	21,113	25,100	----------	−25,100

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Transfers [1]	Amount available
1. Departmental expenses	$324,869	$305,000	$7,300	+$25,100	$337,400
2. Regional office expenses	374,917	369,000	7,700		376,700
Unobligated balance lapsing	25,327				
Total	725,113	674,000	15,000	+25,100	714,100

[1] Comparative transfer from "Salaries and expenses," Office of the Commissioner, Fish and Wildlife Service.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Departmental expenses	$324,869	$337,400	$359,200	+$21,800	+$3,070	+$18,730
2. Regional office expenses	374,917	376,700	379,800	+3,100	+3,100	
Unobligated balance lapsing	25,327					
Total	725,113	714,100	739,000	+24,900	+6,170	+18,730

[1] To provide for increased pay cost for fiscal year 1966 positions.

1. Departmental expenses

Funds	Fiscal year 1965 amount available	Positions	Fiscal year 1966 amount available	Positions	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
						Total	Pay cost	Program
GAE	$324,869	29	$337,400	30	$359,200	+$21,800	+$3,070	+$18,730
S–K	132,862	15	125,500	15	125,500			
Total	457,731	44	462,900	45	484,700	+21,800	+3,070	+18,370

Increases and decreases (1967 compared with 1966)

	GAE		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) An increase for increased pay costs for fiscal year 1966 positions		$3,070				$3,070
(2) An increase for a position of resources planning assistant	1	18,370			1	18,730
Total increase	+1	21,800			+1	21,800

Need for increase.—A position of resources planning assistant, GS–15, is requested to coordinate the Bureau's planning-programing-budgeting system with the Department and the Bureau of the Budget.

Bureau of the Budget Bulletin No. 66–3, dated October 12, 1965, requires the Department of the Interior to establish an integrated planning-programing-budgeting system. The Secretary of the Interior implemented this requirement by order No. 2892, dated December 18, 1965. This integrated system as applied to the Bureau will consist of analysis of objectives and supporting programs on a continuing basis; establishment of a multiyear planning and program process to present data for policy decisions required by the Department and the President;

a budgeting process that can convert this analysis and multiyear data into appropriate format for Presidential and congressional action.

Plan of work.—The Office of the Director will carry out its responsibilities for the formulation and execution of basic policies for carrying out the functions of the Bureau prescribed by Congress and by the Secretary of the Interior, the conducting of relations between the Bureau and the public, and the preparation and development of program objectives and budgets. The Deputy Director shares with the Director the responsibilities for the supervision and direction of the Bureau.

The Division of Administration will exercise staff supervision over all administrative management activities of the Bureau, including budget formulation and execution, finance management, inspection, management analysis, incentive awards, personnel management, safety, contract and property management, internal audit, and financial assistance investigations.

The resources planning assistant will interpret and coordinate requirements of the new planning-programing-budgeting system with the Director, Deputy Director, and Assistant Directors as they affect the Bureau's objectives and programing.

2. Regional office expenses

Funds	Fiscal year 1965 amount available	Positions	Fiscal year 1966 amount available	Positions	Fiscal year 1967 estimate	Increase (+) or decrease (−), 1967 compared with 1966		
						Total	Pay cost	Program
GAE	$374,917	29	$376,700	29	$379,800	+$3,100	+$3,100	----------
S–K	275,713	26	284,500	26	284,500	----------	----------	----------
Total	650,630	55	661,200	55	664,300	+3,100	+3,100	----------

Increases and decreases (1967 compared with 1966)

	GAE		S–K		Total	
	Positions	Amount	Positions	Amount	Positions	Amount
(1) An increase for increased pay costs for fiscal year 1966 positions	----------	+$3,100	----------	----------	----------	+$3,100

Plan of work.—To provide the executive direction and general administrative services (budget, finance, personnel management, property management, and related functions) required at the regional level for the effective and efficient conduct of Bureau functions in accordance with general policies and procedures established by the Director.

Supplementary general administrative services funding applicable to both departmental and regional programs are financed by the permanent appropriation, promote and develop fishery products and research pertaining to American fisheries and by contributed funds, advances and reimbursements, and transfer funds are financed by assessment against the program funds on the basis of predetermined costs. Facilitating services and use-based charges essential to all Bureau operations are charged to funds available to the Bureau, including those for general administrative expenses on a pro rata basis. Facilitating service costs include charges for office rental, utilities, general supplies, telephone, postage, mail handling, employee training, contractual services, transportation, and other items of a similar nature. Also included are charges made by the Department for legal services, library services, health services, etc.

Itemization of estimate

	Actual 1965	Estimate 1966	Estimate 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$699,786	$714,100	$739,000	+$24,900
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	−21,113	−25,100		+25,100
Unobligated balance lapsing	25,327			
Appropriation	704,000	674,000	739,000	+65,000
Proposed supplemental due to civilian pay increase		15,000		−15,000
Obligations by objects:				
11 Personnel compensation	542,506	579,000	606,000	+27,000
12 Personnel benefits	38,761	40,000	42,000	+2,000
21 Travel and transportation of persons	53,770	54,000	54,000	
22 Transportation of things	3,190	2,000		−2,000
23 Rent, communications, and utilities	22,603	13,000	14,000	+1,000
24 Printing and reproduction	1,422	5,000	5,000	
25 Other services	20,258	14,100	11,000	−3,100
26 Supplies and materials	8,750	5,000	5,000	
31 Equipment	8,526	2,000	2,000	
Total obligations	699,786	714,100	739,000	+24,900

PLANNING-PROGRAMING AND BUDGETING SYSTEM

Chairman HAYDEN. Would you comment on this program, please?

Mr. MCKERNAN. These increases in the administrative expenses involve the transfer of one other small program from the Commissioner's office which, incidentally, I failed to mention before, the safety program. This program will be administered by our Administrative Division.

The Department is entering into a new planning-programing and budgeting system which we believe will require a specialist in this field, and we are asking for a man to carry out this highly specialized work of program planning.

BASIC EXPENSES

Chairman HAYDEN. How much total will you have for general administrative expenses; that is, in addition to this appropriation, what other funds will be available?

Mr. MCKERNAN. Mr. Chairman, our general administrative expenses, at the present time we are asking for $1,258,200, which takes care of the hard core of our administration and executive direction. It does not include all of the administrative expenses needed to operate the bureau programs authorized and funded by Congress, and for this latter purpose we are, as we have since the Bureau was organized, supplementing the administration of specific programs from program funds at the present time.

ADDITIONAL FUNDS BY SOURCE AND AMOUNT

Chairman HAYDEN. You can furnish for the record a tabulation of these additional funds by source and amount.

Mr. MCKERNAN. Yes, Mr. Chairman.

(The statement and table follow:)

Certain ambiguities have been noted in the language in the program and performance statement for the "General administrative expenses" appropriation and supporting statements in the budget justification. General administrative expense funds are used primarily by the Bureau for the staffing of hard core executive direction and key administration positions such as Director, Deputy Director, Regional Directors, Deputy Regional Directors; Assistant Director for Administration, both in the headquarters and regional offices, in the administrative management of all bureau programs. However, in those cases where the salary or expense costs associated with the positions are incurred for the benefit of specific programs, rather than for all programs, the costs are charged to benefiting program funds.

The Bureau's six Regional Offices and field stations perform administrative housekeeping functions common to all bureau programs. The benefiting program shares the cost of providing administrative services based upon workloads created by programs in proportion to the funds available to the program.

The cost of providing administrative services is funded therefore in part by the "General administrative expenses" appropriation, permanent appropriations, trust funds and other benefiting appropriations including the annual definite appropriations.

A revised table showing the extent of this financing is as follows:

General administration estimate

[Dollar amounts in thousands]

Source	Estimate, 1966	Permanent positions	Estimate, 1967	Permanent positions
Appropriated:				
General administrative expenses	$674.0	57	$739.0	59
Proposed supplemental for civilian pay increase	15.0			
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	25.1	1		
Federal aid of commercial fisheries research and development	35.0	4	35.0	4
Saltonstall-Kennedy funds (permanent appropriation)	410.0	42	410.0	42
Subtotal	1,159.1	104	1,184.0	105
Benefit-based assessments:				
Management and investigations of resources	571.9	45	575.7	45
Saltonstall-Kennedy funds	99.1	9	99.0	9
Contributed funds (Great Lakes Fisheries Commission)	22.0	2	22.0	2
Contributed funds (inspection and grading of fishery products)	17.9	2	17.9	2
Fisheries loan fund (administrative expense limitation)	16.4	2	16.4	2
Administration of Pribilof Islands	31.2	4	31.2	4
Construction	20.3		20.3	
Construction of fishing vessels	1.8		1.8	
Subtotal	780.6	64	784.3	64
Total	1,939.7	168	1,968.3	169

NOTE.—Ratio of administrative obligations to total obligations, 1966, $1 to $26; 1967, $1 to $22. Ratio of administrative positions to total positions, 1966, 1 to 12; 1967, 1 to 12.

ADMINISTRATION OF PRIBILOF ISLANDS

1967 BUDGET REQUEST

Chairman HAYDEN. Your budget estimate for administration of Pribilof Islands for the next fiscal year is $2,468,000. I will insert the justification for this estimate in the record.

(The justification follows:)

Appropriation, 1965	$2,454,000
Appropriation, 1966	2,454,000
Pay cost supplemental	10,000
Total appropriation, 1966	2,464,000

SUMMARY OF INCREASES AND DECREASES, 1967

To provide for increased pay costs for fiscal year 1966 positions	4,000
Net increase, 1967	4,000
Budget estimate, 1967	2,468,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers	Amount available
Administration of Pribilof Islands	$2,439,220	$2,454,000	$10,000		$2,464,000
Unobligated balance lapsing	14,780				
Total	2,454,000	2,454,000	10,000		2,464,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Administration of Pribilof Islands	$2,439,220	$2,464,000	$2,468,000	+$4,000	−$4,000	
Unobligated balance lapsing	14,780					
Total	2,454,000	2,464,000	2,468,000	+4,000	+4,000	

[1] To provide for increased pay cost for fiscal year 1966 positions.

Plan of work

1. Administration of the islands.—Management and utilization of the fur seal resource will be continued without basic changes in established methods. Residents of the Pribilof Islands and from Aleutian Islands villages will be employed as heretofore as the principal and most economical source of manpower. Resident Aleut employees have qualified for and assumed responsibility for all phases of sealing operations and are increasingly entering the skin-curing field so that fewer nonresident employees will be required. Transfer of St. George Island residents to St. Paul Island will be continued on a voluntary basis as housing facilities become available at St. Paul. In line with the recommendation contained in the report by the Public Health Service to the Jones committee, plans are being made to design waste water disposal facilities for the Pribilof Islands villages in fiscal year 1967.

Emphasis must now be given to the preparation of additional homesite area on St. Paul before more structures can be built. Accelerating the construction program would hasten realization of long-term savings which would result from consolidation of the villages since duplicated facilities such as schools, hospitals, powerplants, warehouses, commissaries, and shops must now be operated and maintained year round on both islands. Cost reduction and manpower utilization will continue to be stressed which, along with gradual withdrawal of Government support for community services, will progressively reduce the number of permanent Federal employees. Savings from reduced permanent salaries will be utilized for expanding St. Paul village facilities to accommodate the merger. The Bureau's cargo vessel *Pribilof* will be used for fur seal research on the high seas, an extra function made possible in the winter by increased effectiveness of its islands supply mission during other times of the year.

2. Fur seal research.—The United States has agreed, as a member of the Convention on Conservation of North Pacific Fur Seals, to continue the following research on fur seals through 1970 when the future of the convention will be considered by the member countries:

Location	Purpose	Kind of research operation
Land and sea	Determine size, age, and sex	Marking, sampling land kills and populations, pelagic collecting, age determinations, reproduction studies, population estimates.
Do	Determine mortality and recruitment	Sampling on land and sea, age classification.
Land	Find relation of recruitment to size and composition of kill.	Sampling, marking, age classification, population estimates.
Sea	Find migration routes and wintering; numbers, age, and sex of seals in these areas.	Sea surveys and sampling.
Do	Find how food habits of seals affect commercial fisheries.	Sampling at sea, stomach content examinations, distribution records.
Land and sea	Compare effectiveness of land and pelagic sealing for management.	Demonstration of selective killing of females.
Do	Determine quality of sealskins by sex, age, time, method of sealing.	Comparisons of quality of processed skins in samples. Joint experiment with other countries.

For the current 6-year extension of the Convention, member countries have agreed to mark adequate numbers of seal pups and to devote to pelagic research effort similar to that of recent years. Experiments with improved marking techniques are necessary. The Bureau of Commercial Fisheries and the North Pacific Fur Seal Commission both have maximum sustained yield as a major research objective. Most of this work will be conducted by the professional staff of the Bureau's Marine Mammal Biological Laboratory at Seattle, Wash. Pelagic investigations will require the use of the Bureau vessel *Pribilof* and chartered vessels for an aggregate of 160 days. Statistical services on populations under a small contract with the University of Washington will be continued.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) decrease (−)
Program and financing:				
Total obligations	$2,439,220	$2,464,000	$2,468,000	+$4,000
Unobligated balance lapsing	14,780			
Appropriation	2,450,000	2,454,000	2,468,000	+14,000
Proposed supplemental due to civilian pay increase		10,000		−10,000
Obligations by objects:				
11 Personnel compensation	1,470,246	1,457,000	1,461,000	+4,000
12 Personnel benefits	84,903	85,000	85,000	
21 Travel and transportation of persons	51,378	51,000	50,000	−1,000
22 Transportation of things	33,506	41,000	36,000	−5,000
23 Rent, communications, and utilities	20,459	24,000	24,000	
24 Printing and reproduction	1,810	5,000	4,000	−1,000
25 Other services	365,114	454,000	453,000	−1,000
26 Supplies and materials	583,995	550,000	558,000	+8,000
31 Equipment	76,520	52,000	52,000	
32 Lands and structures	6,865			
Subtotal	2,694,796	2,719,000	2,723,000	+4,000
95 Quarters and subsistence charges	−255,576	−255,000	−255,000	
Total obligations	2,439,220	2,464,000	2,468,000	+4,000

CONSERVATION AND HARVEST OF FUR SEALS

Chairman HAYDEN. What program do you have planned for the Pribilof Islands this year?

Mr. MCKERNAN. Mr. Chairman, the administration of the Pribilof Islands involves really two things; one, the conservation and harvest of the fur seals of the Pribilofs under an international convention with the U.S.S.R., Japan, and Canada. The United States carries out all of the harvesting of the skins of the largest herd of North Pacific fur seals which reproduce and spend the summer in the Pribilof Islands. There are small herds over on the Commander and Robben Islands in the western North Pacific and these are administered by the Soviet Union. While we harvest in the general neighborhood of 50,000 to 75,000 skins a year, the Soviets harvest at the present time about 15,000 to 20,000 skins.

In recent years, through the efforts of this international commission, the herds on the Soviet side are beginning to increase. We feel that our herds in the Pribilof Islands are now at about the maximum sustainable yield level at a very high level of productivity, although this varies from year to year.

WELFARE OF ALEUT NATIVES

Now that is one of the programs that we administer. The other, of course, is administering the Pribilof Islands for the general welfare of some 600 Aleut natives on the two islands of St. Paul and St. George. In this regard the law requires that these people be given certain preferences in work and that the Department of the Interior insure their general welfare.

There is a bill being considered in Congress, a bill introduced by Senator Bartlett, to change some of the administrative practices on the islands, a bill, incidentally, which I very strongly favor because it will provide more responsibility for the people. It will give them an opportunity to develop to a greater degree themselves, their own community, and their own general welfare still with help of the Department of the Interior and our Bureau.

I believe this legislation is farsighted and very important and I am very hopeful it will pass Congress this year.

FISHERIES LOAN FUND ADMINISTRATIVE EXPENSES

EXPENSES LIMITATION

Chairman HAYDEN. The Bureau of Commercial Fisheries proposes again this year, as last year, an administrative expense limitation of $309,000 on the fisheries loan fund. The statement in justification of this proposal will be placed in the record.

(The justification follows:)

Administrative expense limitation, 1965	$309,000
Administrative expense limitation, 1966	309,000
Administrative expense limitation, 1967	309,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Administrative expense limitation	$284,731	$309,000	$309,000			
Unobligated balance lapsing	24,269					
Total	309,000	309,000	309,000			

Plan of work.—To provide for administration of the program including: investigating the fishery aspects of loan applications; the financial investigation of loan applications; consideration of applications for approval or disapproval; preparation of authorizations for a loan or letters of declination: preparation of the final loan documents; closing of approved loans; and collecting payments and keeping the required financial records. Legal matters concerned with the closing and servicing of loans are supervised by the Office of the Solicitor in the Secretary's Office.

Status of fishery loan fund cases as of Dec. 31, 1965

	New England and Middle Atlantic		California		South Atlantic and Gulf	
	Number	Amount	Number	Amount	Number	Amount
Received	382	$11,249,883	228	$13,011,116	357	$8,723,882
Approved	200	5,071,459	136	5,953,250	133	2,988,984
Declined [1]	101	3,394,978	39	1,441,575	126	3,147,647
Ineligible	22	562,224	11	679,869	37	997,072
Withdrawn	57	1,565,839	37	3,882,220	58	1,248,719
Canceled, after approved	31	778,564	19	745,921	23	432,293
Amounts reduced [2]	100	643,383	62	930,538	71	245,260
Pending	2	12,000	5	123,664	3	96,200
	Pacific Northwest		Alaska		Great Lakes	
Received	333	$6,262,349	361	$3,969,726	43	$460,489
Approved	192	3,275,477	206	2,007,196	13	108,920
Declined [1]	71	939,899	75	855,971	15	163,843
Ineligible	22	411,790	28	347,485	6	109,332
Withdrawn	35	1,202,349	31	416,962	8	64,272
Canceled, after approved	15	271,643	31	384,176	4	21,500
Amounts reduced [2]	44	98,759	38	86,800	5	5,622
Pending	13	334,075	21	210,312	1	8,500
	Puerto Rico		Hawaii		Total	
Received	1	$2,000	23	$391,070	1,728	$44,070,515
Approved	1	1,800	15	205,068	896	19,612,154
Declined [1]			4	51,779	431	9,995,692
Ineligible			1	13,500	127	3,121,272
Withdrawn			3	99,397	229	8,524,758
Canceled, after approved	1	1,800			124	2,635,987
Amounts reduced [2]	1	200	7	21,326	328	2,031,888
Pending					45	784,751
Cases closed					730	16,355,910

[1] Net less amounts approved on reconsideration.
[2] Applications approved for amounts less than applied for.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase (+) or decrease (−)
Program and financing:				
Total obligations	$284,731	$309,000	$309,000	
Unobligated balance lapsing	24,269			
Appropriation limitation	309,000	309,000	309,000	
Obligations by objects:				
11 Personnel compensation	186,843	211,000	216,000	+$5,000
12 Personnel benefits	13,744	17,000	17,000	
21 Travel and transportation of persons	26,655	25,000	22,000	−3,000
22 Transportation of things	1,167	6,000	3,000	−3,000
23 Rent, communications, and utilities	20,272	12,000	11,000	−1,000
24 Printing and reproduction	1,176	4,000	4,000	
25 Other services	9,111	10,000	11,000	+1,000
26 Supplies and materials	3,315	2,000	2,000	
31 Equipment	1,250	1,000	1,000	
Total obligations, Bureau of Commercial Fisheries	263,533	288,000	287,000	−1,000
ALLOCATION TO OFFICE OF THE SOLICITOR				
Obligations by objects:				
11 Personnel compensation	19,720	20,000	21,000	+1,000
12 Personnel benefits	1,478	1,000	1,000	
Total, Office of the Solicitor	21,198	21,000	22,000	+1,000
Total obligations subject to limitation	284,731	309,000	309,000	

COMMERCIAL FISHERIES ON UPTURN

Chairman HAYDEN. Do you have any comment on this program?

Mr. MCKERNAN. This program has been another quite successful one and we think is one of the reasons why the commercial fisheries of the United States are on the upturn. Since the program began in 1957, we have handled a total of almost 2,000 applications for loans and have approved loans of $17 million. These long-term loans have helped many of the commercial fishermen of the United States keep their vessels afloat and have contributed tremendously to the welfare of these people. Now these loans are not provided for people who can get regular bank loans. Right after the war, during the period of economic decline of the American fishing industry, most banks would not make loans on fishing vessels. This loan program of the Government has been very successful, the losses have been very, very low, less than 1 percent of the outstanding balance per year. The fishermen have responded very well to this opportunity.

I think that is all I have to say on that subject.

ADMINISTRATIVE PROVISIONS

SEPARATION FROM FISH AND WILDLIFE ADMINISTRATION

Chairman HAYDEN. There will be placed in the record your statement in support of your new language setting forth the administrative provisions for the Bureau of Commercial Fisheries.

(The statement follows:)

The Fish and Wildlife Service administrative provisions previously have covered the Bureau of Sport Fisheries and Wildlife as well as the Bureau of Commercial Fisheries. A separate administrative provisions paragraph for the Bureau of Commercial Fisheries would facilitate the preparation of estimates and provide a means for the Bureau of the Budget and the Congress to set forth the specific administrative provisions applicable to the Bureau, including those concerning the purchase of motor vehicles and aircraft.

Justification for passenger motor vehicle requirements

Vehicle type	Replacements	Additions	Total requested
Police-type automobiles	1		1
Standard-type automobiles	9	2	11
Total automobiles	10	2	12
Station wagons	7	1	8
Total	17	3	20

The Bureau proposes to purchase 20 motor vehicles in the fiscal year 1967. Seventeen of the vehicles are for replacement, and three will be for addition to the fleet. All of the vehicles to be replaced will have met replacement standards.

Ten sedans and seven station wagons will be replacements. Three of the vehicles, including one police-type, are for use by enforcement agents in the New England and Pacific Northwest areas; six are for use by agents in the collection of fishery statistics in the New England, Gulf of Mexico, and Great Lakes areas; and eight are for use in the conduct of biological research and exploratory fishing and gear research programs in the New England, Gulf, and Great Lakes areas.

The three additional vehicles, two sedans and one station wagon, are needed for the conduct of biological research, exploratory fishing and gear research, and Federal aid programs in the Great Lakes area.

JUSTIFICATION FOR AIRCRAFT REQUIREMENTS

An aircraft pool is operated in Alaska by the Bureau of Sport Fisheries and Wildlife to provide for the requirements of both Fish and Wildlife Service Bureaus. The Bureau of Commercial Fisheries reimburses the Bureau of Sport Fisheries and Wildlife for use of airplanes from the pool, to cover the salaries of pilots and maintenance personnel, cost of fuel, parts, and other operating costs. It is proposed that the Bureau of Commercial Fisheries purchase an aircraft to replace one of the obsolete and inoperable aircraft now assigned to the pool, that was obtained from surplus in the fiscal year 1963.

Aircraft are used by the Bureau of Commercial Fisheries in connection with the conduct of research programs at remote locations and for survey and surveillance work in connection with Bureau responsibilities under international treaties and fishery regulations. It is essential that safe, dependable aircraft be available for the conduct of the Bureau programs in the interest of efficiency and in recognition of the hazards encountered in air travel in this area of operations.

SALMON AND STEELHEAD LOSSES

Chairman HAYDEN. There will be placed in the record a letter dated March 2, 1966, from several Senators pertaining to the losses of salmon and steelhead between the lower Columbia River and the lower Snake River. Will you please submit a statement for the record and the need for the funds mentioned in that letter and as explained in its attachment. Indicate also whether this is covered in your budget and if not, whether it is feasible for you to expand the program should this committee see fit to provide you with additional funds.

(The letter follows:)

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
March 2, 1966.

HON. CARL HAYDEN,
Chairman, Committee on Appropriations,
U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: The invaluable Pacific Northwest commercial and sports salmon and steelhead fishery on the Columbia River confronts a crisis. Tremendous losses in these migratory fish occurred last year between the lower Columbia and the lower Snake, the tributary leading to the major spawning grounds in Idaho.

So critical was the problem that for the first time in history salmon fishing was closed in Idaho, and summer chinook fisheries were closed for the 1965 season in the entire Columbia River system. The spring run of chinook in 1965 suffered an 80-percent loss between Bonneville Dam, on the Columbia, and Ice Harbor Dam on the Snake. A recent survey revealed that a 20-percent annual loss occurred in the previous 8 years between Bonneville and the Dallas Dams on the Columbia. Equivalent losses were reported between other projects.

Some of the causative factors are recognized, but not yet fully evaluated, and others are unknown. Unless these factors are fully determined, and solutions found, the Columbia River fishery—an industry that generates an estimated $50 million in annual economic activity—may be lost completely. The value of this fishery as a recreation resource, at a time when we are spending millions to husband and expand other recreation resources, is incalculable.

The Pacific Salmon Interagency Council, representative of all fishery agencies in the Pacific Northwest, has recommended a crash program to determine exactly where, how and why the fish losses occur. Without such information, the fishery may be doomed.

Attached is a background sheet from the council which includes a review of possible fish loss factors, outlines an investigative program, and estimates its cost.

Because of this emergency situation, and at the request of the Pacific Northwest congressional delegation, the Interior Department early this year redirected unexpended funds to provide $49,000 to launch the investigation, which is now underway by the U.S. Fish and Wildlife Service.

A total of $362,000 is needed in fiscal year 1967 to continue the investigation. We respectfully urge that this amount be included in the fiscal 1967 budget to carry on this very necessary program.

Sincerely,

WARREN G. MAGNUSON, *U.S. Senator.*
HENRY M. JACKSON, *U.S. Senator.*
FRANK E. MOSS, *U.S. Senator.*
LEE METCALF, *U.S. Senator.*
WAYNE MORSE, *U.S. Senator.*
FRANK CHURCH, *U.S. Senator.*
MAURINE B. NEUBERGER, *U.S. Senator.*
LEN B. JORDAN, *U.S. Senator.*

A REPORT ON UNACCOUNTED FOR ADULT SALMONID FISH IN THE COLUMBIA RIVER AND RECOMMENDATIONS FOR INVESTIGATING SUSPECTED CAUSATIVE FACTORS

INTRODUCTION

Substantial unaccountable losses of adult salmon and steelhead between counting stations at lower Columbia River water development projects have become an increasing source of concern as more projects reach completion. A recent study of fish identification and counting techniques, catch estimates and interdam spawning generally discounted these factors as major sources of discrepancies but disclosed the extent and nature of the problem. For the 8-year period of study about 19.4 percent of the spring chinook run or 15,900 fish and 20.9 percent of the summer chinook stock or 17,700 fish were unaccounted for annually between Bonneville and The Dalles dams. Similar losses occurred between other projects.

In September 1965 the Pacific Salmon Interagency Council recommended a crash program to further evalute such fish losses and the causative factors. This action was predicated on low numbers of fish passing into the Snake River as a result of apparent losses between projects on the lower Columbia River. The problem was so critical in 1965 that salmon fishing was prohibited in Idaho for the first time in history and all summer chinook fisheries were closed for the season in the entire Columbia River system.

A special technical subcommittee composed of representatives of member agencies of the Pacific Salmon Interagency Council was assigned the task of reviewing this matter. This group has concluded that a number of factors may be responsible for the fish count discrepancies and has formulated general recommendations for initial research of these factors, fully recognizing the enormity and complexities of the problem, the extreme technical difficulties in accurately measuring each factor and the probability of additional research needs after initial field results have been analyzed.

SUSPECTED CAUSATIVE FACTORS

Review of possible causes of fish count discrepancies indicated that no single factor is likely to be responsible but rather that several possible combinations of factors involving both real losses (mortalities) and statistical discrepancies may be implicated. As a result of a recent 12-month study, it was recommended that no further investigation of fish counting errors including misidentification of species, sample counting, etc., be undertaken at this time. Items recommended for further study are as follows:

1. Fallback over dams.
2. Indian gill net dropout mortality.
3. Unreported Indian catch.
4. Selective mortality on certain fish stocks.
5. Nitrogen supersaturation.
6. Interdam tributary turnoff.
7. Navigation lock passage.
8. Other dam-caused mortality.

The subcommittee also considered locations for conducting the studies and the groups of fish to be investigated. On the basis of discrepancy records, it was recommended that initial studies be conducted in the Bonneville-Dalles dams area on spring and summer chinook and that secondary studies be pursued in the McNary-Ice Harbor-Priest Rapids area on spring chinook and steelhead.

RESEARCH PLANNING

General research plans including time and cost schedules were then developed to investigate each factor by the member agency most experienced in a given field and coordinated into a total plan by the subcommittee. A brief résumé is furnished:

1. An extensive fish tagging program employing sonic and nonsonic equipment is proposed as the basic element of the program to secure information on the movement and destination of the test animals within the 2 study areas. The program would furnish information on the location and rate of fallback at dams, rates of mortality and ladder reascension associated with fallback, frequency of passage through navigation locks and interdam tributary turnoff, and would provide clues to selective mortality on certain stocks and other sources of possible mortality. Contingent on availability of funds, equipment would be constructed and tested in 1966, large-scale field studies would be conducted in the Bonneville-Dalles area in 1967 and in the McNary-Priest Rapids-Ice Harbor area in 1968. The cost of this study extending over 4 fiscal years is estimated to total $551,000.

2. Continuation of the Bureau of Commercial Fisheries monitoring of nitrogen supersaturation at various points in the Columbia River in 1966, 1967, and 1968 and a laboratory study to determine salmonid-nitrogen saturation threshold mortality relationships in late 1966 or early 1967 are estimated to cost $70,000.

3. A preliminary basic study of gill net dropout mortality rates in a closed or semiclosed water course enabling close scrutiny and precise results is proposed for 1966 to gain a better understanding of the possible severity of gill net caused mortalities. This one season investigation would be conducted in the fall of 1966 and is estimated to cost $30,000.

4. The degree of unreported Indian fishing catches above Bonneville Dam can be checked as a source of fish count discrepancies by placing additional personnel in the field to monitor these scattered operations. The estimated cost of investigating this matter during 1966 and 1967 is $70,000.

RECOMMENDATIONS

The subcommittee recommends that this general plan be adopted by the Pacific Salmon Interagency Council and that funds be made available for prosecuting the studies in line with the stated timetable. It is further recommended that the planning subcommittee member agencies continue to develop and integrate detailed study designs to meet proposed scheduling of field investigations.

Recommended investigations pertinent to the unaccountable losses of adult salmonid fish in the Columbia River, summary sheet

Proposed investigation	Fiscal year 1966	Fiscal year 1967	Fiscal year 1968	Fiscal year 1969	Total
1. Fall back at dams, navigation lock passage, tributary turnoff, and other mortality sources:					
(a) Sonic phase—Bonneville-Dalles	$34,000	$207,000	$16,000	----------	$257,000
(b) Nonsonic phase—Bonneville-Dalles	----------	30,000	20,000	----------	50,000
(c) Sonic phase—McNary-Priest Rapids-Ice Harbor	----------	----------	147,000	$47,000	194,000
(d) Nonsonic phase—McNary-Priest Rapids-Ice Harbor	----------	----------	30,000	20,000	50,000
Subtotal	34,000	237,000	213,000	67,000	551,000
2. Nitrogen supersaturation:					
(a) Threshold toxicity determination	----------	50,000	----------	----------	50,000
(b) Columbia Basin monitoring	----------	10,000	10,000	----------	20,000
Subtotal	----------	60,000	10,000	----------	70,000
3. Indian gill net dropout mortality	----------	30,000	----------	----------	30,000
4. Unreported Indian catch	15,000	35,000	20,000	----------	70,000
Grand total	49,000	362,000	243,000	67,000	721,000

Losses of salmon and steelhead occurring between lower Columbia and lower Snake Rivers in Pacific Northwest

Substantial unaccountable losses of adult salmon and steelhead between the lower Columbia and lower Snake Rivers have become an increasing source of concern as more hydroelectric projects in this area reach completion. Recent studies indicate that about 20 percent of the spring and summer chinook runs are annually unaccounted for between Bonneville and the Dalles Dams. Similar losses occurred between other projects. Some of the factors causing these losses are recognized, although the specific impact of each factor has not yet been determined. We are deeply concerned over this matter and have cooperated with the Pacific Salmon Interagency Council in formulating a study plan for determining the causes of these losses and finding solutions to the problem. Items recommended for further investigation include the following:

1. Fall back over dams.
2. Indian gill-net dropout mortality.
3. Unreported Indian catches.
4. Selective mortality on certain stocks.
5. Nitrogen supersaturation.
6. Interdam tributary turnoff.
7. Navigation lock passage.
8. Other dam caused mortality.

Because of the emergency situation arising last year, and at the request of the Pacific Northwest Congressional Delegation, the Department of the Interior has redirected unexpended funds to provide $49,000 to launch the investigation this present fiscal year (fiscal year 1966) under the direction of the U.S. Fish and Wildlife Service.

The study plan for fiscal year 1967 would continue the sonic tagging phase between Bonneville and the Dalles Dams and continue the investigations of unreported Indian catches. New study items that would be started in fiscal year 1967 include the nonsonic tagging phase between Bonneville and the Dalles Dams, a study of Indian gill-net dropout mortality, and determining the existing levels and toxicity thresholds of nitrogen saturation.

A total of $362,000 is needed in fiscal year 1967 to continue this investigation. It is most important to determine the causative factors of these losses so that solutions to this most serious problem can be found.

FEDERAL AID FOR COMMERCIAL FISHERIES RESEARCH AND DEVELOPMENT IN WEST VIRGINIA

Chairman HAYDEN. Senator Byrd, do you have any questions?

Senator BYRD. Thank you, Mr. Chairman.

Mr. McKernan, what will the State of West Virginia receive under the Commercial Fisheries Research and Development Act in fiscal year 1967?

Mr. MCKERNAN. As requested, West Virginia would receive $13,000. In 1966, for example, West Virginia's apportionment of our current level of funding was $20,500.

Senator BYRD. How is West Virginia using these funds presently?

Mr. MCKERNAN. West Virginia is now developing a project with our people and plans on using these funds this year.

OHIO RIVER PROJECT

Senator BYRD. Where would this project be located?

Mr. MCKERNAN. It would concern work on the Ohio River and would include biological studies on the rough fish resource as well as the development of fishing gear for harvesting of this resource.

We think that there is a good potential here and we are working very closely with the State conservation commission in developing that program and have had excellent cooperation.

KANAWHA RIVER POTENTIAL

Senator BYRD. Could similar work be done on the Kanawha River?

Mr. MCKERNAN. Yes, it could, Senator. There are undoubtedly many places in the State of West Virginia where small but significant projects could be initiated.

Senator BYRD. Well, you have touched upon the types of projects that could be undertaken in West Virginia with these funds. Would you like to expand on this?

ROUGH FISH POPULATION

Mr. MCKERNAN. Yes. Throughout the Midwest and the Great Lakes for that matter, changing environment, the development of manmade lakes behind dams have created a vast new aquatic environment. Populations of various sport fisheries have been introduced into these lakes and for the most part populations of what people consider rough fish have been introduced.

Oftentimes, sometimes because of man's harvest of the desirable species and no harvesting of these rough fish species, the rough fish tend to take over the environment and make these lakes and lakes behind the dams rather unproductive of good game fish.

RECREATIONAL TYPE FISHERIES

It seems to me very possible for us to manipulate these two populations by making us of the rough fish population for commercial purposes to the benefit of the sports fisherman.

Now we don't know everything we need to know about this yet, Senator, but we are gaining information which will allow us ultimately to suggest the best possible use of these new resources for the maximum benefit of both groups. Much of this work has, hitherto, been developed in Federal laboratories. This particular program now allows us to very easily communicate with the States, keep them much better informed than we have in the past. It makes it mandatory for us so to do, and I believe that there will be early and significant development in this regard.

COMMERCIAL FISHERIES DEVELOPMENT

Developing significant commercial fisheries could be of great importance to fisheries people of the very low income group, for example some people in your own State. I think this could be an important adjunct to the programs in your State.

ALLOCATION TO WEST VIRGINIA

Senator BYRD. West Virginia was allocated $20,500 in the present fiscal year?

Mr. MCKERNAN. Yes.

Senator BYRD. And under the fiscal year 1967 budget estimate it would be allocated $13,000?

Mr. MCKERNAN. Yes.

Senator BYRD. Now does the reduction result from the reduction in the budget request?

Mr. McKernan. Yes.

Senator Byrd. If you were appropriated the full amount authorized for fiscal year 1967, what would be the allocation for West Virginia?

Mr. McKernan. $25,000.

Senator Byrd. Twice as much as will be the allocation under this budget estimate?

Mr. McKernan. Yes.

Senator Byrd. Now will West Virginia lose the funds presently available if they are not committed during this fiscal year?

Mr. McKernan. They will hold over 1 more year. They are available 2 years.

Senator Byrd. So they would be available throughout fiscal year 1967?

ASSISTANCE IN STATE RECRUITING PROGRAMS

Mr. McKernan. Yes. There is no great pressure on us at the present time. We can develop good sound programs and make sure we have good personnel. In that regard, Senator, I might add we are also trying to work with the States and help them in their recruiting programs. We have of course a great many more sources of information about young people coming from the universities than do the States. I think that we can act as an honest broker in this regard to provide qualified people for the development of these programs. I believe this is going to help the State in the fish and game department.

We are also of course working with the Bureau of Sport Fisheries and Wildlife who are interested in recreational fisheries. We are working together. Here it seems to me we have a real potential for benefiting the fisheries of the Nation.

Senator Byrd. So the fiscal year 1966 funds in the amount of $20,500 will be available for West Virginia throughout fiscal year 1967?

Mr. McKernan. Yes.

Senator Byrd. But the $13,000 available under fiscal year 1967 estimates would then be available through fiscal year 1968?

Mr. McKernan. Yes.

PROGRAM PARTICIPATION BENEFITS FOR WEST VIRGINIA

Senator Byrd. What economic benefits will result to West Virginia if the State participates in this program?

Mr. McKernan. I believe that jobs would be created, not only jobs in fishing but jobs in processing and distribution. In other words, the development of a commercial fishery will mean a good deal more to the economy than just the benefits to the fishermen themselves.

In our view, and it can be shown very easily, the economic benefits tend to spread throughout the entire community.

There is gear that must be manufactured and sold. There are fishing vessels, and engines and motors that need servicing, maintenance and repairs. There are plants for preservation, either freezing or for other processing of various kinds, and there are local people working in those plants whose wages go into the local economy.

Then the marketing of the fish products themselves is an industry in many States. The transportation of the fishery products to other markets within the State will also create jobs.

So, in my view, commercial fisheries to a surprising degree have the potential to exert a surprisingly important influence throughout the entire economy of any area, including your West Virginia, Senator.

Matching Funds for West Virginia

Senator Byrd. West Virginia would then have to appropriate about $11,000 to match the $33,500 available for both fiscal years?

Mr. McKernan. Yes, providing the projects that West Virginia developed were of a scope to be considered at the 75-percent-25-percent matching level. We have been funding some projects at the 50–50 level.

Now the projects that we are developing with State authorities at the present time we think would qualify for the higher degree of Federal matching funds.

Senator Byrd. I take it that there is no lack of interest in West Virginia?

Mr. McKernan. No, there is not. There is a great interest and excellent cooperation from well-qualified people.

Senator Byrd. From the contacts you have had with responsible West Virginia officials, do you feel that the State is moving forward with the intention and desire to avail itself of the $33,500?

Mr. McKernan. There is no question about this, they are.

New Commercial Fishery Development

Senator Byrd. It is my understanding that section 4(c) of Public Law 88–309 authorizes a $100,000 a year appropriation for the development of new commercial fisheries. It would authorize the Secretary of the Interior to make nonmatching grants to the conservation departments of States for the development of new commercial fisheries. However, this section has never been funded and I do not know why.

There is a possibility that a commercial fishery may well be developed along the Ohio River. Please submit a report for the record on the potential contained in this section.

Mr. McKernan. Section 4(c) of Public Law 88–309 authorizes the appropriation of $100,000 a year. These funds shall be made available to the States in such amounts as the Secretary may determine for developing new commercial fisheries. There are many inland areas throughout the country which do not now have a commercial fishing industry. However, the large rivers and manmade reservoirs offer a great potential for the development of small but productive segments of the industry. For example, the Ohio River bordering West Virginia has large populations of rough fish. Very little is known about these species of fish, but we are sure that a commercial fishing industry could be developed in this area. The biological potential of these fish populations should be investigated and new types of gear should be developed to harvest these fish. There should also be studies in the marketing of these fishery products throughout the in-

land area. A similar potential exists in the Kanawha River in West Virginia.

Senator BYRD. Thank you, Mr. McKernan.

Thank you, Mr. Chairman.

DISPOSITION OF SEAL FURS

Chairman HAYDEN. Senator Bartlett.

Senator BARTLETT. Mr. McKernan, you were talking about seals. You were talking about the Russian seals. Are members of the International Commission or their staff members permitted to go to the Russian island?

Mr. MCKERNAN. Yes.

Senator BARTLETT. Now how are these furs divided through the international agreement?

Mr. MCKERNAN. The United States harvests the fur seals and 15 percent of this harvest is given to Canada and 15 percent to Japan. The same disposition is made of the Russian catch; that is, 15 percent of the Russian catch is made available to Japan and 15 percent to Canada. The reason for this, of course, is that these two countries who formerly hunted seals on the open ocean have agreed not to carry out pelagic sealing and take their share from the harvest made on land. We believe the greatest economic benefit comes from land sealing rather than from pelagic sealing where a considerable number are lost.

Senator BARTLETT. The Russians give us that?

Mr. MCKERNAN. The Soviets share none of their sealskins with the United States and we give them none of ours.

CLAMS IN SEED OYSTERS

Senator BARTLETT. You were talking about clams being imported with oysterseeds and being reproduced on our coasts. Has this developed into a commercial fishery? Are these good clams?

Mr. MCKERNAN. Yes, it has; and it has developed in the Pacific Northwest.

DEVELOPMENT OF COMMERCIAL OYSTER FISHERY IN ALASKA

Senator BARTLETT. Why, in your opinion has a successful commercial oyster fishery never been developed in Alaska?

Mr. MCKERNAN. Most of the coastal waters of Alaska are relatively cold and at least at some times of the year the waters get so cold that growth is inhibited of these oysters.

Now in my opinion we undoubtedly could develop a strain of the Pacific oyster which would grow faster and do better in Alaska. There has been a little experimental work done in this but nowhere near enough. What we need to do, of course, is do selection kind of experiments which would tend to pick the oysters best suited for that environment. We have not done that. We have really not done that yet.

POLLUTION AFFECTING OYSTERS

Senator BARTLETT. Has the oyster fishery farther to the south, farther south than Alaska—Washington and Oregon, for example—been seriously hurt these last few years by pollution? California might be included.

Mr. MCKERNAN. Yes, it has. Pollution is an increasing problem in the oyster fisheries of the United States as a whole, not only the west coast. Certainly steps are being taken in Puget Sound and some other bays in the State of Washington and Oregon as well but nowhere near enough in my view. I think this pollution legislation that has recently been introduced in the Congress will be a very important step in helping communities to clean up their pollution, helping whole river basins to improve the pollution picture. I am personally very much concerned about pollution in the United States, pollution of our bays and waters. I think this is a very serious problem.

OYSTER RESEEDING IN PUGET SOUND

Senator BARTLETT (presiding). In Puget Sound, which you have mentioned, is it necessary to bring these oysterseeds over every year?

Mr. MCKERNAN. Yes, it is. Now one could skip a year, for example, if one brought enough seed over from Japan and some come from Formosa and even Okinawa. Generally speaking, the oysterseed is brought over every year, because the waters don't get warm enough or stay consistently warm enough in the Pacific Northwest for the Pacific oyster to reproduce regularly. It does reproduce some every year but not enough to satisfy the requirements of the oyster industry.

Senator BARTLETT. I am jumping around, as you have already noted, picking up thoughts developed during your testimony and questions previously asked you, Mr. McKernan.

ATLANTIC MENHADEN

You referred to the alarming decline in the menhaden catch which was worth how much, would you judge, at the ports before it began this decline?

Mr. MCKERNAN. In the order of $35 million before the decline, and the decline in catch on the Atlantic coast has been so great that many of the plants have been closed completely. It is a very serious matter.

Senator BARTLETT. Two-thirds down?

Mr. MCKERNAN. Yes; in some areas.

Senator BARTLETT. Reduction of two-thirds?

Mr. MCKERNAN. The reduction in the total Atlantic coast catch has been nearly one-half, but the decline has been much more serious along the Delaware and New Jersey coasts than in Chesapeake Bay and southward.

EMPLOYMENT AFLOAT IN THE MENHADEN FISHERY

Senator BARTLETT. Do you know how many people were employed in this industry afloat before the decline started?

Mr. MCKERNAN. Literally hundreds. I can supply the exact amount for the record.

Senator BARTLETT. I wish you would.

(The information follows:)

	Number	Year
Employment before decline	4,353	1960
Employment after decline	3,196	1964

Senator BARTLETT. Is there any hope that this can be brought back?

Mr. MCKERNAN. Oh, yes. I am confident that we can find out why this decline has occurred and I am quite confident but not positive that rehabilitation of this fishery can take place. If it was caused by the fishery this is relatively easy. If it was caused by pollution or some other man-made reason, it would be more difficult. If it is a natural condition, it will come back.

KING CRAB PRODUCTION

Senator BARTLETT. I wish you would tell us something about the amazing growth of the king crab industry in recent years.

Mr. MCKERNAN. Yes. The king crab fishery is very rapidly becoming one of the major fisheries of the United States. After the war exploration in the Bering Sea by the Government, by this Bureau, discovered king crabs. Some of the alert, aggressive young industry people, especially the Wakefield people, began this fishery and it, as you know, Senator, struggled along for several years. By insisting on very high quality products and by carrying out, with Government cooperation, some studies of processing and transportation a very high quality product was developed.

AVAILABILITY OF KING CRAB IN RESTAURANTS

Now of course, king crab is regularly available in all of the better restaurants in Washington, D.C., and the growth of this fishery has been little short of phenomenal. My guess is that in 1966 we will harvest about 100 million pounds of this wonderful seafood, and it will be extensively used in Europe as well as throughout the United States. The king crab resources are very large in the Bering Sea. The Japanese are harvesting king crab and so is the Soviet Union. Our own fishery is developing out along the Aleutian Chain, as you well know, and is even beginning to develop in the Bering Sea. I think the potential is very great for an increased catch, and, although I would not like to say how much, I am confident of a much greater increase.

Now this king crab resource has had a tremendous effect on the people of that portion of Alaska nearest to this fishery. We have a large number of native communities who have been depending for years and years upon salmon over a very short season. Now they have something—king crab—that spreads out the Alaska economic base over many more months and this new factor is most important to these communities.

YEAR-ROUND FISHING

Senator BARTLETT. How many months a year can king crab be fished?

Mr. MCKERNAN. They actually can be fished 12 months of the year. They usually aren't. During some periods of the early summer the fishery tends to slack off but king crab is landed in Alaska, every month of the year.

Senator BARTLETT. And there is ready market acceptance?

Mr. MCKERNAN. Very good market acceptance.

LANDINGS FOR YEARS 1954–65

Senator BARTLETT. Will you be good enough to furnish for the record a table showing production for each of the last 10 years?

Mr. MCKERNAN. Yes, Mr. Chairman.

(The information follows:)

[Thousands of pounds and thousands of dollars]

	King	
	Quantity	Value
Year:		
1954	8,871	880
1955	8,163	809
1956	8,796	864
1957	13,077	1,046
1958	11,212	897
1959	18,840	1,478
1960	28,570	2,286
1961	43,412	3,914
1962	52,782	5,278
1963	78,740	7,607
1964	86,721	8,186
1965 (preliminary)	100,000	9,500

Senator BARTLETT. I might remark that they had an unfortunate episode here 2 or 3 years ago. They were sending some of these king crabs over to an aquarium in Europe over the pole from Anchorage, Alaska in an airplane and the airline chef at Paris saw them and he thought they were for his table and he cooked them and they had to repeat the venture.

VALUE OF SHRIMP FISHERIES

Now what is the most important fishery in the United States in terms of dollars and cents?

Mr. MCKERNAN. The shrimp fishery, Senator, and the total value of the shrimp fishery at the fisherman level is in the general neighborhood of $70 million.

EMPLOYMENT AFLOAT IN SHRIMP INDUSTRY

Senator BARTLETT. How many people employed afloat? If you don't know, furnish it for the record.

Mr. MCKERNAN. I will be glad to do that.

(The information follows:)

	Number	*Year*
Employment shrimp industry	16,133	1964

MOST SHRIMP FROM GULF WATERS

Senator BARTLETT. Where is most of this shrimp caught?

Mr. MCKERNAN. In the Gulf of Mexico.

Senator BARTLETT. In U.S. territorial waters or close to them?

Mr. MCKERNAN. In U.S. territorial waters or close to them, the bulk of the catch is taken.

Senator BARTLETT. Is some off Mexico?

Mr. MCKERNAN. Some are taken off Mexico, others off Central American countries, and more recently along the northeast coast of South America a new source has been exploited after U.S. industry followup of the Bureau's explorations for shrimp resources there.

There are now active in this latter area at least 200, and maybe closer to 300 American vessels fishing out of ports in the Caribbean and the northeast coast of South America, transporting the shrimp into the United States for processing and marketing.

Senator BARTLETT. Is this a developing market also?

Mr. MCKERNAN. A tremendous developing market. Shrimp probably has the greatest acceptance and is growing more rapidly than any other fishery product in the United States.

ALASKAN SHRIMP RESOURCES

Senator BARTLETT. I have heard, and I would like to check this with you, that Alaska has enough shrimp resources to supply 20, perhaps even 25 percent of the U.S. demand. Would you comment on that, please?

Mr. MCKERNAN. Well, from our research in the waters of Alaska which has not been complete by any means, since it has been somewhat scattered, we believe there are great resources of shrimp in Alaska. In fact these resources might be as great as those in the Gulf of Mexico and off northeast South America.

Of course there is a different species taken in Alaska. In fact, there are two or three species. The most common one is a fairly small one. We call it a cocktail shrimp, but it is found all around central and southeastern Alaska and is found in the Bering Sea in great quantites also. The Japanese have a large fishery, not far from the Pribilof Islands for shrimp at the present time. We have not yet really touched the shrimp resources in Alaska.

Senator BARTLETT. The small shrimp is the only one available there?

Mr. MCKERNAN. No. There are probably quantities of the larger shrimp, but we really don't know very much about Alaska's shrimp.

Senator BARTLETT. Well, is there any marketing problem in respect to the small shrimp?

Mr. MCKERNAN. Yes, there is a marketing problem. In past years the Alaskan operators or processors, handpicked the shells from the shrimp. Now this obviously is expensive, and with labor costs increasing rapidly, it has become most difficult to compete economically with sources of shrimp from other areas of the United States and with other high quality, highly desired gourmet types of foods such as this is.

There have been some shrimp peeling machines developed and these machines have been tested in Alaska. But unfortunately, they have not yet been very successful, I am sorry to say. They beat the shrimp up, en route to the shore plant, so that the end product does not look

very good as to appearance and is not even of first-class quality as could be produced if more care were timely taken.

Senator BARTLETT. Now what is its quality when it started out, when it came out of the sea?

Mr. MCKERNAN. Oh, absolutely perfect, of course, from the very cold waters of the North Pacific. Anyone can imagine the good quality of the seafoods from these areas.

Senator BARTLETT. Well, now here we have a dual problem as I see it. One, the perfection of marketing techniques for these little shrimp and then you said that there probably are resources in Alaska equal to those in the Gulf of Mexico, in any case a tremendous fishery and yet not too much is known about it. How much money is the Bureau asking for research with respect to a fishery that may be tremendous in size?

Mr. MCKERNAN. We have not asked for any increase this year, Senator. We received $90,000 to start an exploratory fishing program last year.

Senator BARTLETT. How much?

Mr. MCKERNAN. $90,000 in 1966 to carry out gear research and to continue the explorations to further refine the areas from which Alaska might expect to harvest even more of its latent shrimp resource.

RESEARCH ON ALASKAN SHRIMP

Senator BARTLETT. Gear research on shrimp?

Mr. MCKERNAN. Yes.

Senator BARTLETT. In other words, you just started this fiscal year?

Mr. MCKERNAN. Yes.

Senator BARTLETT. And for the first time?

Mr. MCKERNAN. For the first time.

Senator BARTLETT. Where is this research based?

Mr. MCKERNAN. It is based out of both Juneau and Kodiak. We are reconstructing the base in Kodiak and it is very likely that this research would be conducted out of the Kodiak base when and if there were funds available for further work there.

Senator BARTLETT. What does the Ketchikan Laboratory have to do with this?

Mr. MCKERNAN. The Ketchikan Laboratory is our technological laboratory and that is where we are carrying out some studies on the problems of producing a higher quality product from the shrimp, improving such production elements as the peeling and handling at sea of the shrimp themselves to further improve the end product quality level.

Senator BARTLETT. Now will Ketchikan subsist on this $90,000 also?

Mr. MCKERNAN. No, Ketchikan's funds are separate from this.

Senator BARTLETT. Amount to perhaps how much?

Mr. MCKERNAN. Our total budget in Ketchikan is about $140,000, but this includes all of the technological work done on all species of fish in Alaska.

Senator BARTLETT. Does the State contribute to that laboratory?

Mr. MCKERNAN. No longer; no, they do not. The State, of course, cooperates in other ways. They contribute services but they do not contribute any funds for this particular program effort on shrimp.

KING CRAB

Senator BARTLETT. You have a tremendous job ahead of you.

Does Ketchikan do something about king crab, too?

Mr. MCKERNAN. The laboratory does, yes; it is studying technological problems, working very closely with the industry. Recently, for example, the king crab industry has asked the Bureau to help it develop quality standards for its product. In our view, this is a very excellent thing. It shows the high degree of concern and interest of the Alaskan fishing industry for establishing a high quality level. We are working with that industry to develop these same quality standards for king crab products.

SHRIMP RESEARCH

Senator BARTLETT. Well, could you usefully employ more money for shrimp research in the nature you described it is being performed from Juneau, from Kodiak and in respect to Ketchikan laboratory?

Mr. MCKERNAN. Yes, Senator.

ALASKA SHELLFISH

Senator BARTLETT. How much could you put to gainful use in each category? I mean if someone opened the Treasury to you.

Mr. MCKERNAN. Well, that is a difficult thing to answer.

Senator BARTLETT. Well, will you put a statement in the record?

Mr. MCKERNAN. Yes; I will be glad to.

(The information follows:)

BIOLOGICAL RESEARCH

Research completed to date on king crabs in the Gulf of Alaska has shown that this is a very complex problem. There are probably several distinct stocks, and each must be studied separately. The rapidly developing domestic fishery will probably take more than 100 million pounds in 1966, and scientific knowledge of the resource and the fishery should be gathered as rapidly as possible if overfishing is to be avoided.

Experience of the past few years has confirmed the existence of large quantities of shrimp in the Gulf of Alaska. The domestic fishery is certain to develop rapidly as methods of utilizing the smaller varieties are perfected. At present, only a token amount of the Bureau's Alaskan shellfish funds are being spent on shrimp research.

Considering limitations imposed by available facilities and skilled personnel, the Bureau could use effectively an additional $150,000 in fiscal year 1967 for crustacean shellfish research.

TECHNOLOGICAL RESEARCH

It is estimated that the Alaskan shellfish industry could contribute $150 million toward the Nation's economy if new product forms and modern processing techniques were initiated. For example, the practice of aging shrimp to loosen the shell prior to peeling has contributed to lowering the quality of the product. Other practices which also contribute to a decrease in Alaskan shellfish quality can be improved.

The Bureau's current technological research program in Alaska is aimed toward improving quality of this important resource. Projects now underway include: (1) stabilization of king crab pigments, and (2) improved techniques for the peeling of shrimp, including a hot precook technique that loosens the shell to facilitate machine peeling.

An accelerated research effort is needed to (1) carry previous research findings into the pilot plant stage, (2) to determine optimum methods for maintaining the quality of shrimp held aboard vessels for long periods, and (3) to

investigate the value of holding shrimp in a containerized form at sea, thus allowing better quality control over the product and facilitating transfer to carrier vessels for transport to shore.

These studies will be carried out aboard a chartered shrimp vessel, at the Bureau's Kodiak research station, and at the technological research laboratory in Ketchikan, at an estimated cost of $80,000.

KING CRAB RESEARCH

Senator BARTLETT. I know you are never inclined to exagerate, you will not go to excess here. It seems to me that in reference to king crab research that we must move more speedily to find out what we have in those waters and to find means of better marketing techniques.

Mr. MCKERNAN. Well, the Alaskan industry, if adequate exploration and technological developments occur and with the present aggressive leadership in the industry itself, I believe that the next 10 years are going to see an amazing increase in the fishing industry of Alaska and an amazing increase in the use of these resources which heretofore have been used primarily for the benefit of foreign fishermen, especially in the years since the war.

Senator BARTLETT. I rejoice, Mr. McKernan, in fact I have in my freezer at home right now a can of the cocktail-size shrimp handpicked.

ANADROMOUS CONSERVATION—PUBLIC LAW 89-304

Are you familiar with Public Law 89-304 which is a law to authorize the Secretary of the Interior to initiate with the several States a cooperative program for the conservation, development, and enhancement of the Nation's—I spent a whole fall trying to learn to pronounce this word—"anadromous," and for other purposes.

This authorizes up to $25 million to be appropriated for the period ending June 30, 1970, and though that was signed into law October 30, 1965, there are many of us who believe that this is one of the most important legislative acts regarding the fishery to go into the books for quite some time.

How much do you propose to spend on this program in the fiscal year 1967?

Mr. MCKERNAN. We did not budget for it, Senator. It passed very late in the session after our budgets had been formulated.

Senator BARTLETT. Did the Bureau of Commercial Fisheries ask for any more money for this program?

Mr. MCKERNAN. No, because it had not become a law.

Senator BARTLETT. Well, if the committee were to ask you if this program could be put into effect in the fiscal year 1967, what would you say?

Mr. MCKERNAN. I would say it could be. In fact, perhaps I ought to clarify my preceding answer, Senator. The Bureau is considering a supplemental appropriation request as is the Bureau of Sport Fisheries and Wildlife.

The Bureau of Sport Fisheries and Wildlife has a great interest in this program and we developed cooperatively the means for implementing the program when it is funded.

Senator BARTLETT. If the committee were to say it should be funded and were to fund it, what amount would you recommend?

Mr. McKernan. For fiscal year 1967 both Bureaus estimate we likely could allocate to the States and the States could match in the general area of about $5 million.

Senator Bartlett. You say that you could use a substantial portion of the funds which this act authorizes in fiscal year 1967 and that you are considering a supplemental budget request for fiscal year 1966, and I presume 1967. Would you please provide for the record a statement of the sort of a program your Bureau could undertake in 1966 and 1967 if this committee were to provide $1 and $5 million in the way of an appropriation. Please also indicate allocation for each of the eligible States.

(The statement follows:)

PUBLIC LAW 89-304

The Bureau is considering the submission of a supplemental budget request for fiscal year 1966 to initiate the new Anadromous Fish Act (Public Law 89-304). In an informal survey of the States relative to their desire and ability to participate in this new program, we have ascertained that there is great interest in this legislation. The States are prepared to match on a 50-50 basis over $1 million during the current fiscal year for commercial fishery projects on anadromous species. These same States are prepared to match over $4 million in Federal funds during fiscal year 1967. The greatest interest in the program seems to be along the Pacific coast, including Alaska. There is also some interest in the Great Lakes and in certain States along the Atlantic coast. When this program is funded, the Bureau would use these funds in cooperative research and development programs with the States. Such work include stream clearance; the construction of spawning channels, rearing ponds, fish passage devices, and hatcheries; the screening of irrigation ditches; research into the prediction of anadromous fish runs; and the collection and analysis of fishery statistics. All of these programs will assist the States in the preservation of the anadromous fishery resources which are of great importance to the Nation.

Any funds appropriated for implementation of the program would be allocated to the States on the basis of need and desire of the State to participate. An apportionment formula has not yet been developed.

EXPIRATION OF STATUTE

Senator Bartlett. Aren't we facing in respect to this law, as well as the Research and Development Act, a very serious danger in that if we don't move adequately by way of appropriations the law is going to expire with the dates established within them.

Mr. McKernan. Yes.

Senator Bartlett. And none of us knows whether or not they can be renewed?

Mr. McKernan. Yes; that is right. This law expires June 30, 1970.

Senator Bartlett. And the Research and Development Act has only 2 or 3 years to run?

Mr. McKernan. Yes.

Senator Bartlett. And never has been fully funded; has it?

Mr. McKernan. No.

CONSTRUCTION OF FISHING VESSEL "DELAWARE II"

Senator Bartlett. Mr. McKernan, Senator Saltonstall would like you to keep the committee informed on progress of replacement of the vessel *Delaware II*. Will you do this, please?

Mr. McKernan. Yes, I certainly will. I will be glad to put a statement in the record concerning the current status of this matter. I am very much concerned about it also, Senator.

(The statement follows:)

Contract was awarded on May 22, 1964, to South Portland Engineering Corp., South Portland, Maine, for construction of the *Delaware II*. Work was to be completed by December 16, 1965. The contractor planned to construct the hull in seven sections inside a building and then move the sections to an adjacent basin where the hull would be welded together. On May 5, 1965, a fire completely destroyed the building in which work was being performed and damaged the work in process to such an extent that all hull sections were rejected. A work suspension order was issued by the contracting officer pending decision by the contractor as to how the contract would be completed. The contractor requested that the contract be reformed and that the amount be increased by $256,429 to cover the increased cost of constructing the vessel outdoors during inclement weather. On October 22, 1965, the Comptroller General ruled that there was no basis for reformation of the contract. This decision was appealed by the contractor and was submitted by the Department to the Comptroller General on February 11, 1966, for consideration.

Representatives of the Department and the contractor met with personnel of the General Accounting Office on March 3. At that time the GAO representatives expressed the opinion that the contracting officer could amend the contract and make an equitable adjustment for the increased costs resulting from change in method of construction and acceleration of the construction schedule. At a meeting with Department personnel on March 4 the contractor estimated that its total increased costs for completing the vessel would be approximately $500,000. This estimate was given informally and will be confirmed by the contractor.

Senator BARTLETT. Senator Hayden left with me questions to which Senators Mundt and Robertson desire replies. I will place them in the record and ask that you provide replies.

(The questions and answers follow:)

QUESTION SUBMITTED BY SENATOR ROBERTSON

ATLANTIC AND GULF MENHADEEN PROGRAM

Question. Please provide for the record a statement showing your plans and needs for menhaden fisheries, and biological research in the Atlantic Ocean.

Answer. In recent years the Atlantic menhaden fishery has shown an alarming decline. The fact that this phenomenon cannot be adequately explained demonstrates the inadequacy of our menhaden research program.

The menhaden has a complex life history and is subject to wide variations in abundance from natural causes. Consequently, the research necessary to provide an adequate background for management of menhaden is more costly than research on many other commercial species. At present we are budgeting $210,000 annually on Atlantic menhaden, a resource worth some $23 million during a peak year. Our gulf menhaden program is funded at about $122,000 annually; this is on a resource valued at about $22 million in recent years.

The Bureau's present biological research program could be extended in the following directions to help the industry solve its present problems.

1. *Obtaining knowledge about the characteristics of menhaden populations—$350,000 annually.* The Bureau of Commercial Fisheries started a limited tagging study in 1965. The budget for fiscal year 1967 proposed an increase of $100,000 to expand this program to about $200,000. An additional $150,000 would permit us to obtain timely information over a more extensive area of the coast on such basic questions as:

(1) What is the maximum sustainable yield of this resource?
(2) What are the effects of natural and fishing mortality?
(3) Is there overfishing?
(4) What is the geographic distribution of menhaden stocks?
(5) Where do they migrate?
(6) What controls, if any, are necessary to maintain adequate yields?

2. *Studies on menhaden physiology and behavior—$100,000 annually.*—Although menhaden are one of the major commercial species, little is known about their physiology and basic behavior, food and feeding habits, the effect of various environmental factors on movements and survival; and the importance of subpopulations. These are things we need to know to help explain why menhaden fluctuate so much in abundance.

3. *Research on environmental effects during spawning and early larval development—$200,000 annually.*—The lack of data on spawning and early development of menhaden has been a major void in studies on this resource. Knowledge of areas and times of spawning and early development, as well as the relation of certain environmental factors such as temperature, salinity, and current patterns, are necessary to evaluate possible causes in the fluctuations and survival of year classes. This knowledge would permit predictions on future abundance to help the industry plan their operations and to avoid overfishing.

Menhaden appear in abundance along the coasts of 12 Atlantic and Gulf States. Because answers to a sound management program require intensive scientific effort, it is logical for the Federal Government to take the leadership in this research program.

The program, amplified above, would require $450,000 more than budgeted in fiscal year 1967, 17 new positions in the first year, and increase to about $1.5 million in 5 successive steps, as follows:

Year	Increase	Atlantic	Gulf	Total
1st	$450,000	$660,000	$120,000	$780,000
2d	225,000	885,000	120,000	1,005,000
3d	225,000	1,110,000	120,000	1,230,000
4th	150,000	1,260,000	120,000	1,380,000
5th	150,000	1,410,000	120,000	1,530,000

Additional physical facilities required would include: Addition to Beaufort laboratory, $250,000; research vessel, $1,500,000.

Although the increased research discussed above is aimed primarily at the Atlantic menhaden resource, some of the knowledge and techniques developed would have application to gulf menhaden stocks. Eventually, we would shift greater emphasis to this area, but to obtain similar data concurrently for the gulf area would require considerable additional funding and effort.

Question Submitted by Senator Mundt

Oahe Reservoir Fisheries Investigations

Question. As you know, a couple of years ago, we started a commercial fisheries investigation on the Oahe Reservoir at Mobridge. Can you give us a brief status report of progress being made there?

Several of my constituents, residents of the area, have contacted me concerning the need for more tail waters research and expansion of biological investigations. Can you give us, or put in the record a statement of the possibilities along these lines? What would the cost be and would you need any additional personnel?

In connection with this same project, I have been contacted by the Mobridge Chamber of Commerce. The chamber is interested in a project which would display mounted specimens of the various species of fish in Oahe Reservoir. Could this type of display be made a part of your headquarters building? What do you think it would cost?

Answer. During the year Bureau biologists examined thousands of fish for biological data and statistics were collected on fishing effort and catch by gear. Much of these data have been prepared for automatic data processing. By the use of trap nets as part of the scheduled program, we have determined the species composition, age class strength, and growth rates of the commercial species. During 1965 from four to six trap nets were fished in the Mobridge area in the spring, in the Whitlock Crossing area in the summer, and near Mobridge in the fall.

Over 50 percent of our trap net catch by weight was buffalofish with individual fish averaging much larger in size than those of the previous year. Trap net catches continued to demonstrate dominance of the 1959 and 1962 year classes of fish. Catches from all types of gear indicate poor hatches in 1960, 1961, 1963, and 1964.

Different mesh sizes were tested in the lifting cribs of traps to find the optimum size for selectively catching commercial species and protecting small fish and sport fish. The experiment determined the mesh size that best met these requirements. Tested also were several small mesh sizes in the hearts

and leads of traps, and the elimination of closed hearts to reduce losses of northern pike by gilling. Results of these studies have indicated the modifications required for minimizing fish mortality.

To obtain information on fish migration and population densities 11,648 fish in the larger size groups were tagged during the trap net operation in 1965, and about 110,000 fish have been marked by removal of fins since 1963. Most of the fish that were tagged and marked were buffalofish. Of the large buffalofish marked the commercial fishery has recaptured nearly one-third of them. Tagged buffalofish have been recovered throughout the reservoir. Since precise data are available on the place of tagging and recovery of fish bearing numbered tags, we will be able to map the migration patterns of buffalofish in the reservoir.

Last year commercial fishermen landed more than 700,000 pounds of fish of which nearly 90 percent was buffalofish. The catch was approximately two times greater than that of 1964. The composition of buffalofish in the catch was quite similar during the past 2 years since commercial fishermen favor this marketable species. Catch rates for both years was high compared to other waters in the United States. Of interest was the change in type of gear used by the fishermen. Whereas gill nets were used almost exclusively in 1964, this past year 56 percent of the catch was taken in hoop nets and only 44 percent in gill nets.

Buffalofish hatched in 1958, the first year of impoundment, dominated the commercial catch. By the end of the 1965 fishing season some of the larger buffalofish of the 1962 class entered the catch, but this group probably will not contribute greatly to the fishery until 1967.

The Bureau's new experimental vessel *Hiodon*, fitted primarily for trawling, was launched in June 1965 and began her cruise schedule in July. Most of the early cruises, up to 2 weeks in duration, were planned to locate good trawling grounds throughout the reservoir. Early attempts at trawling encountered many difficulties—trees and debris often clogged the trawl, trawls were frequently torn, and the gear often snagged trees and stumps. As the crew became more familiar with the bottom configuration and use of the gear, catches increased steadily and fouling of gear decreased. The hourly average catch in pounds by month was as follows: 236 in July; 296 in August; 664 in September; 840 in October; and 1,136 in November. The largest catch was 1,640 pounds in 15 minutes.

Most of the good catches were taken in water less than 35 feet deep and little difference was found between day and night catches. Mortality of sport fish in the trawl catches was negligible.

Data are sufficient from last year's vessel operation to permit the design of a systematic sampling operation for juvenile fish. We hope to be able to quantitatively measure the size of the new year classes of fish and to follow their growth and survival over subsequent years.

The R/V *Hiodon* already has demonstrated its versatility and its usefulness for conducting biological and exploratory fishing operations over long distances for extended periods of time. Planned for 1966 are attempts to catch fish on a commercial scale by trawling and to test new gears and equipment, particularly an electrotrawl. Other plans include three cooperative cruises on the *Hiodon* with biologists of the Bureau of Sport Fisheries and Wildlife.

Tailwater research, $50,000, three positions

For unknown reasons large concentrations of fish are common in the tailwater areas of Missouri River reservoirs. In order to develop recommendations for the wise management of reservoir fishery resources, an understanding is needed of the characteristics of the fish populations in tailwater areas. It is essential to delineate the phenomena responsible for the large concentrations of fish below the dams of the Missouri River; where the fish come from that comprise the populations; the proportion of various fish populations inhabiting the area and the length of time they spend there; and the effect of large-scale harvest of commercial fish on the local fish populations. Studies also would be undertaken to develop methods for the economical and efficient harvest of commercial fish to allow a profitable commercial fishery without harm to sport fish populations.

Expansion of biological investigations, $40,000, two positions

Research on Oahe Reservoir has established the fact that great variability exists from year to year in the success of hatches of various species of fish. Also it has been found that environmental conditions exert a major influence on

the survival, growth, and distribution of fish populations. Not known is the impact on fish life of water chemistry, physical characteristics of the reservoir, and metorological conditions. Studies in these fields will delineate and describe those environmental factors that directly or indirectly affect the well-being of aquatic life.

Studies would be undertaken of water chemistry by season and depth at selected stations on the reservoir. The movements of water masses would be examined and tests would be conducted of the effect of fluctuations in water level on the habitat for fish and fish food organisms. In addition, regular sampling of fish food organisms such as plankton and bottom fauna would be instituted. Analyses of these data would provide scientists with an understanding of the processes that affect fish productivity and enable them to describe the potential of the reservoir to produce fish. Knowledge acquired from this research will help to establish management policies for the optimum utilization of the fish resources.

Exhibit, Mobridge, S. Dak., Biological Station

We believe a mounted fish display could be made a part of the Mobridge Biological Station. This would require an addition to the present station by the owner and would result in an increase in rental charges to the Bureau. Within the funds provided by an increase in tail-waters research and an expansion of biological investigations we would be able to cover costs of maintaining the exhibit room.

SUBCOMMITTEE RECESS

Senator BARTLETT. The subcommittee appreciates your appearance and the appearances of your associates. I thank you for some very excellent testimony.

Mr. MCKERNAN. Thank you very much, sir.

Senator BARTLETT. We will stand in recess until 2 o'clock, when the Bureau of Sport Fisheries and Wildlife will be heard.

(Whereupon, at 11:45 a.m., Thursday, March 3, 1966, the hearings were recessed, to be reconvened at 2 p.m. the same day.)

(AFTERNOON SESSION, 2 O'CLOCK, THURSDAY, MARCH 3, 1966)

The subcommittee met at 2 p.m., in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman, presiding.

Present: Chairman Hayden and Senators Byrd, Bartlett, and Young.

DEPARTMENT OF THE INTERIOR

BUREAU OF SPORT FISHERIES AND WILDLIFE

MANAGEMENT AND INVESTIGATIONS OF RESOURCES

STATEMENTS OF JOHN S. GOTTSCHALK, DIRECTOR; ABRAM V. TUNISON, DEPUTY DIRECTOR; WARREN J. WISBY, DIRECTOR, NATIONAL FISHERIES CENTER AND AQUARIUM; SAMUEL BENJAMIN, ASSISTANT DIRECTOR, ADMINISTRATION AND ENGINEERING; GEORGE F. SPODEN, ACTING ASSISTANT DIRECTOR, OPERATIONS; RAYMOND E. JOHNSON, ASSISTANT DIRECTOR, RESEARCH; JAMES T. McBROOM, ASSISTANT DIRECTOR, COOPERATIVE SERVICES; JACK H. BERRYMAN, CHIEF, DIVISION OF WILDLIFE SERVICES; ROY E. PELTO, BUDGET OFFICER

1967 BUDGET REQUEST

Chairman HAYDEN. The subcommittee will be in order. The fiscal year 1967 budget estimate for "Management and investigations of resources, Bureau of Sport Fisheries and Wildlife," will be considered at this time. A highlight statement submitted with the justification will be printed in the record at this point.

(The justification follows:)

The purpose and long-range objectives of the program for management and investigations of resources are the perpetuation, use, and enjoyment by the people of the sport fish and wildlife resources of the Nation. These objectives are attained through production and distribution of hatchery fish; the maintenance of a nationwide system of wildlife refuges; the regulation of migratory bird hunting; and the management of fish and wildlife populations by scientific research and methods, all conducted in cooperation with the States and private organizations.

The 1966 appropriation provided for wage board increases, operation of new facilities at eight fish hatcheries and eight refuges; planning for the National Fisheries Center and Aquarium; establishment of seven cooperative fishery units and one fishery management project, construction of facilities and studies for the rare and endangered species program, planning for research work at a marine laboratory, operation of a research vessel and experimental sea tank, expansion of reservoir investigations, additional bird banding work, comprehensive basin planning and the registration of pesticidal chemicals. There were savings from the deactivation of 8 hatcheries, curtailed operations at 11 wildlife refuges, and a reduction of federally paid mammal control work in certain areas. A supplemental appropriation is proposed to cover Pay Act costs, wage board increases, and expanded pesticides research.

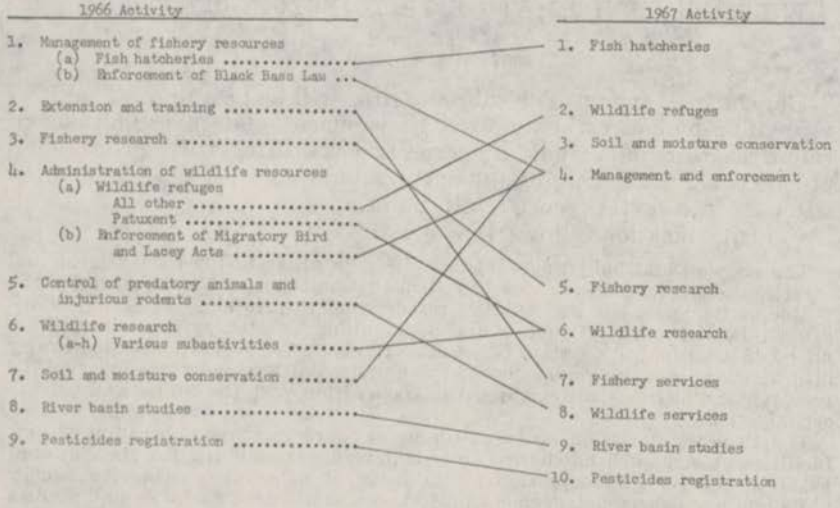
In 1966, the Office of the Commissioner, Fish and Wildlife Service, was reorganized to transfer operational functions together with the funds and manpower associated with these functions to the two constituent Bureaus of the Fish and Wildlife Service. Functions, permanent positions and funds transferred to the Bureau of Sport Fisheries and Wildlife and reflected in the estimates as a

comparative transfer in the "Management and investigations of resources" appropriation are as follows: Conservation education, 13 permanent positions, $127,617, and international relations, 1 permanent position, $15,920. In addition, one permanent position and $20,353 for the safety function are shown as a comparative transfer in the "General administrative expenses" appropriation. These transfers place directly under the control of the Bureau the conservation education function consisting of the issuance of publications, informational, and educational materials and audiovisual aids and the dissemination of research findings through all media; the international relations function consisting of developing sport fisheries and wildlife policies and programs involving relationships with foreign countries; and the safety function consisting of staff assistance in the development of programs to reduce losses from accidents to employees and property.

The increase in the 1967 estimates provide for operation of new facilities at 16 fish hatcheries, operation of a spawning channel, continuance of planning and expansion of operations for the National Fisheries Center and Aquarium, operation of 14 new wildlife refuges and waterfowl production areas, augmenting the staffing of fish and wildlife research centers, initiation of a new program of wildlife enhancement, expansion of the pesticide research program, replacement of 5 aircraft, and annualization of Pay Act costs. Partially offsetting the increases in the estimates is a transfer of financing of a portion of the refuge program to the national wildlife refuge fund.

The activity structure of this appropriation has been revised with some shifts in funds to conform it more closely with the organization structure of the Bureau. Following is a conversion chart showing the old and new activities:

Bureau of Sport Fisheries and Wildlife
Activity Structure - Management and Investigations of Resources Appropriation
Conversion Chart



PREPARED STATEMENT

Chairman HAYDEN. Mr. Gottschalk, you may present your written statement for the record, and summarize it if you wish.

Mr. GOTTSCHALK. Thank you, Mr. Chairman.

We have a statement we will supply for the record.

(The statement follows:)

Before discussing our estimates for 1967 I would like to report to you briefly on changes in our organization and programs since I first appeared before you last year.

The Bureau reorganized along functional lines into four major groupings each headed by an Assistant Director. There are (1) Operations, consisting of the Divisions of Fish Hatcheries, Management and Enforcement, Realty, and

Wildlife Refuges, (2) Research, consisting of the Divisions of Fishery Research and Wildlife Research, (3) Cooperative Services, consisting of the Divisions of Federal Aid, Fishery Services, River Basin Studies, and Wildlife Services, and (4) Administration and Engineering, consisting of the various administrative dvisions, the Division of Engineering and the Job Corps staff. These new groupings replaced the former groupings of Sport Fisheries, Wildlife, Technical Services, and Administration. Our functions are now more logically and effectively organized and the change permitted the top staffing of our regional offices with a regional director, an associate regional director, and two assistant regional directors instead of a regional director and four assistant regional directors. This resulted in a saving of one upper level position in each regional office for a total of five.

As to reorganization changes beneath the directorate level, the Division of Predator and Rodent Control was replaced by the Division of Wildlife Services and new responsibilities were assigned to this division to achieve long-range goals. You may recall that at last year's hearings we discussed the report of the Secretary of the Interior's Advisory Board on Wildlife Management. This report recommended a change in the name and a reassessment of the role of the Division of Predator and Rodent Control to meet the minimal needs of the public within a broad policy of wildlife conservation and management. In furtherance of the recommendations, a new program of wildlife enhancement has been initiated in the new Division of Wildlife Services to assist governmental and private agencies and organizations and individuals in realizing the full potential of wildlife resources. Initial emphasis is being placed on assistance to military and Indian lands with particular attention to migratory species.

Our justifications reflect changes in titles and some minor transfers of funds among the various activities of the management and investigations of resources appropriation to streamline and conform activities more closely with the organizational stucture and to give effect to the reorganization changes I have just mentioned. Our activities are being reoriented so they may relate more closely and make a substantial contribution to Government-wide programs that look to development of the Great Society. While our functions are principally concerned with fish and wildlife, they help achieve the aims of restoration of the natural beauty of our country as expressed in the President's message on natural beauty. We acquire and preserve marshes and other areas of natural beauty and above all contribute to providing a living environment for wildlife to natural landscapes complete. Preliminary studies indicate that some of our lands can contribute to the wilderness program to preserve in its original state as much natural habitat as possible. Also by acquiring and developing areas nearer to centers of population we can provide outdoor recreation to the people and thus contribute to this new and important part of the program of the Great Society to make human experience more worthwhile.

In addition to furnishing natural beauty and recreational opportunities to the people of today we are part of the great crusade of restoring the quality of our environment so that future generations may have an unspoiled heritage of water and air as well as land. Our activities of pesticides research and pesticides registration, marsh, and estuary protection, studies of environmental conditions and changes, pest and pollution oriented research as well as clean in-house operations all contribute substantially to preserving or restoring the quality of our environment. Most of these activities have a direct relationship to clean water and in this respect they will be increasingly of vital concern to the Nation as fresh, wholesome supplies of this important resource become scarcer and more critical to man's health as well as to the preservation of our fish and wildlife resources.

The vital pesticides research program is being vigorously pursued. Legislation in 1966 increased the annual level of expenditures for pesticides research to $3.2 million in 1966 and $5 million in 1967 and 1968. Construction of the new Pesticides-Fishery Laboratory at Columbia, Mo., and the Pesticides-Wildlife Laboratory at Denver, Colo., is being completed. Staffing for operation of these facilities will be initiated in 1966 with a proposed supplemental appropriation of $105,000.

With funds appropriated last year, the Bureau has embarked upon a new and significant program of protection of rare and endangered species of wildlife. While endangered wildlife is of great interest to the people of today the program is primarily one for the benefit of future generations. This as well as other

programs of the Bureau cannot be measured solely in terms of their immediate output benefits. Rather they are more like capital investments which will continue to offer returns to generation after generation in the future. Actually many people do not think of endangered species in ordinary terms of dollars and cents but as an issue involving deep moral and esthetic considerations touching on the meaning of man's existence and purpose on earth.

The Bureau, in the course of conducting its operations, is making other contributions to the Great Society and is oriented to human as well as natural resource needs. We are vigorously pursuing a program of affording equal opportunity to minority groups in all our employments. We are implementing the provisions of the Civil Rights Act in our business dealings with State and local governmental agencies and private organizations. The Bureau participated actively in the youth opportunity campaign and last summer employed 105 young people from 32 States. These people made a substantial contribution to our overall mission while earning pay and being trained and encouraged to return to school and prepare themselves for useful roles in the future. The Bureau is, as you undoubtedly know, operating youth conservation centers on national wildlife refuges under the economic opportunity program. This year we expect to have 978 enrollees at 7 conservation centers. These disadvantaged young people will be engaged in programs of habitat restoration, development of public recreational facilities and other conservation missions while being trained to take their rightful place in society.

Worthy of special comment is the role of the Bureau in furnishing outdoor recreation opportunities to the public. These opportunities consist of such pursuits as hunting and fishing, swimming and hiking, and birdwatching and picnicking. In the last 10 years visitation to Bureau facilities has doubled from a trifle less than 8 million in 1955 to 15,500,000 in 1964 and actually the annual rate of increase is growing from the 10-year average of 10 percent to 12 and 13 percent in recent years.

The purpose of this rather long discussion of our relationship to other programs of the Great Society is to express our conviction that the role of the Bureau is more than merely one of conservation of fish and wildlife resources and furnishing hunting and fishing opportunities to the American people. Increasingly in the future we will be called upon to contribute to nationwide programs affecting all the people in one way or another and having a significant impact on the future.

Now, Mr. Chairman, I should like to highlight our appropriation requests.

The 1967 estimates for the annual definite appropriations total $49,387,000, a decrease of $14,654,000 from 1966 as follows: Management and investigations of resources—estimate $37,304,000, an increase of $574,000; construction—estimate $3,169,000, a decrease of $15,130,000; advances to migratory bird conservation account—estimate $6 million, a decrease of $1,500,000; Appalachian region fish and wildlife restoration projects—$1,350,000; and general administrative expenses—estimate $1,564,000, an increase of $52,000.

Principal increases in the management and investigations of resources appropriation are: $152,000 for operation of new facilities at 16 fish hatcheries; $146,000 for continuance of planning and expansion of operations at the National Fisheries Center and Aquarium; $924,000 for operations at 14 new wildlife refuges and waterfowl production areas; $100,000 for augmenting the staffing at the Northern Prairie Wildlife Research Center; $100,000 for a new program of wildlife enhancement; $415,000 for the pesticide research program; $231,000 for recently enacted pay increases; and $180,000 for wage board increases. Partially offsetting these increases are decreases of $1,600,000 because of a transfer in financing of a portion of the refuge program to the national wildlife refuge fund and $118,000 due to deactivation and curtailment of operations at existing refuges.

The "Construction" appropriation includes funds for the following work: $84,000 for planning of the Eastern Fish Nutrition Laboratory at Cortland, N.Y.; $1,785,000 for development on 26 national wildlife refuges and $200,000 for advance planning; and $1,100,000 for construction of a general purpose laboratory-office building at the Patuxent Wildlife Research Center at Laurel, Md.

The "General administrative expenses" appropriation includes an increase of $18,000 for a resource planning assistant in the new Government-wide program of planning, programing and budgeting about which I am sure the committee has had prior information. Also included are increases of $20,000 for periodic pay increases and $14,000 for annualization of pay act costs. A large part of

the "General administrative expenses" appropriation is tied up in personal services costs and there is little latitude for absorption of unavoidable increases in these costs by savings in other objects of expenditure.

The $6 million advance to the "Migratory bird conservation account," together with $5 million from the sale of duck stamps, will enable acquisition of 180,000 acres of land for migratory waterfowl; 37,000 acres will be in refuges and 143,000 acres will be in waterfowl production areas.

The $1,350,000 in the "Appalachian region fish and wildlife restoration projects" appropriation is for strip mine restoration by developing fish and wildlife habitat; $200,000 is for planning for fish and wildlife restoration projects; $1 million is for payments to States for reimbursement up to 75 percent of the cost of approved projects within the boundary of the Appalachian region, and $150,000 is for examination of State plans, inspection of projects and audits of State expenditures.

As you can see, our estimates reflect the needs of the times to hold down expenditures during the war in Vietnam. The estimates are not intended to cover all that could be considered for fish and wildlife conservation in normal times. Our hatcheries are being operated at 81 percent of potential production with major maintenance at 35 percent of the required level. Our refuges are being operated at 66 percent of management needs with maintenance at 79 percent of the required level. The goals of the accelerated wetlands acquisition program are not being realized. And there is belt tightening in all other activities. Nonetheless, our estimates comprise a balanced program which will make its needed contribution to the well being of the Nation.

We are continuing our efforts to do our work more economically and efficiently. Manpower is under control as to total numbers employed and total dollar obligations for the year. Actual travel expenditures from all Bureau appropriations in 1965 were $415,000 under the amount budgeted or a reduction of 15 percent. In 1966, ceilings have been established to control travel with the goals of not exceeding 1965 expenditures except in a few of the programs that had increases in 1966. Our cost-reduction program is achieving increased production and efficiency by elimination of low priority work and substitution of less costly alternatives. Fish hatchery productivity is being raised in 1966 from 8,821 to 8,975 pounds of fish per man year. Employee quarters rates have been adjusted to realistic levels with savings to the Government of $135,000 in 1966. Mechanization of arrest records, development of an automatic plankton sampling system and simplification of migratory bird permit administration are a few examples of 1966 cost-reduction measures. And above all, major economies are being achieved as reflected in the 1966 budget as a result of closure of uneconomical hatcheries, transfer of wildlife refuges to State administration and reduction in the Federal share of the predator and rodent control program. Aside from measures designed to reduce costs, there have been significant gains in the quality of services furnished the public. An outstanding example last year was printing and mailing 2½ million copies of hunting regulations in 14 days and making them available to the public 10 days to 2 weeks before the opening of the season.

That concludes my statement. My staff and I will be glad to answer any questions the committee may have.

A Year of Accomplishments

Mr. Gottschalk. I would like to take a moment to express our appreciation to the committee for the consideration we have received here in the past and, particularly, last year.

We think we have undergone a period of rather rigorous examination in the Bureau last year. We have undergone a reorganization, and we have taken a very hard look at some of our operations to determine whether they are those that should be remodeled, which should have their direction changed, but all in all we think we can point to several accomplishments which we must acknowledge are a result of the interest of the Congress in getting them started.

WILDLIFE RESEARCH STATION, JAMESTOWN, N. DAK.

This past year I had the pleasure of getting acquainted with the senior Senator from North Dakota in starting the research at the Jamestown Laboratory, in Jamestown, N. Dak., which we were encouraged to undertake by the senior Senator and had the support of your committee. We feel we have the physical requirements for one of the finest wildlife research stations that can be found anywhere in the world at Jamestown as a result.

It is not an ostentatious development. It is not a tremendous installation in terms of a lot of American scientific efforts but in its own small way we expect it to produce great results in terms of better information in the management of our migratory waterfowl.

PESTICIDE RESEARCH LABORATORIES

That is one of the accomplishments we can point to. In addition are our laboratories that are going to be dealing with our overall pesticide problems, the ones at Denver, Colo., and Columbia, Mo., are coming along quite well and we expect to start staffing these laboratories this year.

NEW PROGRAM OF RARE AND ENDANGERED SPECIES OF WILDLIFE

The committee last year was instrumental in providing us with funds to begin a more concerted effort in the general area of caring for our rare and endangered species of wildlife and we think we have made good progress with the funds which were allowed for this work last year.

We can discuss this in more detail later on if it should be desirable, but I can say that, if anyone is interested, it would be possible to see a number of our rare birds at the Patuxent Wildlife Research Center where we brought our bird from the Monte Vista Wildlife Refuge in Colorado to Patuxent last month.

One of the birds there is Canus, the crippled whooping crane which was picked up in Canada 2 years ago and nursed to health, although we are not sure this particular bird is ever going to be able to return to the flyways because of the crippling effects of its injury.

Senator YOUNG. Before you leave wildlife laboratories, I wonder if I could ask a few questions?

Chairman HAYDEN. Certainly.

ADDITIONAL STAFFING AT JAMESTOWN, N. DAK., RESEARCH CENTER

Senator YOUNG. I have received expressions of concern from a number of very responsible people in North Dakota, over the lack of funds for the Northern Prairie Wildlife Research Center at Jamestown.

As I recall, you were scheduled to fill 10 additional staff positions at this facility in fiscal 1967. Are the funds for these positions provided in your budget?

Mr. GOTTSCHALK. We are continuing our staffing in this current year, but the funds for the expansion of the staffing there that you note are not in this budget.

Senator YOUNG. Unless the budget is increased you won't be able to fill the positions you had intended to fill?

Mr. GOTTSCHALK. That is correct.

Senator YOUNG. How much would be required in additional funds to fill these 10 positions in order to meet your original schedule of staffing this facility?

Mr. GOTTSCHALK. Approximately $175,000, Senator Young.

Senator YOUNG. Did you request these funds of either the Secretary of Interior or the Bureau of the Budget?

Mr. GOTTSCHALK. We have a sum of $100,000 in the budget but we were unable to, in view of the total limitations placed on the Bureau's operations, we were unable to request the remainder.

Senator YOUNG. If the additional funds that you had originally requested were allowed, what would you do with them?

Mr. GOTTSCHALK. It is a question of staffing. We would bring the center up to its currently authorized operating strength. It would be a question of hiring the additional biological staff and the technical staff with some maintenance support, both for the center and the field headquarters at Woodruff.

Senator YOUNG. You would be able to realize more on your investment there at an earlier time?

Mr. GOTTSCHALK. It would advance the rate at which we would begin to accumulate this information we expect to get out of this station, correct.

ROAD IMPROVEMENT AT JAMESTOWN LABORATORY

Senator YOUNG. With further reference to the Northern Prairie Wildlife Research Center, I understand that there has been considerable discussion between the county commissioners and the major local representatives concerning the need for improving the road connecting this facility with Interstate 94.

This road is not in very satisfactory condition, I understand.

Mr. GOTTSCHALK. That is correct, and your understanding coincides exactly with mine; in fact, we have asked our station director to give us a report on this problem. A part of the road, about six-tenths of a mile runs along a sewage lagoon and the increase in traffic which has been brought about by the establishment of the center there has simply proved that the road in its present condition is inadequate to carry the amount of traffic.

The result is, that it needs constant repair and maintenance and in all likelihood, unless some drastic steps are taken there, we are going to be faced with a rather substantial problem.

The road comes from Route 94 down to the break of the hill leading down into the James River Valley and, particularly where it comes down this hill there is a good deal of washing and rutting.

Senator YOUNG. In wintertime it blocks in with snow quite easily, I understand.

Mr. GOTTSCHALK. That is correct.

Senator YOUNG. What would the total cost of this road be?

Mr. GOTTSCHALK. The total cost is estimated at $39,000 for everything, but it has been estimated that the part that ought to be identified with the laboratory would be approximately $20,000.

Senator YOUNG. That would be the Federal cost?

Mr. GOTTSCHALK. Yes.

Senator YOUNG. Could we appropriate the money to make this available to the county commissioners there and they would build the road under your specification?

Mr. GOTTSCHALK. If we were given the funds we would work out an agreement with the county commissioners where they did the actual construction.

Senator YOUNG. The way I understand it, that way you could build the road much cheaper than if you let it out on bids or some other way?

Mr. GOTTSCHALK. I think that is correct.

INCREASING DEMAND FOR HATCHERY FISH

Senator YOUNG. With all the new reservoirs in North Dakota there has been a vast increase in the interest in sport fishing in the State.

Since the completion of the Garrison Fish Hatchery little has been done to expand or improve your hatcheries in North Dakota. I note that your current budget does not contain funds for expanding any of our hatcheries.

I realize that the fish hatchery located just below Garrison Dam is comparatively new. However, is it not true that additional facilities are needed at that hatchery? This is the one at Garrison Dam.

Mr. GOTTSCHALK. We are in a position in many of our hatcheries where we can see additional work that should be done but again our overall budget situation this year, taking into consideration the problems that the Nation faces, we were unable to include funds for the complete development or redevelopment of many of our hatcheries. Those in North Dakota were included.

We do have a long-range development program for the hatcheries there. At Garrison the total program to provide all the facilities necessary to make that a maximum unit, that is to bring it to full development, would be $184,000.

Senator YOUNG. This is the amount of money that you originally sought?

Mr. GOTTSCHALK. It is a part of the original estimated amount; that is correct.

Senator YOUNG. Would you give the same information for Valley City?

Mr. Chairman, rather than take up any more time I could give him the questions and let him put them in the record.

Mr. GOTTSCHALK. I have this, it is $281,200 for Valley City needed to complete all planned work for that station.

Senator YOUNG. These are also funds you requested?

Mr. GOTTSCHALK. No, sir, we were not able to put these funds in our budget estimates.

Senator YOUNG. Because of the budget limitations?

Mr. GOTTSCHALK. Yes, sir.

Hatcheries Operated Below Capacity

Senator Young. Are the operation and maintenance funds requested in your current budget sufficient either for your existing program at these fish hatcheries, or for an expanded program should the Congress provide funds for additional construction?

Mr. Gottschalk. Across the country our hatcheries are operating at approximately 80 percent of capacity. There is almost no hatchery where we could not use additional money. The hatcheries in North Dakota are no exception.

Senator Young. I think you answered my question with respect to all of them.

Thank you, Mr. Chairman.

Questions Submitted by Senator Cooper

trout hatcheries in kentucky

Chairman Hayden. I have some questions submitted by Senator Cooper that I will place in the record, and ask that you answer them.

Mr. Gottschalk. We will be very happy to do so. We will take them from the record and provide the answers in the record.

(The questions and answers follow:)

Question. What is your estimate of the trout needed to stock streams in Kentucky during the next 5 years, year by year?

Answer. The total annual stocking requirements for trout in Kentucky are calculated to be 946,000 fish, weighing 91,500 pounds. These determinations were computed in a joint survey of potential trout waters by the State of Kentucky and Bureau biologists during the summer of 1963. As some of the streams evaluated were considered marginal for supporting trout, it appears to be advisable to stock trout in these streams experimentally to determine survival, utilization by the public, and rate of return. This will provide a more realistic appraisal of needs. It is not anticipated that the needs for trout in Kentucky will vary to any great extent during the next 5 years from the 946,000 trout weighing 91,500 pounds as stated above.

Question. Will new facilities be needed to provide for the increased trout requirements you are discussing?

Answer. If trout stocking requirements for Kentucky exceed our present production capabilities, we believe that the new hatchery at Dale Hollow Dam, Tenn., should be enlarged to increase its production potential. This hatchery could meet present and future requirements for hatchery-reared trout that might conceivably develop over the next several years. Also, enlargement of this hatchery would probably be less costly than construction of an entirely new unit in Kentucky. The alternative is a new hatchery in Kentucky when a suitable site can be found.

Question. Does the Bureau have any specific funds to complete a survey of these needs and begin the planning for facilities to meet them?

Answer. The Bureau has no specific funds to complete a survey of needs in Kentucky or to begin planning for facilities to meet them.

Question. In light of what information is available on Kentucky, and in light of your experience in planning trout hatcheries to meet needs in other States, what funds would be required to proceed with the planning of facilities in Kentucky?

Answer. Funds required to initiate planning for a hatchery in Kentucky would be approximately $50,000. This would include completing the biological studies and if a suitable site was found the remainder would be used to acquire land and water rights required, use agreements, and preliminary engineering.

MARINE LABORATORIES ON ATLANTIC AND GULF COASTS

Mr. GOTTSCHALK. To complete my presentation: Another sign of progress is that the new marine laboratory located on Narragansett Bay, Long Island, is nearing completion. It will serve as the base for our North Atlantic marine fish investigations and with the other laboratories of the Department of Health, Education, and Welfare, and the University of Rhode Island, will constitute a very important oceanographic and fishery research complex.

Funds were provided for preliminary planning and site selections of two marine laboratories on the Gulf of Mexico. Preliminary work has been completed and excellent sites selected at Panama City, Fla., and Port Aransas, Tex. When construction funds are available we will be able to move rapidly toward the development of long-needed marine research in the gulf.

The foregoing are examples of a few of the more spectacular aspects of our great efforts. Perhaps, in the long run is the overall effort our Bureau makes in its routine activities. All of these are closely related to the health, welfare, and the improvement of the American public. Whether it be the protection afforded the migratory birds through the enforcement staff, the advice we give about fish management and welfare information on Indian reservations, military areas, and many other areas, both public and private, or whether we are considering the results from our river basin studies, all in all, we make a contribution for a better life in the United States.

In summary, I would like to leave with the committee the thought that while the Bureau of Sport Fisheries and Wildlife is carrying out programs which make for great pleasure and enjoyment by virtue of our preservation and other conservation programs, at the same time we make very real contributions to the quality of the environment in which people, too, must live.

The interest of the public in improving the quality of its environment cannot be exaggerated. The request we are making for funds for fiscal year 1967 represents the very minimum that we think should be allotted to support our contribution to guarantee a better America.

With that, Mr. Chairman, we will be glad to answer any questions that you may have.

REORGANIZATION OF OFFICE OF THE COMMISSIONER

Chairman HAYDEN. During the past year the Office of Commissioner, Fish and Wildlife Service, has been reorganized as a result of which certain functions heretofore accomplished in that office are now accomplished in your Bureau.

Would you please discuss these briefly, and indicate the advantages which accrue to your Bureau from this reorganization?

Mr. GOTTSCHALK. Three different functions were transferred from the Commissioner's office to the respective bureaus. The one which has the greatest impact in our organization is the one relating to conservation education. Of the staff in the Commissioner's office, 13

permanent positions and funds in the amount of $127,000-plus were transferred to our Bureau to carry out this work.

In addition, we were given one permanent position which is filled by a man devoting full time to carrying out our safety program throughout the organization.

We believe that this shift of functions from the Commissioner's office to the Bureau will result in a shortening of the administrative ties between the directional staff and the people actually doing the work and result in a more efficient overall operation.

This will permit me, for example, to identify a particular conservation educational need and then maybe list a group from within my own organization of people responsible to me to get that job done.

Heretofore to accomplish the same thing it was necessary to go into another organization and work down to the man that took the pictures or worked with the school and have this done and then have him report back. It was a very roundabout way to get the job done. We think this is a streamlining and will be very helpful to us.

MANAGEMENT AND INVESTIGATIONS OF RESOURCES

1967 Budget Request

Chairman Hayden. For "Management and investigations of resources" in fiscal year 1967 you request an appropriation of $37,304,000. In addition to this amount, there will be available to you some $5,500,000 in transfers from other agencies and receipts from your activities which will also be utilized in your management and investigations program.

The justification for this estimate will be printed in the record.

(The justification follows:)

Appropriation, 1965	$33,810,000
Supplemental appropriation, 1965	1,050,000
Second supplemental appropriation, 1965	470,000
Total appropriation, 1965	35,330,000
Transferred to "Operating expenses, public building service," General Services Administration	−22,489
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	+151,148
Total available, 1965	35,458,659
Appropriation, 1966	36,134,300
Pay cost supplemental	478,031
Total appropriation, 1966	36,612,331
Transferred to "Operating expenses, public building service," General Services Administration	−26,335
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	+143,537
Total available, 1966	36,729,533

SUMMARY OF INCREASES AND DECREASES, 1967

Fish hatcheries:	
To provide for increased pay costs for fiscal year 1966 positions	+$52,000
To provide for wage board pay increases	+45,000
To provide for operations of new hatcheries and other new facilities	+189,000
To provide for operation of the National Fisheries Center and Aquarium	+146,100
Total	+432,100
Wildlife refuges:	
Savings from deactivation and curtailment of operations at existing refuges	−118,000
Savings from reduced employees' compensation payments	−11,886
Decrease due to a shift in financing to the National Wildlife Refuge Fund	−1,600,000
To provide for increased pay costs for fiscal year 1966 positions	+59,000
To provide for operation of 14 new refuges and waterfowl production areas	+924,221
To provide for wage board pay increases	+125,000
Total	−621,665
Soil and moisture conservation: To provide for increased pay costs for fiscal year 1966 positions	+4,000
Management and enforcement: To provide for increased pay costs for fiscal year 1966 positions	+17,000
Fishery research:	
To provide for increased pay costs for fiscal year 1966 positions	+24,000
To provide for wage board pay increase	+4,000
To provide for initial staffing and operation of a new fish-pesticide research laboratory	+100,000
To provide additional staffing at three research facilities	+19,000
Total	+147,000
Wildlife research:	
To provide for increased pay costs for fiscal year 1966 positions	+36,000
To provide for wage board pay increase	+5,600
To provide for acceleration of pesticide wildlife studies	+315,000
To provide for additional staffing and operation of a new research center	+100,000
Total	+456,600
Fishery services: To provide for increased pay costs for fiscal year 1966 positions	+9,000
Wildlife services:	
To provide for increased pay costs for fiscal year 1966 positions	+20,000
To implement the new program of wildlife enhancement	+100,000
Total	+120,000
River basin studies: To provide for increased pay costs for fiscal year 1966 positions	+9,000
Pesticides registration: To provide for increased pay costs for fiscal year 1966 positions and rounding	+1,432
Net increase, 1967	+574,467
Budget estimate, 1967	37,304,000

Analysis by activities (direct appropriation)

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Transfers [1]	Amount available
1. Fish hatcheries	$7,346,518	$7,358,900	$90,000	$28,000	$7,476,900
2. Wildlife refuges	10,881,195	10,902,000	153,000	21,665	11,076,665
3. Soil and moisture conservation	697,332	705,000	3,000		708,000
4. Management and enforcement	3,312,273	3,335,000	41,000	13,000	3,389,000
5. Fishery research	2,813,099	3,157,000	43,000	12,000	3,212,000
6. Wildlife research	4,897,760	5,351,400	72,000	22,000	5,445,400
7. Fishery services	1,014,477	1,351,000	20,000	5,000	1,376,000
8. Wildlife services	2,716,417	2,381,000	30,000	10,000	2,421,000
9. River basin studies	1,337,411	1,387,000	22,000	5,000	1,414,000
10. Pesticides registration	105,336	206,000	4,031	537	210,568
Unobligated balance lapsing	336,841				
Total	35,458,659	36,134,300	478,031	117,202	36,729,533

[1] Represents a net figure due to a $26,335 transfer to General Services Administration and a $143,537 comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife.

Analysis by activities (direct appropriations)

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Fish hatcheries	$7,346,518	$7,476,900	$7,909,000	+$432,100	+$52,000	+$380,100
2. Wildlife refuges	10,881,195	11,076,665	10,455,000	−621,665	+59,000	−680,665
3. Soil and moisture conservation	697,332	708,000	712,000	+4,000	+4,000	
4. Management and enforcement	3,312,273	3,389,000	3,406,000	+17,000	+17,000	
5. Fishery research	2,813,099	3,212,000	3,359,000	+147,000	+24,000	+123,000
6. Wildlife research	4,897,760	5,445,400	5,902,000	+456,600	+36,000	+420,600
7. Fishery services	1,014,477	1,376,000	1,385,000	+9,000	+9,000	
8. Wildlife services	2,716,417	2,421,000	2,541,000	+120,000	+20,000	+100,000
9. River basin studies	1,337,411	1,414,000	1,423,000	+9,000	+9,000	
10. Pesticides registration	105,336	210,568	212,000	+1,432	+969	463
Unobligated balance lapsing	336,841					
Total	35,458,659	36,729,533	37,304,000	+574,467	+230,969	+343,498

[1] To provide for increased pay costs for fiscal year 1966 positions.

Analysis by activities (total funds)

Activity and appropriation	Amount available 1965	Amount available 1966	Estimate 1967	Increase (+) or decrease (−)
1. Fish hatcheries: Management and investigations of resources	$7,346,518	$7,476,900	$7,909,000	+$432,100
2. Wildlife refuges:				
Management and investigations of resources	10,881,195	11,076,665	10,455,000	−621,665
National wildlife refuge fund	755,197	1,227,100	2,640,300	+1,413,200
Subtotal	11,636,392	12,303,765	13,095,300	+791,535
3. Soil and moisture conservation: Management and investigations of resources	697,332	708,000	712,000	+4,000
4. Management and enforcement:				
Management and investigations of resources	3,312,273	3,389,000	3,406,000	+17,000
Federal aid in wildlife restoration	5,000			
National wildlife refuge fund	460,310	486,200	497,600	+11,400
Subtotal	3,777,583	3,875,200	3,903,600	+28,400
5. Fishery research:				
Management and investigation of resources	2,813,099	3,212,000	3,359,000	+147,000
Federal aid in fish restoration and management	22,773	164,600	151,200	−13,400
Subtotal	2,835,872	3,376,600	3,510,200	+133,600
6. Wildlife research:				
Management and investigations of research	4,897,760	5,445,400	5,902,000	+456,600
Federal aid in wildlife restoration	262,283	278,500	472,600	+194,100
Subtotal	5,160,043	5,723,900	6,374,600	+650,700
7. Fishery services: Management and investigations of resources	1,014,477	1,376,000	1,385,000	+9,000
8. Wildlife services: Management and investigations of resources	2,716,417	2,421,000	2,541,000	+120,000
9. River basin studies:				
Management and investigations of resources	1,337,411	1,414,000	1,423,000	+9,000
Bureau of Reclamation:				
General investigations	365,886	405,815	406,700	+885
Construction and rehabilitation	331,547	341,104	329,000	−12,104
Corps of Engineers, civil:				
General investigations	203,167	296,700	422,000	+125,300
Construction, general	510,265	478,500	526,300	+47,800
Subtotal	2,748,276	2,936,119	3,107,000	+170,881
10. Pesticides registration	105,336	210,568	212,000	+1,432
Total, direct appropriation	35,121,818	36,729,533	37,304,000	+574,467
Other funds	2,916,428	3,678,519	5,445,700	+1,767,181
Grand total	38,038,246	40,408,052	42,749,700	+2,341,648

1. Fish hatcheries

Fiscal year 1965, amount available	$7,346,518
Fiscal year 1966, amount available	7,476,900
Fiscal year 1967, estimate	7,909,000
Increase (+) or decrease (−), 1967 compared with 1966:	
Total	+432,100
Pay cost [1]	+52,000
Program	+380,100

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $7,909,000 and 613 permanent positions, an increase of $432,100 and 13 permanent positions over 1966. The increase consists of—

(1) An increase of $52,000 for increased pay costs.

(2) An increase of $45,000 for wage board increases.

(3) An increase of $152,000 and eight permanent positions for operation of new facilities at national fish hatcheries.

(4) An increase of $146,100 and three permanent positions for operation of the National Fisheries Center and Aquarium.

(5) An increase of $37,000 and two permanent positions for operation of a spawning channel, Tehama-Colusa-Red Bluff project, California.

The estimate for enforcement of the black bass law, amounting to $18,000 and two permanent positions, has been transferred to activity 4, management and enforcement.

Operation of new hatcheries and new facilities.—$152,000 and eight permanent positions will permit use of new facilities at national fish hatcheries. These funds will be utilized for salaries, fish food and other operational expenses, and costs of distributing the increased production of fish. Funds for construction of new hatcheries and expansion or improvement of rearing facilities at existing hatcheries have been included in appropriations for recent years. The 43 stations included in this construction program are located in areas where the need for fish for stocking purposes has far exceeded production. In addition, the increasing need of the Bureau and Public Health Service for selected species of fish for research purposes has increased the demand on the hatcheries. The construction program is greatly expanding facilities for the propagation of fish at the hatcheries involved. Of the 43 hatcheries included in the current construction program, 39 will have new facilities ready for operation in fiscal year 1967. The increase of $152,000 will provide for operation of some of these new facilities at 16 hatcheries. A listing of the hatcheries follows:

Operation of new hatcheries and new facilities constructed at existing hatcheries

Hatchery	Fiscal year 1966 amount available		Fiscal year 1967 estimate		Increase		When operating at 100 percent of capacity	
	Operating cost	Estimated production (pounds)	Operating cost	Estimated production (pounds)	Operating cost	Estimated production (pounds)	Operating cost	Estimated production (pounds)
Carbon Hill, Ala.	$30,300	5,000	$39,300	7,000	$9,000	2,000	$39,300	7,000
Marion, Ala.[1]	101,700	13,000	114,700	15,000	13,000	2,000	124,700	17,000
Alchesay, Ariz.[2]	103,500	100,000	103,500	100,000			142,100	150,000
Corning, Ark.[1]	34,800	6,000	46,600	10,000	11,800	4,000	46,600	10,000
Greers Ferry Dam, Ark.[2]	39,400		39,400	30,000			141,300	150,000
Mammoth, Spring Ark.[1]	49,100	4,000	49,100	4,000			54,200	6,000
Norfork, Ark.[2]	152,700	220,000	152,700	220,000			265,100	450,000
Coleman, Calif.[3]	273,950	250,000	273,950	250,000			336,950	360,000
Leadville, Colo.[2]	95,300	110,000	95,300	110,000			109,300	138,000
Welaka, Fla.[1]	75,500	11,000	75,500	11,000			85,500	13,000
Chattahoochee Forest, Ga.[2]	79,200	65,000	79,200	65,000			106,800	100,000
Cohutta, Ga.[1]	42,000	4,500	45,900	5,500	3,900	1,000	45,900	5,500
Warms Springs, Ga.[1]	25,700	2,000	25,700	2,000			31,200	2,500
Hagerman, Idaho[2]	136,600	220,000	136,600	220,000			180,200	310,000
Natchitoches, La.[1]	56,500	17,000	56,500	17,000			83,500	28,000
Craig Brook, Maine[3]	69,000	31,000	81,000	37,000	12,000	6,000	89,000	45,000
Hiawatha Forest, Mich.[2]	32,600	6,000	43,600	15,000	11,000	9,000	43,600	15,000
Jordan River, Mich.[2]	121,700	90,000	129,700	100,000	8,000	10,000	129,700	100,000
Lyman, Miss.[1]	40,600	6,000	55,600	10,000	15,000	4,000	55,600	10,000
Bozeman, Mont.[2]	41,200	55,000	56,200	80,000	15,000	25,000	66,200	100,000
Ennis, Mont.[2]	126,900	190,000	126,900	190,000			153,900	235,000
Lahontan, Nev.[2]	10,100		10,100				[4] 70,000	50,000
Berlin, N.H.[2]	78,700	60,000	78,700	60,000			100,100	90,000
Cortland, N.Y.[2]	58,500	14,000	65,950	17,000	7,450	3,000	73,000	20,000
Pisgah Forest, N.C.[2]	103,200	112,000	112,950	122,000	9,750	10,000	116,250	125,000
Garrison Dam, N. Dak.[5]	68,500	15,000	68,500	15,000			85,500	30,000
Valley City, N. Dak.[1]	22,900	1,400	22,900	1,400			33,400	2,000
Lamar (including Tylersville), Pa.[1]	148,950	112,000	148,950	112,000			270,950	280,000
Cheraw, S.C.[1]	36,600	3,700	40,600	5,000	4,000	1,300	40,600	5,000
Gavins Point, S. Dak.[1]	77,300	5,000	77,300	5,000			91,100	8,000
McNenny, S. Dak.[2]	60,650	67,000	65,650	75,000	5,000	8,000	83,100	105,000
Dale Hollow Dam, Tenn.[3]	35,500		35,500	30,000			146,200	150,000
Springville, Utah[1]	94,850	97,000	94,850	97,000			103,850	110,000
Harrison Lake, Va.[1]	35,250	4,500	41,350	5,500	6,100	1,000	41,350	5,500
Wytheville, Va. (new)[2]	22,800		22,800	20,000			159,300	150,000
Leavenworth, Wash.[3]	108,800	75,000	124,800	90,000	16,000	15,000	134,800	100,000
Quilcene, Wash.[3]	87,000	95,000	87,000	95,000			112,400	125,000
Leetown, W. Va.[3]	100,600	45,000	105,600	50,000	5,000	5,000	105,600	50,000
Saratoga, Wyo.[2]	60,100	25,000	60,100	25,000			90,800	65,000
Total	2,938,550	2,137,100	3,090,550	2,323,400	152,000	106,300	4,188,950	3,722,500

[1] Warm-water hatchery.
[2] Trout hatchery.
[3] Combination hatchery—salmon and trout.
[4] Operation at 100 percent of capacity of new facilities which will be ready in fiscal year 1967. Full production of hatchery will be as follows: $135,000; 125,000 pounds.
[5] Combination hatchery—warm-water and trout.

NOTE.—All cost figures exclude major maintenance and equipment.

Operation of spawning channel, Tehama-Colusa-Red Bluff project, California.—$37,000 and two permanent positions will initiate operation of a spawning channel. As part of the Central Valley project, California, the Red Bluff diversion dam and reservoir will be ready for operation in the summer of 1967. Operation of the spawning channel in the Tehama-Colusa Canal is necessary to attain salmon conservation, and replace spawning grounds lost through the filling of the Red Bluff Reservoir.

Operation of the National Fisheries Center and Aquarium.—$146,100 and three permanent positions are to be utilized in solving the following problems:

Good water is the most important and the least understood portion of an aquarium. All successful large aquaria (with one exception), are located close to the sea, where ample quantities of running sea water are available to them. The Fisheries Center has little precedent and only scanty quantitive information on which to base its operation on closed, recirculating sea water and fresh water systems. Present methods of filtering the water are costly and inefficient. New filter materials and water treatment substances have recently become available but are not yet in general use. Their adequacy for aquarium use must be evaluated before the final design stages are reached.

Investigations must be started on a comparison of synthetic sea water and natural sea water; the use of cobalt irradiation for controlling disease organisms; the build up of bacteria in filter systems; the elimination of chlorine and copper from city water supplies; the comparative toxicity of various newly available plastics and sealants. Part of the necessary research will be done by the staff of the Fisheries Center, and the additional staff members will be chosen for their abilities in these areas. It will be possible to contract with other organizations for those projects for which facilities are not available here.

Working models of certain of the novel exhibits must be prepared, in order that their final form and function can be determined. This will enable the architects to plan for the location and the adequacy of structural members, piers, footings, utilities, and the like. It is planned to issue contracts for a portion of this work.

Aquarium and research specialists will be consulted with increasing frequency and it is expected that the Advisory Board of the Fisheries Center will need to meet at least twice during fiscal year 1967. Also, the Director and his staff will have increased need of travel funds as the project and plans progress.

Contracts will be issued to other large aquaria for 6-month training programs for each of three employees, in order that a nucleus of trained persons will be available for the opening of the Fisheries Center.

Research equipment will be required to provide such items as spectrophotometer, pH meter, oxygen meters, in-line monitoring equipment, multiple recorders, aquaria, oscilloscopes, pumps, filters, work benches, and desks. Supplies will include office supplies, reference books and periodicals, chemicals, glassware, and the like.

The Fisheries Center is already beginning to function as an important addition to the aquatic research facilities of our Nation. Requests for information pertaining to the sea and its inhabitants and our Nation's role in marine research are arriving in increasing numbers. Publications and pamphlets on various subjects should be prepared in advance of the opening date of the Fisheries Center, as this important function is the responsibility and charge of that facility.

The National Fisheries Center and Aquarium is an active institution engaged in planning, and preparing for, a new national facility of great importance. Some of the research to be undertaken in fiscal year 1967 can result in economies during construction, and will provide operating knowledge by the time the structure is completed.

Wage board increases.—$45,000 is needed for wage board increases. Employees occupying unclassified positions in the trades, crafts, or occupations are compensated at hourly rates of pay which are fixed and adjusted from time to time to correspond with prevailing rates in the local recruiting areas, through wage rate surveys and wage board action. Unlike classified positions where salary increases are offset by normal turnover, with replacements usually starting at the base salary for the grade, replacement employees in the unclassified group must be recruited and hired at the currently approved rate, with the result that there is no salary saving. The estimate of $45,000 will cover the increased cost of these positions.

Program of work

The estimate of $7,909,000 will be used for operation and maintenance of hatcheries and the distribution of fish, maintenance of fish screens, operation of the Tehama-Colusa spawning channel, operation of the existing national aquarium, and planning for the National Fisheries Center and Aquarium in Washington, D.C.

The national fish hatchery system has been developed and is operated to produce the species, sizes, and numbers of fish required in the management of the Nation's inland sport fishery resource. Rearing and stocking of hatchery-produced fish are one element in the total management effort, which is a joint undertaking of the Fish and Wildlife Service and the State fish and game departments. The objective is to conserve and enhance the fishery resource and to provide thereby a resource base capable of sustaining the growing public demand for quality sport fishing. In 1960 a total of 25,300,000 fishermen engaged in the sport for an estimated 465,700,000 fishermen days. By 1980, the number of fishermen will increase to about 44,400,000, and by the year 2000 will grow to 67,700,000. The total fishermen days in those years are estimated to be 843,400,000 and 1,355,000,000 respectively. These projected levels of utilization of the sport fishery resource base indicated a growth rate in excess of that estimated for the national population.

Allocations of hatchery-produced fish are made according to recommendations of management biologists to assure optimum utilization of the hatchery product and maximum efficiency in operations. Close cooperation is maintained with State conservation agencies regarding fish stocking activities and production planning for the future. Cooperative agreements are in effect with the States regarding details of national fish hatchery propagation and distribution activities. Agreements are also in effect with Federal agencies for fishery management activities in waters controlled by those agencies. These agreements are developed to provide assurance that stocking will conform with management plans and to avoid duplication of effort between the State and Federal Governments.

Production from national fish hatcheries is utilized in the following principal areas: maintenance of Pacific salmon species and steelhead trout (anadromous species); stocking of fingerling or catchable trout in suitable waters; initial and maintenance stocking of reservoirs and farm ponds with warm-water species; restocking of lake trout depleted by an infestation of sea lampreys in the Great Lakes; distribution of predatory species (walleye and northern pike) to control undesirable fish in large impoundments; limited production of rare or endangered species (such as Lahontan cutthroat trout and Atlantic salmon); and production of various species as test animals for research programs of the Bureau or other Federal agencies. Production from national fish hatcheries is utilized to stock the following categories of waters in the order listed: first, to waters on lands owned or controlled by the Federal Government (including waters created on private lands with the assistance of the Federal Government); second, to waters affected by Federal or federally sponsored water development projects, whether the waters concerned are under Federal or State control; third, to public waters under State control where State fish production is inadequate to meet the management need. The total estimate is broken down by functions as follows:

	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase or decrease (−)
Production	$4,028,000	$4,180,000	$152,000
Distribution	620,000	641,000	21,000
Maintenance	2,235,000	2,332,000	97,000
Recreation	441,400	456,200	14,800
Planning (National Fisheries Center and Aquarium)	152,500	299,800	147,300
Totals	7,476,900	7,909,000	432,100

Production.—In fiscal year 1965, approximately 3,741,000 pounds of fish were produced, an increase of 9 percent over the previous year. It is estimated that productiton for 1966 is increased an additional 8,000 pounds. Production for 1967 will be approximately 3,934,000 pounds, or 81 percent of the potential production level obtainable with existing facilities. The production scheduled in 1967 will support an estimated 19 million fishermen days. The total level of fishing supported by the national fish hatchery program, including accumulative effects of prior years' stocking, is estimated to be approximately 42 million fishermen days annually. It has been estimated that on a national level, each man-day of freshwater fishing generates an expenditure in excess of $5.

Distribution.—In 1967, an estimated 2.9 million pounds of fish will be distributed by national fish hatchery trucks. Additional poundages will be distributed in plastic bags through the mails, by aircraft, and by State agencies under reciprocal stocking agreements. For the past few years, several million fish have been stocked annually in Lake Powell (above Glen Canyon Dam) by a C–46 aircraft under contract to the Bureau. A 1964 study of this stocking method indicated that savings over conventional truck distribution methods amounted to $12,000 and 1,100 man-hours. As a result of better designed distribution equipment, and the application of research findings on fish transport, an average of nearly 600 pounds of fish is now carried on each distribution trip. This is an increase of 102 percent (or nearly 300 pounds) within the past 10 years.

Maintenance.—The estimate provides funds for recurring maintenance of production facilities, buildings, and other physical facilities, including purchase of necessary supplies, materials, and equipment for both major and minor maintenance. The replacement value of the physical plant of the National Fish Hatchery System is almost $65 million and requires an annual maintenance level of approximately $2,132,000. In 1967, this planned program of annual major maintenance will be at 35 percent of the required level.

Recreational.—In addition to recreational fishing supported by the production program, hatchery installations offer on-site recreation and conservation education opportunities to the public, in the form of sightseeing, picnic areas, aquariums, and visitor centers, and informational contacts with public groups. These programs will be conducted in minimum levels in 1967. During the period 1951 to 1961, the number of visitors to national fish hatcheries (not including the Washington, D.C., aquarium) increased from 700,000 to 1,274,000. It is estimated that the number of visitors will total approximately 1,872,000 in 1967.

Planning.—The Act of October 9, 1962 (16 U.S.C. 1051 *et seq.*) authorized construction of a National Fisheries Center and Aquarium in Washington, D.C. Activities in 1967 will be primarily devoted to research and planning functions to enable the staff to keep pace with the architects in preparing drawings and specifications prior to construction.

The total estimate is broken down as follows:

State	Hatchery or station	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)
Alabama	Carbon Hill	$45,700	$55,100	$9,400
	Marion	109,900	124,500	14,600
Arizona	Alchesay	129,800	131,500	1,700
	Williams Creek	87,000	88,200	1,200
	Willow Beach	166,700	169,400	2,700
Arkansas	Corning	48,700	61,100	12,400
	Greers Ferry Dam	39,400	40,000	600
	Mammoth Spring	51,500	52,300	800
	Norfolk	167,700	170,200	2,500
California	Coleman	351,400	356,300	4,900
	Tehama-Colusa Spawning Channel		37,000	37,000
Colorado	Leadville	95,300	96,900	1,600
Florida	Welaka	75,900	77,100	1,200
Georgia	Chattahoochee Forest	81,800	83,000	1,200
	Cohutta	63,700	68,200	4,500
	Millen	68,400	69,200	800
	Warm Springs	35,700	36,200	500
Idaho	Hagerman	149,500	151,700	2,200
Iowa	Fairport	35,900	36,400	500
	Guttenberg	39,900	40,500	600
	Manchester	81,400	82,400	1,000
Kansas	Cedar Bluff	47,100	47,900	800
	Farlington	35,300	35,900	600
Kentucky	Frankfort	47,200	47,800	600

State	Hatchery or station	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)
Louisiana	Natchitoches	$61,000	$61,900	$900
Maine	Craig Brook	107,100	120,300	13,200
Massachusetts	North Attleboro	56,500	57,300	800
Michigan	Charlevoix	18,300	18,500	200
	Hiawatha Forest	46,400	58,000	11,600
	Jordan River	127,700	137,700	10,000
	Pendills Creek	78,600	79,800	1,200
Minnesota	New London	48,100	48,700	600
Mississippi	Lyman	40,600	56,200	15,600
	Meridian	34,900	35,500	600
	Tupelo	37,800	38,400	600
Missouri	Neosho	74,600	75,400	800
Montana	Bozeman	46,800	62,400	15,600
	Creston	71,100	72,300	1,200
	Ennis	136,200	138,300	2,100
	Miles City	49,400	50,000	600
Nebraska	Crawford	50,800	51,300	500
Nevada	Lahontan	10,100	10,900	800
New Hampshire	Berlin	95,300	96,500	1,200
	Nashua	73,900	74,700	800
New Mexico	Dexter	47,900	48,500	600
	Mescalero	60,800	61,800	1,000
	Santa Rosa	64,600	65,200	600
New York	Cortland	64,900	73,350	8,450
North Carolina	Edenton	44,600	45,200	600
	McKinney Lake	68,500	69,100	600
	Pisgah Forest	127,400	138,850	11,450
North Dakota	Baldhill Dam	12,700	12,900	200
	Garrison Dam	75,400	76,700	1,300
	Valley City	24,100	24,700	600
Ohio	Hebron	68,100	68,900	800
	Senecaville	38,900	39,500	600
Oklahoma	Tishomingo	69,300	70,300	1,000
Pennsylvania	Lamar (including Tylersville)	178,500	180,900	2,400
South Carolina	Cheraw	54,300	58,900	4,600
	Orangeburg and Orangeburg County	57,400	58,300	900
	Walhalla	95,400	96,600	1,200
South Dakota	Gavins Point	85,100	86,300	1,200
	McNenny	65,000	71,000	6,000
	Spearfish	54,700	55,200	500
Tennessee	Dale Hollow Dam	35,500	36,100	600
	Erwin	80,100	81,300	1,200
Texas	Austin	52,900	53,500	600
	Fort Worth	55,200	55,800	600
	Inks Dam	61,200	61,800	600
	Uvalde	47,100	47,700	600
Utah	Springville	97,600	99,200	1,600
Vermont	Pittsford	72,400	73,600	1,200
Virginia	Harrison Lake	40,600	47,200	6,600
	Paint Bank	97,100	98,500	1,400
	Wytheville (old)	35,900	36,200	300
	Wytheville (new)	22,800	23,200	400
Washington	Carson	20,000	20,000	----------
	Entiat	71,600	72,500	900
	Leavenworth	131,500	149,300	17,800
	Little White Salmon	15,000	15,000	----------
	Quilcene	90,500	91,900	1,400
	Spring Creek	6,000	6,000	----------
	Winthrop	75,300	76,300	1,000
West Virginia	Bowden	107,200	108,800	1,600
	Leetown	100,800	107,400	6,600
	White Sulphur Springs	61,400	62,300	900
Wisconsin	Genoa	58,400	59,100	700
	La Crosse (no production of fish)	39,000	39,600	600
	Lake Mills	50,900	51,500	600
Wyoming	Jackson	85,700	86,500	800
	Saratoga	60,700	61,700	1,000
Operation and maintenance of fish screens: Washington.	Yakima	25,900	26,300	400
	Regional offices:			
	Portland, Oreg.	77,100	77,700	600
	Albuquerque, N. Mex.	109,500	110,400	900
	Minneapolis, Minn.	121,700	122,700	1,000
	Atlanta, Ga.	111,500	112,400	900
	Boston, Mass.	91,300	92,000	700
Washington, D.C.	Central office staff	378,500	381,300	2,800
	National Fisheries Center and Aquarium.	211,300	359,100	147,800
Total		7,476,900	7,909,000	432,100

2. Wildlife refuges

Fiscal year 1965 amount available	$10,881,195
Fiscal year 1966 amount available	11,076,665
Fiscal year 1967 estimate	10,455,000
Increase (+) or Decrease (−) 1967 Compared with 1966:	
Total	−621,665
Pay cost [1]	+59,000
Program	−680,665

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $10,455,000 and 1,017 permanent positions, a decrease of $621,665 and an increase of 59 permanent positions over 1966. The increase consists of—

1. A decrease of $118,000 from deactivation and curtailment of operations at existing refuges.
2. A decrease of $11,886 because of reduced employees' compensation payments.
3. A decrease of $1,600,000 due to a shift in financing for fiscal year 1967 to the national wildlife refuge fund made possible principally by release of 1964 and 1965 oil revenues of the Delta National Wildlife Refuge that had been withheld from distribution pending settlement of the Leiter Minerals lawsuit.
4. An increase of $59,000 for increased pay costs.
5. An increase of $924,221 and 59 permanent positions for operation of 14 new refuges and waterfowl production areas in the States of Minnesota and North Dakota.
6. An increase of $125,000 for wage board increases.

Program of work

The estimate of $10,455,000 will be used for the following:

Operation of new refuges.—Fourteen new refuges and waterfowl production areas in Minnesota and North Dakota will be placed in operation as follows:

State and refuge	Positions	Estimate fiscal year 1967
Colorado: Browns Park	5	$60,000
Idaho:		
Dingle Swamp	3	50,000
Grays Lake	6	95,000
Kootenai	4	55,000
Maine: Coastal Maine	2	20,000
Minnesota: Waterfowl production areas	2	55,000
New Mexico: Las Vegas-Maxwell	5	70,000
North Carolina: Cedar Island	3	46,221
North Dakota: Waterfowl production areas	1	22,000
Oklahoma: Sequoyah	4	75,000
Oregon-Washington: Umatilla	5	65,000
Tennessee: Hatchie	4	81,000
Texas:		
Brazoria	4	65,000
San Bernard	4	60,000
Washington:		
Conboy	3	50,000
Ridgefield	4	55,000
	59	924,221

The remainder of the estimate will be used for salaries and other refuge operating and management costs in carrying out the waterfowl, other wildlife, and land resource programs of existing units of the national wildlife refuge system, and for employees' compensation payments which will total $59,835. With the country's wildlife habitat shrinking at an alarming and accelerated rate under the pressures of population growth and developments demanded by an affluent society, increased emphasis on the new refuges and waterfowl production areas as well as existing refuges will be given to the improved management of natural resources which provide improved habitat for waterfowl and other wildlife. These resources include the croplands necessary to provide supplemental food, particularly for waterfowl; the timberlands which, through proper management,

including harvest which provides economic benefits, provide wildlife food and cover; the grasslands which provide nesting habitat for waterfowl and upland game birds; and the marsh and water which provide the most important habitat for waterfowl—for nesting, resting, and feeding. Increased emphasis will be given also to the protection and recreation functions of wildlife refuge management. One of the primary objectives of the national wildlife refuge system is to preserve and manage wildlife and its associated environment for the enjoyment and edification of the American people. In 1964 the national wildlife refuge system was host to over 14 million visitors who came to observe wildlife, and to picnic, swim, boat, hunt, or fish.

The functional breakdown of the total program is as follows:

Function	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase or decrease (−)
(1) Maintenance	$4,711,395	$4,739,065	$4,399,400	−$339,665
(2) Management	4,614,400	4,735,200	4,446,200	−289,000
Croplands	2,177,200	2,249,300	2,102,700	−146,600
Timberlands	551,000	564,100	528,500	−35,600
Grasslands	554,300	557,300	522,500	−34,800
Marsh and water	1,331,900	1,364,500	1,292,500	−72,000
(3) Protection	1,035,900	1,064,502	1,075,202	10,700
(4) Recreation	459,177	466,177	474,363	8,186
(5) Employees' compensation	60,323	71,721	59,835	−11,886
Total	10,881,195	11,076,665	10,455,000	−621,665

The total estimate is broken down as follows:

State	Refuge	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)
Alabama	Choctaw	$32,500	$33,200	$700
	Wheeler	81,200	82,400	1,200
Alaska	Aleutian Islands	54,400	54,600	200
	Clarence Rhode	75,400	75,600	200
	Kenai	118,300	119,600	1,300
	Kodiak	59,900	60,400	500
Arizona	Cibola	55,400	55,400	
	Havasu	66,100	67,200	1,100
	Imperial	43,600	43,900	300
	Kofa and Cabeza Prieta	55,600	56,300	700
Arkansas	Big Lake	35,700	36,100	400
	Holla Bend	48,700	49,300	600
	Wapanocca	39,500	40,300	800
	White River	92,100	93,400	1,300
California	Kern-Pixley	101,700	102,800	1,100
	Klamath Basin	275,300	278,900	3,600
	Merced	78,500	79,100	600
	Modoc	45,800	46,600	800
	Sacramento-Colusa-Sutter-Delevan	288,400	291,600	3,200
	Salton Sea	77,400	78,400	1,000
Colorado	Alamosa	17,200	18,200	1,000
	Browns Park [1]		60,000	60,000
	Monte Vista	97,000	98,900	1,900
Delaware	Bombay Hook	122,800	116,600	−6,200
	Prime Hook	49,300	49,400	100
Florida	Chassahowitzka	31,500	32,100	600
	Lake Woodruff	31,600	32,100	500
	Merritt Island	44,800	45,800	1,000
	St. Marks	107,500	108,800	1,300
	Sanibel	27,500	27,800	300
	South Florida	116,550	107,750	−8,800
Georgia	Eufaula	70,700	66,500	−4,200
	Harris Neck	23,000	22,500	−500
	Okefenokee	90,600	86,600	−4,000
	Piedmont	24,600	24,800	200
	Savannah and Blackbeard Island	105,500	101,900	−3,600
Hawaii	Hawaiian Islands	19,000	19,000	
	Nene Goose	15,000	15,000	

See footnotes at end of table.

State	Refuge	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)
Idaho	Camas	$50,100	$50,700	$600
	Deer Flat	38,000	38,600	600
	Dingle Swamp [1]		50,000	50,000
	Grays Lake [1]		95,000	95,000
	Kootenai [1]		55,000	55,000
	Minidoka	27,300	27,600	300
Illinois	Chautauqua	34,400	34,700	300
	Crab Orchard	503,900	508,100	4,200
	Mark Twain	58,000	59,400	1,400
Iowa	De Soto	64,600	66,700	2,100
	Union Slough	21,700	23,000	1,300
Kansas	Flint Hills	60,500	61,100	600
	Kirwin	56,700	58,300	1,600
	Quivira	43,700	44,800	1,100
Louisiana	Catahoula	30,400	30,900	500
	Delta	49,500	50,500	1,000
	Lacassine	46,800	47,400	600
	Sabine	79,400	80,300	900
Maine	Coastal Maine [1]		20,000	20,000
	Moosehorn	120,800	92,300	−28,500
Maryland	Blackwater and Susquehanna	82,100	83,300	1,200
	Eastern Neck	10,000	10,500	500
	Glen Martin	15,000	15,300	300
Massachusetts	Great Meadows	5,000	5,000	
	Monomoy	9,800	10,000	200
	Parker River	80,300	82,200	1,900
	Sudbury	22,700	22,800	100
Michigan	Seney	90,300	92,200	1,900
	Shiawassee	58,100	59,100	1,000
Minnesota	Agassiz	65,600	66,600	1,000
	Rice Lake	35,600	36,100	500
	Sherburne	120,400	120,400	
	Tamarac	69,000	70,800	1,800
	Upper Mississippi	144,400	146,000	1,600
	Waterfowl production areas	29,600	84,600	55,000
Mississippi	Gulf Coast Island	33,500	34,000	500
	Noxubee	95,200	96,200	1,000
	Yazoo	60,800	61,300	500
Missouri	Mingo	60,700	62,300	1,600
	Squaw Creek	56,500	57,600	1,100
	Swan Lake	58,000	58,400	400
Montana	Benton Lake	225,600	84,000	−141,600
	Bowdoin	46,800	47,300	500
	Charles M. Russell	225,400	228,600	3,200
	Medicine Lake	34,900	35,400	500
	National Bison and Ninepipe	90,900	92,600	1,700
	Ravalli	50,600	51,100	500
	Red Rock Lakes	55,900	56,600	700
Nebraska	Crescent Lake	36,000	36,500	500
	Fort Niobrara	34,900	35,900	1,000
	Valentine	48,200	48,900	700
	Waterfowl production areas	4,100	4,400	300
Nevada	Desert Game Range	96,200	90,500	−5,700
	Ruby Lake	31,400	32,000	600
	Sheldon-Hart Mountain	91,900	93,000	1,100
	Stillwater	47,500	48,500	1,000
New Jersey	Brigantine	75,345	76,445	1,100
	Great Swamp	44,555	44,755	200
	Killcohook	500		−500
New Mexico	Bitter Lake	51,300	51,800	500
	Bosque del Apache	110,800	93,400	−17,400
	Las Vegas-Maxwell [1]		70,000	70,000
	San Andres	39,300	39,900	600
New York	Iroquois	53,300	53,900	600
	Montezuma	70,900	72,100	1,200
	Morton	9,300	9,600	300
North Carolina	Cedar Island [1]		46,221	46,221
	Mackay Island	29,300	29,800	500
	Mattamuskeet and Swan Quarter	79,000	80,800	1,800
	Pea Island	32,800	33,300	500
	Pee Dee	50,000	50,600	600
	Pungo	70,700	71,300	600
North Dakota	Arrowwood	35,100	35,400	300
	Des Lacs	40,000	40,700	700
	Lake Ilo	15,600	15,800	200
	Long Lake	29,400	29,700	300
	Lostwood	27,100	27,300	200
	Lower Souris	118,000	119,900	1,900
	Slade	22,400	23,000	600
	Snake Creek	31,600	32,100	500
	Sullys Hill	10,500	10,800	300
	Tewaukon	26,900	27,600	700
	Upper Souris	44,700	45,400	700
	Waterfowl production areas	66,000	88,200	22,200

See footnotes at end of table.

State	Refuge	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)
Ohio	Ottawa	$45,400	$46,100	$700
Oklahoma	Salt Plains	57,500	59,100	1,600
	Tishomingo	87,100	88,800	1,700
	Washita	57,000	57,600	600
	Wichita Mountains	155,200	159,700	4,500
	Sequoyah [1]		75,000	75,000
Oregon	Malheur	156,300	158,600	2,300
	Willamette	52,100	52,500	400
Oregon-Washington	Umatilla [1]		65,000	65,000
Pennsylvania	Erie	57,200	57,700	500
South Carolina	Cape Romain	65,200	60,400	−4,800
	Carolina Sandhills	25,300	25,600	300
	Santee	78,900	75,500	−3,400
South Dakota	Lacreek	48,900	49,300	400
	Lake Andes	36,900	37,500	600
	Sand Lake	66,700	67,600	900
	Waubay	27,400	27,800	400
	Waterfowl production areas	12,500	13,500	1,000
Tennessee	Cross Creeks	62,000	59,400	−2,600
	Hatchie [1]		81,000	81,000
	Reelfoot and Lake Isom	62,500	63,000	500
	Tennessee	110,000	103,900	−6,100
Texas	Anahuac	70,500	71,600	1,100
	Aransas	105,400	107,600	2,200
	Brazoria [1]		65,000	65,000
	Buffalo Lake	50,700	51,300	600
	Hagerman	53,500	54,800	1,300
	Laguna Atascosa and Santa Ana	83,700	85,400	1,700
	Muleshoe	21,400	21,700	300
	San Bernard [1]		60,000	60,000
Utah	Bear River	81,900	83,600	1,700
	Fish Springs	53,100	53,700	600
	Ouray	52,000	53,100	1,100
Vermont	Missisquoi	41,400	42,000	600
Virginia	Back Bay	36,800	37,200	400
	Chincoteague	66,900	68,000	1,100
	Presquile	34,500	35,000	500
Washington	Columbia	56,900	57,200	300
	Conboy [1]		50,000	50,000
	McNary	54,300	54,900	600
	Ridgefield [1]		55,000	55,000
	Toppenish	60,000	60,000	
	Turnbull	37,500	38,100	600
	Willapa	31,300	31,800	500
Wisconsin	Horicon	63,500	64,600	1,100
	Necedah	72,900	73,600	700
Wyoming	Hutton Lake, Bamf., and Path	34,600	35,100	500
	National Elk	138,800	115,600	−23,200
Regional offices:				
Portland, Oreg.		391,300	392,000	700
Albuquerque, N. Mex.		194,200	195,100	900
Minneapolis, Minn.		317,200	317,700	500
Atlanta, Ga.		249,350	250,350	1,000
Boston, Mass.		145,100	145,800	700
Washington, D.C.:				
Central office staff		628,344	641,644	13,300
Employees' compensation payments		71,721	59,835	−11,886
Total		12,075,665	12,866,000	790,335
Less available from national wildlife refuge fund		999,000	[2] 2,411,000	1,412,000
Estimate, management and investigations of resources appropriations		11,076,665	10,455,000	−621,665

[1] New refuges.
[2] Includes $142,500 for Benton Lake.

3. Soil and moisture conservation

Fiscal year 1965 amount available	$697,332
Fiscal year 1966 amount available	708,000
Fiscal year 1967 estimate	712,000
Increase (+) or decrease (−), 1967 compared with 1966:	
Total	+4,000
Total	+4,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $712,000 and 6 permanent positions, an increase of $4,000 over 1966. This increase is for pay costs.

Program of work

The estimate of $712,000 will be used for work on 132 units of the national wildlife refuge system in 40 States as compared with 120 units in 41 States in 1966. The funds will serve a fourfold objective: (1) continue the work in progress; (2) initiate work which has long been delayed on additional refuges; (3) plan and initiate work on a few recently acquired areas where erosion is most severe; and (4) permit the Bureau to carry out conservation treatment on joint projects involving other Federal, State, and private organizations. The following tabulation shows the distribution of the estimate by States and refuge area:

State and refuge	Fiscal year 1967 estimate
Alabama:	
Choctaw	$2,000
Eufaula	3,000
Wheeler	15,000
Alaska: Kenai	15,000
Arizona:	
Cibola	2,000
Havasu Lake	6,000
Kofa	1,000
Arkansas:	
Big Lake	2,000
Holla Bend	7,000
Wapanocca	4,000
White River	7,000
California:	
Kern-Pixley	6,000
Klamath Basin	12,000
Merced	6,000
Modoc	8,000
Sacramento-Colusa-Sutter	10,000
Salton Sea	1,500
Colorado: Monte Vista	10,500
Delaware:	
Bombay Hook	4,000
Prime Hook	2,000
Florida: St. Marks	5,000
Georgia:	
Blackbeard Island	3,000
Harris Neck	4,000
Okefenokee	1,000
Piedmont	2,000
Idaho:	
Camas	8,000
Minidoka	3,000
Illinois:	
Chautauqua-Cameron	4,000
Crab Orchard	16,000
Mark Twain	8,000
Iowa: Union Slough	3,000
Kansas:	
Flint Hills	2,000
Kirwin	5,000
Quivira	5,000
Louisiana:	
Catahoula	2,000
Lacassine	2,000
Maryland:	
Blackwater	3,000
Eastern Neck	2,000
Michigan:	
Seney	6,000
Shiawassee	5,000
Minnesota:	
Agassiz	7,000
Rice Lake	6,000
Sherburne	1,000
Tamarac	7,000
Upper Mississippi	5,000
Waterfowl production areas	10,000
Mississippi:	
Noxubee	8,000
Yazoo	8,000
Missouri:	
Mingo	$6,000
Squaw Creek	5,000
Swan Lake	5,000
Montana:	
Benton Lake	5,000
Bowdoin	1,000
Charles M. Russell	16,500
Medicine Lake	3,000
National Bison Range	3,000
Ninepipe-Pablo	2,000
Ravalli	2,000
Red Rock Lakes	7,000
Nebraska:	
Crescent Lake	6,000
DeSoto	5,000
Fort Niobrara	6,000
Valentine	6,000
Waterfowl production areas	3,000
Nevada:	
Desert Game Range	8,000
Ruby Lake	8,000
Sheldon-Hart Mountain	17,500
Stillwater	1,000
New Jersey: Brigantine	2,000
New Mexico:	
Bitter Lake	2,000
Bosque del Apache	8,000
New York:	
Iroquois	4,000
Montezuma	1,000
North Carolina:	
Mattamuskeet	4,000
Pea Island	2,000
Pee Dee	3,000
Pungo	10,000
North Dakota:	
Arrowwood	3,000
Des Lacs	3,000
Lake Ilo-White Lake	2,000
Long Lake	5,000
Lostwood	4,000
Lower Souris	6,000
Slade	3,000
Tewaukon	5,000
Upper Souris	5,000
Waterfowl production areas	20,000
Ohio: Ottawa	4,000
Oklahoma:	
Salt Plains	3,500
Tishomingo	1,000
Washita	5,000
Wichita Mountains	2,000
Oregon:	
Malheur	10,000
Willamette	3,000
Pennsylvania: Erie	4,000
South Carolina:	
Cape Romain	2,000
Carolina Sandhills	2,000
Santee	9,000

State and refuge	Fiscal year 1967 estimate	State and refuge	Fiscal year 1967 estimate
South Dakota:		Virginia:	
Lacreek	$5,000	Back Bay	$2,000
Lake Andes	1,000	Chincoteague	2,000
Sand Lake	6,000	Mackay Island	2,000
Waterfowl production areas	6,000	Washington:	
Tennessee:		Columbia	5,000
Cross Creeks	8,000	McNary-Cold Springs-McKay Creek	14,000
Hatchie	2,000	Turnbull	7,000
Reelfoot-Lake Isom	3,000	Willapa	4,000
Tennessee	19,000	Wisconsin:	
Texas:		Horicon	5,000
Anahuac	2,000	Necedah	5,000
Aransas	8,500	Wyoming: Hutton Lake-Pathfinder	4,000
Buffalo Lake	2,000	Portland, Oreg	10,000
Hagerman	3,000	Albuquerque, N. Mex	3,800
Laguna Atascosa	5,000	Minneapolis, Minn	7,700
Muleshoe	2,000	Atlanta, Ga	15,000
Utah:		Central office	25,000
Bear River	4,000		
Fish Springs	2,500	Total	712,000
Ouray	3,000		

Examples of recent accomplishments

During the past year, soil and moisture conservation plans were developed or revised for 20 refuges. The 1967 estimate will enable the refuge system to meet 56 percent of its scheduled 1967 soil and moisture treatment needs, about the same percentage as for the 3 previous years. These funds are sufficient to accomplish about 1.6 percent of the total soil and moisture conservation needs required for the refuge system. These requirements are increasing as a result of the present Bureau acquisition program. Much of the newly acquired land is in an eroded or depleted soil condition. Corrective measures to check further deterioration are applied to the extent possible until such time as sufficient funds are available to correct these problems and restore the land to full production.

Most of the refuges are adjacent to intensively farmed or grazed private lands, therefore, the Bureau's management of its soil, water and plant resources has an important influence upon the public.

Several watershed treatment projects which include refuge lands have recently been initiated. The augmented program now underway is an essential step toward meeting the responsibilities of Federal land stewardship as well as attaining public support.

The following is an analysis of the soil and moisture conservation program:

	Estimate, 1966	Estimate, 1967
Number of projects	120	132
Number of States concerned	41	40
Gross project acreage	10,109,000	10,229,000
Percentage of refuge system programed	36	37
Acreage of intensive application of practices	50,000	100,000
Appropriation level	$708,000	$712,000
Man-years—Temporary personnel	47	47
Man-years—Permanent personnel	6	6
Distribution of estimate:		
Land use planning, surveys, and studies	$33,000	$88,000
Soil management	357,000	367,500
Water management	280,000	206,500
Project operation, maintenance, and facilitating practices	38,000	51,000
Total	708,000	712,000

Annual percent of accomplishment on total soil and moisture conservation projects needs	Current total need	Accomplished, 1966	Estimated to be accomplished in 1967
		Percent	*Percent*
Land use planning, surveys, and studies	$640,000	4.0	12.5
Soil management	23,850,000	1.3	1.5
Water management	13,110,000	1.9	1.6
Project operation, maintenance, and facilities	5,400,000	.6	.9
Total	$43,000,000	1.4	1.6

4. Management and enforcement

Fiscal year 1965 amount available	$3,312,273
Fiscal year 1966 amount available	3,389,000
Fiscal year 1967 estimate	3,406,000
Increase (+) or decrease (—), 1967 compared with 1966:	
Total	+17,000
Pay cost [1]	+17,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $3,406,000 and 208 permanent positions, an increase of $17,000 over 1966. This increase is for pay costs.

The estimate for enforcement of the black bass law, amounting to $18,000 and and two permanent positions, has been transferred to this activity from fish hatcheries.

Program of works

The estimate of $3,406,000 will be used in developing and executing a program of game management. Pertinent to fulfilling this purpose, continentwide studies and inventories are conducted annually to gather selective and factual data and information on the population status of migratory birds. The findings are correlated with previous years' collected data, analyzed and evaluated. A judgment is then made of the population status and the annual hunting regulations are established governing the take of the predetermined surpluses of migratory birds. One hundred fifty-five game management agents and eight flyway biologist-airplane pilots are responsible for carrying out this program at the field level.

The functional breakdown of this estimate is as follows:

	Estimate, 1966	Estimate, 1967
Enforcement and depredations control	$2,755,425	$2,769,700
Enforcement of black bass law	18,000	18,000
Surveys and banding	615,575	618,300
Total	3,389,000	3,406,000

The geographic scope of the management and enforcement program is continentwide. Migratory bird surveys and banding work is carried out in the United States, Puerto Rico, and the Virgin Islands, Canada, and Mexico. Enforcement of the Federal game laws and regulations, including the Migratory Bird Treaty Act, as amended (16 U.S.C. 703–711), and the Lacey Act (18 U.S.C. 42–44), regulating interstate and foreign commerce in birds, mammals, reptiles, fish and amphibians is carried out in the United States, Puerto Rico, and the Virgin Islands.

This program directly affects the resource but more importantly the millions of people who enjoy a wide variety of wildlife oriented outdoor recreation. It is vital in maintaining the populations of North American migratory birds. In addition to the approximately 2 million duck hunters, there are unnumbered thousands of hunters of woodcock, snipe, white-winged doves, band-tailed pigeons, rails, and gallinules. Recent studies indicate that of all the species of migratory birds, the mourning dove supports more hunting opportunities than any other, including ducks and geese. The latest estimate of the annual kill of doves is in excess of 19 million birds, which greatly exceeds the annual kill of all species of ducks combined. With more leisure time, increasing numbers of hunters are looking for more game to hunt and woodcock, jacksnipe, and pigeons are pursued more avidly each year.

These millions of migratory bird hunters have a tremendous impact on local and national economy. They spend, in the aggregate, large sums of money annually for the purchase of shotguns and shells, boats, outboard motors, gas and oil, clothing, board and lodging, transportation, guides, club dues, and personal services. The economic importance nationally of this natural resource is shared on an international basis by susbtantial contributions to the economy of the Canadian Provinces and the various Mexican States.

In 1967 emphasis will be directed toward improvement of the professional abilities of program personnel through formalized and expanded training in the most up-to-date advances in theory, philosophy, and techniques of game law enforcement and management; to continue the push into the wilderness area of northern Canada conducting waterfowl breeding ground surveys and banding work; and to continue definite action on behalf of advising and informing the general public on the conservation needs. The benefits derived from this positive growth program will be reflected in the uniformity of approach to management of the wildlife resources, in establishing widespread appreciation and understanding of the need to preserve and protect the Nation's wildlife, and in acquiring a high level of statistical reliability on the population status data which will in turn provide hunting regulations of maximum benefit to the resource and the hunting public.

The total estimate is broken down by State and foreign countries as follows:

Management and enforcement

State or other	Estimate 1966	Estimate 1967	Increase or decrease (−)
Alabama	$44,000	$44,000	
Alaska	211,000	213,000	$2,000
Arizona	26,000	26,000	
Arkansas	49,000	49,000	
California	190,000	190,000	
Colorado	50,000	50,000	
Connecticut	15,000	15,000	
Delaware	35,000	35,000	
Florida	63,000	77,000	14,000
Georgia	86,000	60,000	−26,000
Idaho	35,000	35,000	
Illinois	84,000	84,000	
Indiana	35,000	35,000	
Iowa	32,000	32,000	
Kansas	46,000	46,000	
Kentucky	29,000	29,000	
Louisiana	137,000	137,000	
Maine	19,000	19,000	
Maryland	131,000	131,000	
Massachusetts	17,000	17,000	
Michigan	58,000	58,000	
Minnesota	127,000	123,000	−4,000
Mississippi	33,000	33,000	
Missouri	58,000	58,000	
Montana	34,000	34,000	
Nebraska	59,000	60,000	1,000
Nevada	27,000	27,000	
New Hampshire	14,000	14,000	
New Jersey	29,000	30,000	1,000
New Mexico	51,000	49,000	−2,000
New York	61,000	62,000	1,000
North Carolina	82,000	96,000	14,000
North Dakota	68,000	82,000	14,000
Ohio	32,000	32,000	
Oklahoma	32,000	33,000	1,000
Oregon	106,000	104,000	−2,000
Pennsylvania	30,000	30,000	
Rhode Island	16,000	16,000	
South Carolina	43,000	45,000	2,000
South Dakota	46,000	46,000	
Tennessee	45,000	46,000	1,000
Texas	155,000	156,000	1,000
Utah	92,000	83,000	−9,000
Vermont	15,000	15,000	
Virginia	54,000	55,000	1,000
Washington	81,000	82,000	1,000
West Virginia	14,000	14,000	
Wisconsin	46,000	45,000	−1,000
Wyoming	19,000	19,000	
Puerto Rico and Virgin Islands	15,000	15,000	
Central office	438,000	435,000	−3,000
Regional offices:			
Portland, Oreg	89,000	95,000	6,000
Albuquerque, N. Mex	103,000	107,000	4,000
Minneapolis, Minn	90,000	96,000	6,000
Atlanta, Ga	105,000	110,000	5,000
Boston, Mass	73,000	74,000	1,000
Canada	85,000	85,000	
Mexico	16,000	16,000	
Total program	3,875,000	3,904,000	29,000
Less: Available from "Management of national wildlife refuges" appropriation	−486,000	−498,000	−12,000
Estimate: "Management and investigations of resources" appropriation	3,389,000	3,406,000	17,000

Table of cases involving violations of wildlife conservation laws enforced by the Bureau of Sport Fisheries and Wildlife, fiscal year 1965

	Pending July 1, 1964	New cases	Terminations					Penalties			Pending June 30, 1965
			Guilty	Acquitted	Dismissed	Declined	Total	Fines and costs	Jail sentences (days)	Probation (days)	
Migratory Bird Treaty Act	737	4,341	3,565	87	89	449	4,190	$137,729	2,901	68,404	888
Migratory Bird Conservation Act	65	716	622	7	5	54	688	20,260	7,730	15,330	93
Bald Eagle Act	1	11	6		1	3	10	1,185	130	90	2
Lacey Act		24	19			1	20	2,216		1,460	4
Black Bass Act	4	5	7				7	520	20		2
Migratory Bird Hunting Stamp Act	46	279	183	2	29	42	256	5,982	120	3,650	69
Assault Act	2			1			1				1
Total	855	5,376	4,402	97	124	549	5,172	[1] 167,892	[2] 10,901	88,934	1,059

[1] Includes $42,208 in fines which were suspended.

[2] Includes 10,647 days jail sentences which were suspended.

In addition, U.S. game management agents cooperated with State conservation officers in the apprehension for 2,950 violations of State laws and regulations involving resident game and fish. Total cases disposed of were 2,835 with 2,689 adjudged guilty. Sentences imposed resulted in total fines of $92,383, jail sentences of 3,163 days, and probation of 26,422 days.

5. Fishery research

	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Fishery research	$2,813,099	$3,212,000	$3,359,000	+$147,000	+$24,000	+$123,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $3,359,000 and 264 permanent positions, an increase of $147,000 and 22 permanent positions over 1966. The net increase consists of—

(1) An increase of $24,000 for increased pay costs.

(2) An increase of $4,000 for wage-board increases.

(3) $100,000 and 19 permanent positions for staffing and operation of new facilities being completed for the fish-pesticide research studies.

(4) $19,000 and 3 permanent positions for staffing and operation of new facilities at 3 laboratories.

The increase other than for pay costs is broken down by laboratories as follows:

Fish Farming Experimental Station, $5,500.—1 position. Needed is an aid for operation of an additional new research building at the Stuttgart site.

Fish-Pesticide Research Laboratory, $100,000.—19 positions. Research specialists and a supporting staff of maintenance and custodial people, biological aids and a hatchery manager must be recruited to maintain and operate the new research installation.

Tiburon Marine Laboratory, $5,500.—1 position. Increased space at this station requires additional funds to employ one unclassified custodial person to maintain the facilities.

Fish Genetics Laboratory, $8,000.—1 position. Recently completed laboratory facilities in the lodge basement and temporary fish holding facilities in the barn made it possible for essential exploratory and background studies to be undertaken. Needed is a fishery biologist. The potential benefits of the planned program to recreational fishing are great and this increase will permit some progress in the essential exploratory studies.

Program of work

Fishery research is conducted to provide the knowledge necessary for the successful management of sport fishery resources to meet mounting needs despite the complexity of environmental contamination and diminishing available habitat. To provide this knowledge, research is conducted to increase the efficiency of production and to improve the quality of hatchery fish; to develop strains of sport fish better suited to changing management needs; to understand the principles governing the distribution and abundance of sport species in large bodies of water, both fresh and marine; to develop means of controlling unwanted species that compete with sport species for food and habitat; and to understand the effects of man-caused environmental pollution so that adequate protection can be provided.

The estimate of $3,359,000 is broken down by the following functions:

Function	Available, 1966	Estimate, 1967	Increase
Pathology	$260,000	$262,000	$2,000
Nutrition	270,000	275,000	5,000
Husbandry methods	324,000	333,000	9,000
Fish-pesticide relationships	670,000	770,000	100,000
Fish control methods	317,000	320,000	3,000
Reservoirs	386,000	390,000	4,000
Marine	634,000	644,000	10,000
Genetics	78,000	90,000	12,000
Field functions, subtotal	2,939,000	3,084,000	145,000
Washington office supervision	273,000	275,000	2,000
Total	3,212,000	3,359,000	147,000

The estimate is broken down by locations at which the work will be conducted as follows:

State laboratory or field station	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)
Alabama—Marion:			
Southeastern Fish Cultural Laboratory	$71,000	$72,000	$1,000
Fish-Pesticide Field Station	23,000	32,000	9,000
Arkansas:			
Fayetteville—South-Central Reservoir investigation	156,000	158,000	2,000
Stuttgart—Fish Farming Expermental Station	113,000	119,000	6,000
California:			
Tiburon—Tiburon Marine Laboratory	83,000	88,000	5,000
Bishop—California-Nevada Convict Creek Experiment Station	49,000	50,000	1,000
Colorado—Denver: Fish-Pesticide Research Laboratory	[1] 285,000	170,000	−115,000
Georgia:			
Atlanta—Fish-Pesticide Surveillance Station	10,000	11,000	1,000
Warm Springs—Southeastern Fish Control Laboratory	179,000	180,000	1,000
Idaho—Hagerman: Western Fish Nutrition Field Station	31,000	34,000	
Maryland—Laurel (Patuxent): Fish-Pesticide Research Field Station	56,000	45,000	−11,000
Massachusetts—Boston: Fish-Pesticide Surveillance Station	2,000	4,000	2,000
Minnesota-Minneapolis: Fish-Pesticide Surveillance Station	1,000	3,000	2,000
Missouri—Columbia: Fish-Pesticide Research Laboratory (new)	14,000	[2] 300,000	286,000
Nevada—Reno: California-Nevada sport fishery investigation	16,000	16,000	
New Jersey—Sandy Hook (Highlands):			
Sandy Hook Marine Laboratory	459,000	464,000	5,000
Fish-Pesticide Research Field Station	52,000	55,000	3,000
New Mexico—Albuquerque: Fish-Pesticide Surveillance Station	21,000	19,000	−2,000
New York—Cortland: Eastern Fish Nutrition Laboratory	70,000	71,000	1,000
Oklahoma—Tishomingo: Fish-Pesticide Research Field Station	14,000	24,000	10,000
Oregon—Portland: Fish-Pesticide Surveillance Station	17,000	14,000	−3,000
Rhode Island—Saunderstown: Narragansett Marine Laboratory	92,000	92,000	
South Dakota:			
Pierre—North Central Reservoir Investigation Field Station	85,000	85,000	
Yankton—North Central Reservoir Investigation	145,000	147,000	2,000
Washington:			
Cook—			
Western Fish Nutrition Laboratory	166,000	170,000	4,000
Fish-Pesticide Research Field Station	53,000	25,000	−28,000
Longview—			
Salmon-Cultural Laboratory	75,000	76,000	1,000
Fish-Pesticide Research Field Station	17,000	7,000	−10,000
Seattle—			
Western Fish Disease Laboratory	126,000	127,000	1,000
Fish-Pesticide Research Field Station	28,000	12,000	−16,000
West Virginia—Leetown: Eastern Fish Disease Laboratory	134,000	135,000	1,000
Wisconsin—La Crosse:			
Fish Control Laboratory	138,000	140,000	2,000
Fish-Pesticide Research Field Station	55,000	25,000	−30,000
Wyoming:			
Beulah—Fish Genetics Laboratory	78,000	90,000	12,000
Jackson—Fish-Pesticide Research Field Station	22,000	24,000	2,000
District of Columbia—Washington Central Office	273,000	275,000	2,000
Total	3,212,000	3,359,000	147,000

[1] Includes estimated $95,000 for research contracts.
[2] Includes estimated $40,000 for research contracts.

6. Wildlife research

Fiscal year, 1965, amount available	$4,897,706
Fiscal year 1966, amount available	5,445,400
Fiscal year 1967, estimate	5,902,000
Increase (+) or decrease (−), 1967 compared with 1966:	
Total	+456,600
Pay cost[1]	+36,000
Program	+420,600

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $5,902,000 and 418 permanent positions, an increase of $456,600 and 38 permanent positions over 1966. The increase consists of—

(1) An increase of $36,000 for increased pay costs.

(2) An increase of $5,600 for wage-board increases.

(3) An increase of $315,000 and 30 permanent positions to accelerate research currently in progress, to provide for additional basic studies of the long-term effects of pesticides on wildlife and their environments, and to expedite the discovery and development of more selective methods of pest control.

(4) An increase of $100,000 and eight permanent positions to augment staffing of the Northern Prairie Wildlife Research Center to perform laboratory, controlled environment, and field studies on means of obtaining optimum waterfowl production from available wetland habitats and ways of maintaining waterfowl populations at levels compatible with other resource and spatial needs.

Program of work:

The estimate of $5,902,000 will be used for:

Function	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)
Waterfowl management	$1,007,000	$1,122,000	$115,000
Other migratory bird research	779,000	785,000	6,000
Upland-wildlife	221,400	224,400	3,000
Pesticide-wildlife relationships	1,395,000	1,710,000	315,000
Diseases and parasites	387,000	389,000	2,000
Control methods	1,192,000	1,202,600	10,600
Classification, distribution, and life history	162,000	164,000	2,000
Cooperative units	302,000	305,000	3,000
Total	5,445,400	5,902,000	456,600

Waterfowl management. The estimate of $1,122,000 is an increase of $115,000 and eight permanent positions over 1966, of which $12,000 is for pay costs and $100,000 and eight permanent positions are for program purposes. The $1,027,000 will be used for scheduled waterfowl research projects, annual hunter success and productivity surveys, analysis of data, and publication of results. Emphasis will be placed on means of managing waterfowl to provide maximum sustained recreational benefits in harmony with other land-use objectives. Projects will be undertaken to ascertain environmental requirements of species and to develop improved methods of habitat management. Although studies on the breeding, migrational, and wintering ecology of waterfowl will continue to be emphasized, intensified effort will be directed to determining requirements for successful waterfowl production and the factors responsible for annual fluctuations in use of nesting areas. Research findings are disseminated promptly to waterfowl managers and administrators. The waterfowl research program is cooperative in nature involving the Mexican, Canadian, Provincial, and State Governments, flyway councils, and private organizations. The increase of $100,000 will enable expansion of the research program of the Northern Prairie Wildlife Research Center and fuller utilization of the new facilities which have been developed there.

Other migratory bird research.—The estimate of $785,000 is an increase of $6,000 over 1966 for pay costs. The $785,000 will be used for scheduled migratory bird research projects, for the processing and maintenance of bird banding records, and for the classification, storage, retrieval, and analysis of research data. Mourning dove research will be continued under the plans developed jointly with the International Association of Game, Fish, and Conservation Commissioners with primary emphasis on the development of population inventory and harvest estimates. Woodcock and snipe studies are designed to collect data for regulation determinations and the refinements of inventory survey techniques. The status and seasonal movements of nongame migratory birds will be studied in cooperation with the National Audubon Society and other cooperators. Field, laboratory, and avicultural research associated with the new rare and endangered species program will continue to be directed to priority species such as whooping cranes, the California condor, a group of Hawaiian birds, and the black-footed ferret.

Upland-wildlife.—The estimate of $224,400 is an increase of $3,000 over 1966 for pay costs. The $224,400 will be used to continue forest-wildlife relationship studies to evaluate the impact of forest management practices on wildlife and to seek methods or modifications which will lead to the maintenance of optimum wildlife populations consonant with the multiple-use philosophy. In cooperation with the Forest Service, Bureau wildlife biologists will conduct these studies in the major forested areas of the United States. Such studies as factors affecting population dynamics of deer herds in the Southwest; evaluation of ecological factors affecting Merriam's wild turkey in Arizona; wildlife-forest regeneration relationships in the Northern Rocky Mountain region; and life history of small mammals and seed-eating birds in the Douglas-fir timber type of western Oregon illustrate the varied and complex nature of the upland game research program. Wildlife review, an abstracting service for professional wildlife conservationists, will be continued in its present form.

Pesticide-wildlife relationships.—The estimate of $1,710,000 is an increase of $315,000 and 30 permanent positions over 1966. The $1,710,000 will be used for scheduled pesticide-wildlife research projects, related laboratory service work, surveillance and monitoring activities, and for research contracts with competent agencies and individuals. Acute and chronic toxicity evaluations of pesticides in common usage and studies of their ecological and physiological effects will be continued through feeding tests and controlled plot studies using a variety of key bird and mammal species. Dosage rates, active ingredients, carriers, timing, and methods of applications of pesticides will be correlated with observed effects on wildlife to assist in the development of new materials and techniques which will enable effective control with minimum damage to wildlife. Special attention will be devoted to determining clorinated hydrocarbon pesticidal residues which are now seemingly ubiquitous. Contract research, including service work, will be performed on selected aspects of the problem which are not feasibly handled on an in-house basis, or in circumstances where facilities or specialized manpower is not available. The increase of $315,500 and 30 permanent positions will permit the acceleration of research in progress and to probe new fields of investigations such as the effects on wildlife of exposure to pesticides in combination with other pollutants, studies to determine more precisely the physiological effects of pesticidal residues in the tissue and organs of various species of wildlife; correlate residue levels in eggs with levels in parent birds, determine pesticidal elimination rates in animals following reduction in environmental contamination, and establish how various environmental and physiological stresses affect reactions to pesticides. The additional personnel are required to furnish the professional and nonprofessional assistance necessary to conduct this expanded program.

Diseases and parasites.—The estimate of $389,000 is an increase of $2,000 over 1966 for pay costs. The $389,000 will be used for scheduled disease research projects and for associated laboratory service work. Studies designed to investigate the principal causative agents of diseases in wildlife will be continued in an effort to accumulate information on which to base feasible control measures. Attention will be given to diseases, such as encephalitis and botulism which affect both humans and wildlife. The potential of disease organisms in the control of nuisance wildlife populations will be continued at the University of Georgia on the studies which were initiated in fiscal years 1964, 1965, and 1966 and remain uncompleted. New starts in fiscal year 1967 will involve problems of mutual interest to the several States served by this program. Cooperative studies with other governmental agencies and educational institutions will be continued to insure maximum effectiveness of available talent, facilities, and funds.

Control methods.—The estimate of $1,202,600 is an increase of $10,600 over 1966 for pay costs. The $1,109,000 will be used for scheduled research projects and laboratory service work oriented to the control of nuisance and destructive populations of birds and mammals. Studies in progress are designed for the development of selective and effective control methods for alleviating damage to corn, rice, orchard crops, livestock, stored products and forest reproduction. Particular emphasis will continue to be place on the corn-blackbird problem in the East, the rice-blackbird and nutria problems in the South Central States, the starling and forest rodent problems in the West, and the predator and rodent problems on the rangelands. In addition to the screening of repellent, sterility producing, and lethal chemicals, which will be carried out in cooperation with the chemical industry, work will continue on the refinement of scaring and trapping devices, cultural methods and habitat manipulation as means of ef-

fecting damage control. Studies on the biology, distribution, and behavioral traits of birds and mammals will be made to provide the basis for selective control procedures. Extensive control operations will be appraised for total impact on the wildlife environment.

Classification, distribution and life history.—The estimate of $164,000 is an increase of $2,000 over 1966 for pay costs. The $164,000 will be used for scheduled research projects, bird and mammal identification services, maintenance of the scientific specimen collections, and coordination of the nationwide bat banding program. Basic taxonomic research will continue to focus on migratory game birds and other species of primary concern in the Bureau's management programs. Manuscripts on the sea otter, Pacific walrus and birds of the Northern Rocky Mountains will be brought to completion. Data will be provided on the geographical delineation and status of rare and endangered bird and mammal species for delimiting acquisition areas and for taking precautions to prevent catastrophe in pest control programs.

Cooperative wildlife research units.—The estimate of $305,000 is an increase of $3,000 over 1966 for pay costs. The $305,000 will be used for the Bureau's share of the cooperative wildlife research units, a program supported jointly by the Bureau, the Wildlife Management Institute and the land grant colleges and conservation departments of 18 States for the purpose of conducting wildlife research, facilitating the training of professional wildlife biologists, promoting conservation education, and providing technical advice and information to conservation agencies. Bureau biologists serve as unit leaders and guide the programs developed by the local coordination committees. Research on migratory birds, pesticide-wildlife relationships, animal depredations control, and other subjects of national interest are scheduled.

The following is a breakdown of the cooperative wildlife research unit program:

Unit location	Fiscal year 1966 estimate	Fiscal year 1967 estimate
Auburn, Ala.	$14,400	$14,500
College, Alaska	23,000	23,400
Tucson, Ariz.	15,200	15,300
Fort Collins, Colo.	15,300	15,500
Moscow, Idaho	15,300	15,500
Ames, Iowa	15,300	15,500
Baton Rouge, La.	14,400	14,500
Orono, Maine	15,300	15,500
Amherst, Mass.	15,300	15,500
Columbia, Mo.	15,300	15,500
Missoula, Mont.	15,300	15,500
Ithaca, N.Y.	14,400	14,500
Columbus, Ohio	40,000	40,000
Stillwater, Okla.	13,400	13,500
University Park, Pa.	15,000	15,200
Brookings, S. Dak.	15,400	15,600
Logan, Utah	15,300	15,500
Blacksburg, Va.	14,400	14,500
Total	302,000	305,000

The total estimate is broken down as follows:

State and field station	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)	Function
Alabama: Auburn Cooperative Wildlife Research Unit	$14,400	$14,500	$100	Cooperative unit.
Alaska: College Cooperative Wildlife Research Unit	23,000	23,400	400	Do.
Arizona:				
Mesa Field Station	13,500	13,500		Bird control research.
Tempe Field Station	22,300	22,300		Upland wildlife ecology.
Tucson Field Station	14,700	15,000	300	Migratory bird studies.
Tucson Cooperative Wildlife Research Unit	15,200	15,300	100	Cooperative unit.
Arkansas: Stuttgart Field Station	47,000	47,000		Bird Depredation research.
California:				
Davis Field Station	75,000	75,500	500	Bird and rodent research pesticides-wildlife investigations.
Riverside Field Station	18,500	18,500		Bird control research.
Redding Field Station	10,000	10,000		Forest-wildlife studies.
Santa Paula Field Station	25,000	25,000		Rare and endangered species (California Condor).
Colorado:				
Denver Wildlife Research Center	815,765	933,285	117,520	Upland wildlife resarch, pesticides control methods, diseases, and parasites.
Fort Collins Field Station	16,500	16,500		Upland wildlife ecology.
Fort Collins Cooperative Wildlife Research Unit	15,300	15,500	200	Cooperative unit.
Monte Vista Field Station	5,000		−5,000	Rare and endangered species.
Delaware: Newark Field Station	40,000	40,000		Bird depredation control.
Florida: Gainesville Field Station	113,000	115,000	2,000	Waterfowl management, animal depredations, rare and endangered species.
Georgia:				
Athens, University of Georgia, contract	185,000	185,000		Wildlife disease studies.
Atlanta regional office	45,000		−45,000	Engineering costs for rare and endangered species facilities.
Hawaii: Honolulu Field Station	25,000	25,000		Rare and endangered species.
Idaho:				
Moscow Cooperative Wildlife Research Unit	15,300	15,500	200	Cooperative unit.
Twin Falls Rabbit Control Research Station	26,000	26,000		Rabbit control.
Iowa: Ames, Cooperative Wildlife Research Unit	15,300	15,500	200	Cooperative unit.
Louisiana:				
Baton Rouge Cooperative Wildlife Research Unit	15,400	15,500	100	Do.
Houma Nutria Research Station	32,000	32,000		Nutria control.
Lafayette Field Station	28,000	28,000		Waterfowl mangement.
Maine: Orono Cooperative Wildlife Research Unit	15,300	15,500	200	Cooperative unit.
Maryland:				
Laurel, Patuxent Wildlife Center	1,266,055	1,378,655	+112,600	Waterfowl research, other migratory bird research, upland-wildlife diseases and parasites control methods.
Laurel Migratory bird station	634,000	638,000	4,000	Migratory bird population studies.
Massachusetts:				
Amherst Cooperative Wildlife Research Unit	67,800	68,500	700	Cooperative unit and bird depredations.
South Lincoln Field Station	22,500	22,500		Bird depredations.
Minnesota: St. Paul Field Station	19,500	19,500		Upland wildlife ecology.
Missouri: Columbia Cooperative Wildlife Research Unit	15,300	15,500	200	Cooperative unit.

State and field station	Fiscal year 1966 estimate	Fiscal year 1967 estimate	Increase or decrease (−)	Function
Montana:				
Missoula Field Station	$14,700	$14,700	----------	Upland wildlife ecology.
Missoula Cooperative Wildlife Research Unit	15,300	15,500	$200	Cooperative unit.
Hamilton Field Station	13,000	13,000	----------	Pesticide-wildlife investigation.
New York: Ithaca Cooperative Wildlife Research Unit	14,400	14,500	100	Cooperative unit.
North Carolina: Asheville Field Station	14,500	14,500	----------	Upland wildlife ecology.
North Dakota: Jamestown Northern Prairie Center	259,500	362,000	+102,500	Waterfowl management.
Ohio: Columbus Cooperative Wildlife Research Unit	40,000	40,000	----------	Cooperative unit.
Oklahoma: Stillwater Cooperative Wildlife Research Unit	13,400	13,500	100	Do.
Oregon:				
Cornelius Bird Control Research Station	23,000	23,000	----------	Bird control research.
Corvallis Field Station	15,200	15,200	----------	Upland wildlife ecology.
Pennsylvania:				
University Park Cooperative Wildlife Research Unit	15,000	15,200	200	Cooperative unit.
Warren Field Station	16,000	16,000	----------	Upland wildlife ecology.
South Dakota:				
Aberdeen Field Station	16,500	17,000	500	Waterfowl management.
Brookings Cooperative Wildlife Research Unit	16,400	16,600	200	Cooperative unit.
Rapid City Field Station	30,000	30,000	----------	Rare and endangered species.
Texas:				
Beaumont Field Station	11,000	11,000	----------	Nutria control.
Nacogdoches Field Station	19,000	19,000	----------	Upland wildlife ecology.
San Antonio Field Station	13,000	13,000	----------	Predator prey studies.
Utah:				
Brigham City Bear River Reservation Station	90,000	90,000	----------	Wildlife diseases, pesticide-wildlife relation.
Logan Cooperative Wildlife Reservation Unit	15,300	15,500	200	Coopreative unit.
Virginia: Blacksburg Cooperative Wildlife Reservation Unit	14,400	14,500	100	Do.
Washington:				
Olympia Forest—Animal Damage Lab	38,000	38,000	----------	Forest animal damage research.
Seattle Marine Field Station	25,000	25,000	----------	Marine mammal studies.
Washington, D.C., National Museum	103,000	108,000	5,000	Distribution, classification, and life history studies of birds and mammals.
Central office	588,180	546,360	−41,820	Supervision and overhead cost.
Surveillance	----------	100,000	+100,000	Pesticide surveillance.
Contracts	300,000	400,000	+100,000	
Total	5,445,400	5,902,000	+456,600	

7. Fishery services

Fiscal year 1965 amount available	$1,014,477
Fiscal year 1966 amount available	1,376,000
Fiscal year 1967 estimate	1,385,000
Increase (+) or decrease (−), 1967 compared with 1966:	
Total	+9,000
Pay cost [1]	+9,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $1,385,000 and 90 permanent positions, an increase of $9,000 over 1966. This increase is for pay costs.

Program of work

Technical assistance in sport fishery management.—The estimate of $685,000 will provide technical guidance on approximately 255 federally owned areas and 45 Indian reservations. Also, some guidance will be provided in the formation of plans for stocking fish produced at the national fish hatcheries in public and private waters.

The Bureau has working agreements with the Department of Defense, the National Park Service, the Forest Service, the Bureau of Indian Affairs and 22 tribes. More than 150 Department of Defense areas depend upon Bureau biologists for technical guidance in the development and maintenance of recreational fishing. In fiscal year 1966, steps are being taken to carry out plans, which include inventories of fish and wildlife resources, in cooperation with State conservation agencies and defense establishments as called for by the act of September 15, 1960 (16 U.S.C. 670a–e). Several actvities of national significance are being carried on in cooperation with the State fish and game agencies. These include fishery programs of the Upper Mississippi River Conservation Committee; the Colorado River storage project on which Bureau biologists serve as field inspectors and accomplish coordination of research efforts being carried out by State fish and game departments under contract; and a project to serve the Upper Connecticut River Basin, including the Green Mountain National Forest.

Giving technical assistance to the Indian tribes has resulted in greatly increased recreational opportunities to visitors of the reservations and has added to the income of the tribes through employment of its members as guides and operators of concessions, and through development of physical facilities such as boat docks, parking areas, campgrounds and trails for fishermen, and dams to impound new water areas. Fish from the Federal hatcheries are used to maintain the fishing, and technical guidance assures their being stocked effectively in reservation waters.

Fishery management services being provided the public include preparation and distribution of reports, circulars, and correspondence related to sport fishery resources. Several thousand letters will be answered and information contained in fishery circulars on sport fishery subjects, including management of ponds, improved stocking procedures and habitat improvements, will be furnished the public. Public interest in outdoor recreation is increasing and leads to many requests to the Bureau for information on sport fishery subjects. In 1967, technical assistance will be provided on Federal areas at about the same level as in 1966.

Cooperative fishery units.—An estimate of $700,000 will provide for the continuation of 20 cooperative fishery units now in existence or to be established in fiscal year 1966. Each cooperative fishery unit functions under an agreement involving the Bureau, a university, and usually, the fish and game department of the State where the unit is located. The program emphasizes the training of fishery scientists for employment by State and Federal agencies and at the same time, the performance of beneficial fishery research and management work. There has been a continuing shortage of fishery biologists which these programs will help alleviate. Surveys of fishery resources on large Federal holdings, development of new management techniques, studies of fish behavior, life histories, development of recreational fishing in new impoundments, sport fishes in estuaries, genetics of warm water fishes, fish ecology and habitat requirements are subjects receiving attention by unit staff members and graduate students under their supervision. The ratio of funds varies from approximately half

State to half Federal to somewhat lesser contributions by the States. The units provide opportunities for seasonal employment of students who are seeking careers in fisheries.

Summary by States.—The total estimate of $1,385,000 is broken down by States and projects as follows:

Station	Amount available, fiscal year 1966	Estimate, fiscal year 1967	Increase or decrease (−)
Technical assistance in sport fishery management:			
Arizona:			
Parker	$14,000	$14,000	
Phoenix	12,000	12,000	
Springerville	12,000	12,000	
Georgia, Atlanta (regional office)	43,000	44,000	$1,000
Massachusetts, Boston (regional office)	31,000	32,000	1,000
Minnesota, Minneapolis (regional office)	42,000	43,000	1,000
Montana, Kalispell	14,000	14,000	
Nebraska, Valentine	12,000	12,000	
Nevada, Reno	14,000	14,000	
New Hampshire, Laconia	13,000	13,000	
New Mexico:			
Albuquerque (regional office)	42,000	43,000	1,000
Gallup	13,000	13,000	
Mescalero	12,000	12,000	
North Carolina, Pisgah Forest	16,000	16,000	
North Dakota, Bismarck	14,000	14,000	
Oregon, Portland (regional office)	50,000	51,000	1,000
Pennsylvania, Lamar	13,000	13,000	
Tennessee, Maryville	45,000	45,000	
Utah, Springville	24,000	24,000	
Vermont, Montpelier	40,000	40,000	
Washington, Olympia	14,000	14,000	
West Virginia, Bowden	30,000	30,000	
Wisconsin, La Crosse	14,000	14,000	
Wyoming:			
Lander	14,000	14,000	
Yellowstone	50,000	50,000	
Central Office, Washington, D.C	78,000	82,000	4,000
Subtotal	676,000	685,000	9,000
Cooperative fishery units:			
Arizona, University of Arizona, Tucson	40,000	40,000	
Colorado, Colorado State University, Fort Collins	30,000	30,000	
Georgia, University of Georgia, Athens	40,000	40,000	
Hawaii, University of Hawaii, Honolulu	40,000	40,000	
Idaho, University of Idaho, Moscow	30,000	30,000	
Iowa, Iowa State University, Ames	40,000	40,000	
Louisiana, University of Louisiana, Baton Rouge	30,000	30,000	
Maine, University of Maine, Orono	30,000	30,000	
Massachusetts, University of Massachusetts, Amherst	30,000	30,000	
Missouri, University of Missouri, Columbia	30,000	30,000	
Montana, Montana State College, Bozeman	30,000	30,000	
New York, Cornell University, Ithaca	30,000	30,000	
North Carolina, North Carolina State College, Raleigh	40,000	40,000	
Ohio, Ohio State University, Columbus	40,000	40,000	
Oklahoma, Oklahoma State University, Stillwater	40,000	40,000	
Oregon, Oregon State University, Corvallis	40,000	40,000	
Pennsylvania, Pennsylvania State University, University Park	30,000	30,000	
South Dakota, South Dakota State University, Brookings	40,000	40,000	
Utah, Utah State University, Logan	30,000	30,000	
Virginia, Virginia Polytechnic Institute, Blacksburg	40,000	40,000	
Subtotal	700,000	700,000	
Total program	1,376,000	1,385,000	9,000

8. Wildlife services

	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Wildlife services	$2,716,417	$2,421,000	$2,541,000	+$120,000	+$20,000	+$100,000

[1] To provide for increased pay cost for fiscal year 1966 positions.

This activity was carried as "5. Control of predatory animals and injurious rodents" in the 1966 budget.

The estimate for 1967 is $2,541,000 and 233 permanent positions, an increase of $120,000 and 10 permanent positions over 1966. The increase consists of—

(1) An increase of $20,000 for pay costs.

(2) An increase of $100,000 and 10 permanent positions to implement the new program of wildlife enhancement. This program has been developed to cope with constantly increasing pressures on wildlife resources and their habitat, to meet clear and present public needs on the national level, and to discharge existing statutory responsibilities in meeting new demands for coordination and technical assistance, especially on Indian, military, and other Government lands.

Program of work

The estimate of $2,541,000 will be used for the conduct of the Bureau's wildlife services functions, which include providing professional direction to other agencies and individuals for enhancement of recreational and esthetic values of wildlife resources, with emphasis on migratory species; providing an extension-educational program using mass media to inform the public of all values of wildlife, including nonconsumptive species; and conducting operational control programs where there is a demonstrated need to alleviate damage caused by wildlife. The basic objective is the scientific husbandry of wild animals resulting in optimum populations at times, places, and circumstances, considering man and his interests as an inseparable part of our environment. The following is the functional breakdown of the program:

(a) *Wildlife enhancement, $100,000.*—This is a new program, tailored to fulfill adequately the responsibilities of the Federal Government in the management of wildlife and its environment, as authorized in the Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Sikes Act (16 U.S.C. 670) and other legislation. It has been developed in response to the increasing and conflicting pressures on wildlife resources generated by a mushrooming population, and the constantly growing competitive demands for incompatible uses of land, water, and other environmental resources. The broad objective of the program is to assist State and Federal agencies and other organizations and individuals in realizing the full potential of the Nation's wildlife resources; to improve conditions for those resources including both game and nongame species; and to improve the public enjoyment and understanding of the scientific husbandry of wildlife resources and the total environment of which they are an integral part. This activity will not only contribute to a greater society, but also make a positive contribution to the national economy as well.

Although there are enough specific economic and social values attached to good wildlife management to justify this as a goal in itself, in this era of growing environmental stress the welfare of wildlife in the national picture assumes an even greater importance. Any continuing failure to maintain or to realize the full potential of all types of wildlife on all types of land in this country, will serve as a negative index of success in solving our environmental problems. It will carry with it implications about our society that reach beyond the regrets over lost wildlife populations here and there, or even the sometimes irreversible damages now being experienced by some natural ecosystems. Healthy wildlife populations mean healthy environments, and wildlife conditions are a sensitive indicator of environmental quality.

In every State, often among States, and especially in the matter of wetland habitat for migratory birds, conflicting interests and desires generate mounting pressures for environmental changes that may or may not allow a place for wildlife. The future of this renewable resource will depend upon how successful the responsible public agencies can be in influencing these vast general changes in the environment—and in influencing the attitudes of our population toward these changes.

Wildlife resource agencies, both State and Federal, traditionally have been concerned generally with huntable, or game species. These provide wholesome outdoor recreation and sport for an ever-increasing number of hunters, who contribute over a billion dollars annually to the economy through their expenditures. These hunters may be considered as tourists. Wildlife is a built-in attraction. Managed on a sustained basis, wildlife resources, specifically hunter visits, can mean much more to local economies than at the present time. Through planning, urban and rural areas can realize the full economic potential of wildlife resources. Hunter visits can bolster the economy and add a new dimension. Aid to urban and rural groups has not been generally available and is sorely needed in this time of change, that sees the population, economy, and even the appearance of the Nation change.

While the number of hunters has increased, the percent of the total population that engages in hunting is decreasing and will continue to decrease as the population expands. An increasing portion of the public, in fact the great mass of people, enjoy wildlife for pure enjoyment or nonconsumptive purposes, as contrasted to consumptive use or hunting. This public embraces the protectionist groups and includes the backyard enthusiasts, the bird watchers, the photographers, and those city inhabitants of the "concrete jungle" whose only experience with wildlife is to feed domestic pigeons and watch squirrels in city parks. This public, represented by many groups, is not served specifically by any bureau or Federal agency. Ironically, it quite often finds itself at odds with a Government dedicated to the scientific husbandry of all wildlife resources. This broad segment of the public should and will be served by this program.

Wildlife enhancement will be accomplished by providing specialized technical assistance and liaison to agencies, organizations, and individuals. Primarily, emphasis will be placed on working through agencies whose programs influence management on large blocks of land, whether public or private.

The Federal Government holds title to some 750 million acres of land, or approximately 34 percent of the 2.3 billion acres comprising the 50 United States. More than 50 million additional acres are in Indian reservations, mostly in the West. This comes to well over 800 million acres of Federal and Indian land, a high percentage of which is, or could be, good wildlife habitat.

There are approximately 300 Indian reservations across the country, totaling more than 50 million acres. In size they range from a few acres to nearly 25,000 square miles (as large as several of the smaller Eastern States combined). Twelve of these reservations contain more than 1 million acres each.

During the year 1960, the receipts from fish and wildlife resources on Indian lands exceeded $8 million. With better and more intensive management, this figure can undoubtedly be increased as the Nation's population increases. The fish and wildlife resources are of importance to the Indians in most areas for subsistence, but the greatest benefit will come from management services which will attract more fee-paying recreational hunters and fishermen. The Indians are one of the groups at which the antipoverty program is aimed, and the enhancement of wildlife resources by the Bureau of Sport Fisheries and Wildlife on the Indian lands can substantially augment their economy. Requests for assistance have already been received from 10 Indian reservations in the Southwest.

The Military Establishment includes more than 28 million acres of land, much of which is adaptable to wildlife production. As bases are closed for purposes of economy, more and more acres will fall into this category. Wildlife production would be good utilization of this land, because it would quickly and easily be reconverted to military use in the event of a national emergency. Wildlife biologists of the Bureau will supplement the work of the State agencies on military land, and, because of their Federal status, will serve as coordinating and liaison officers between the State agencies and the military, as provided by the Sikes Act. The Bureau's wildlife biologists would provide the leadership for migratory bird man-

agement and work very closely with State officials in resident-game management. On many military reservations the States are not active; here the Bureau biologists would be expected to provide or encourage a program of wildlife management.

The Bureau will provide wildlife services, working through cooperative agreements with Federal and other agencies that look to the Bureau of Sport Fisheries and Wildlife to provide supporting expertise to avoid duplication of technical staffs.

The Bureau's role in relation to the 800 million acres of public and Indian lands will be to furnish technical information and specialist services to Federal agencies administering such lands; to serve as a coordinator and liaison between Federal agencies and State game and fish departments; and to promote, organize, establish, and sometimes supervise wildlife programs on public land where no program now exists. It is the statutory responsibility of the Bureau of Sport Fisheries and Wildlife to furnish the technical know-how for fish and wildlife management at the Federal level.

In addition to the public lands, three-quarters of the land in the contiguous 48 States is in private ownership. These areas produce 80 percent of the game taken by hunting and have 85 percent of the habitat economically feasible to improve. These lands must continue to provide most of our hunting opportunity. However, with the increasing demands upon all lands and a growing army of hunters, hunting must either be compatible with other land uses or financially attractive to the landowner. There is a need, therefore, for developing systems applicable to all private lands if future demands are to be satisfied.

Such systems, in order to be successful, will depend upon knowledgeable and effective coordination of all public programs, and a full appreciation of the broad spectrum of owner-user conflicts involving complex economic, social, legal, and political problems. The enhancement program will seek to encourage and assist these activities wherever possible.

The basic objectives of the wildlife enhancement program, whether on public or private lands, will be—

(1) To explore ways and means of managing wildlife for both abundance and diversity, on a basis compatible with other land uses and other needs of man.

(2) To improve conditions for both game and nongame species on all classes of land.

(3) To increase hunting and similar wildlife-oriented recreational opportunities with emphasis on Federal and Indian lands, and federally financed cooperative programs.

(4) To provide assistance in managing nongame species for the enjoyment of the nonhunting public, and to stimulate and encourage an increased understanding and involvement of the general public in "the fight for the total environment."

In the present circumstances there is ample precedent and an obvious requirement for the Federal Government to help fill clear and present public needs—especially in the areas of technical information, assistance, and coordination. Many problems are common to a number of States on the national level. In addition, there are what seem to be innumerable Federal, State, and other agencies that advise, cooperate, grant funds and otherwise carry on programs that in one way or another influence the fortunes of wildlife of all kinds in many different environments everywhere across the country. If we are to have wildlife, we must plan for it, and it is in this area of need that the wildlife enhancement program expects to perform a vital function in the national interest.

(*b*) *Animal control, $2,441,000.*—The program of assisting States, counties, and other organizations in a cooperative endeavor to control mammals and birds causing damage to livestock, agriculture, forests, or human health, has been conducted for over 52 years and is one of the oldest functions of the Bureau. Control programs are carried out by educational means and through direct supervision. All programs are conducted in cooperation with local agencies or organizations, and are designed to serve the four objectives described in further detail below.

Public health and safety: Incidence of rabies in wildlife continues to increase In 1964, 4,784 confirmed cases of rabies in wildlife were reported; over 800 more than in 1963, an increase of 20 percent. It is found in virtually every State, but with greater incidence occurring generally east of the Mississippi River. The highest incidence of rabies in bats ever recorded in an urban situation now exists in the Baltimore area. There have been several human exposures, and the Bureau is cooperating with the various health departments to determine the actual status of the problem and help bring the situation under control.

An average of a thousand or more people a year per State are bitten by animals, and most of them take the painful antirabies treatment. This virus is responsible for substantial losses to livestock; cattle are particularly susceptible and must be protected in many communities in an attempt to reduce the multimillion-dollar annual loss. Foxes and skunks are the principal vectors of the disease. In many areas, particularly in the Southwest and West, the Bureau control programs have been credited by the U.S. Public Health Service as a major reason why explosive outbreaks have not occurred over much of that area. The Bureau is currently cooperating with the Mexican Government through the Pan American Sanitary Bureau in a control effort to prevent rabies from spreading along the Mexican-United States boundary.

From 1900 through 1964 there were 951 cases of human plague with 723 deaths in the United States, principally in the West although local cases have occurred in Florida, Louisiana, and Michigan (see chart II attached). During the summer of 1965 bubonic plague was reported among the Indians near Gallup, N. Mex. A total of 15 cases were reported with 1 death occurring and another probable death as a result of the plague. In October 1965, a human case was reported from northern California. Sylvatic plague is endemic over much of the Western United States in rodent populations. When the right set of circumstances combine, humans become involved. In these situations the Bureau has a responsibility for moving swiftly and efficiently as the small mammal populations play host to the flea which carries the plague organism.

An increasing problem is that of aircraft bird strikes. This problem is multiplied each time a new jet aircraft is used or an airport is opened to jet aircraft use. Under partial reporting, 145 jet military-type aircraft were involved with bird strikes during 1964. Under a more complete reporting system, 87 bird strikes have been reported for January and February 1965. Cost of repair averages approximately $10,000 per engine. This figure reaches $50,000 if airflow is disrupted at supersonic speeds and if the plane must be replaced it may run to over a million dollars. More important is the hazard to human safety. Two civilian air strikes have resulted in over 100 deaths and there have been a number of near misses.

Natural resource management and assistance: This function provides for animal control in reforestation projects, in range rehabilitation and for the protection of game animals.

Agricultural Handbook No. 291, issued in August 1965, indicates accumulation losses in reforestation projects as a result of rodent damage amounted to $10 million annually for the 1951 to 1960. Range and timber resources of this country are under constant attack by mammals and birds. Rodents are major offenders. A continuing supply of timber and forest products require reforestation but seed and seedlings are often destroyed as quickly as they are set out. Rangelands are subjected to destruction of rodent feeding and burrowing activ-

ities. Much of this economy could not exist without protection from the depredation and activities of a wide variety of wildlife species. Assistance is provided on both Federal and private lands.

Although most established game populations seldom need protection against other wild animals, game introduction programs do, as well as such species as the antelope. Waterfowl production programs are enhanced by such protection.

Agricultural production: This function provides protection to livestock, poultry and other domestic stock from predatory animals, and crops from destructive rodents and birds. Control is conducted only after the need has been demonstrated. When determining the need for a control program, due consideration is given not only to economic values, but also to the esthetic and recreational values of all animal life and to the effect of suppression measures on known ecological factors within the area under consideration. Control is accomplished by removal of the animal causing damage by the most selected method applicable to the situation. Occasionally conditions may necessitate extreme local reduction of especially harmful forms of wildlife. Control action is taken only to limit animal numbers to tolerable limits, never to exterminate a species.

In many areas farmers and ranchers who depend upon grazing livestock and poultry for their livelihood could not remain in business without protection from wildlife depredations. Range animals such as sheep, cattle, hogs, and poultry are easy prey for predatory animals such as coyotes, bobcats, bear, and mountain lions.

Changing agricultural practices and multiple use of public land areas in recent years have necessitated more intensified programs in some areas and the use of more specific control techniques in areas of multiple use. New methods are required as substitutes for more hazardous control methods, even though this results in increasing operating costs.

Major population explosions of some bird species, particularly blackbirds and starlings, have resulted in heavy losses to almost all agricultural production including poultry and livestock feedlots. Losses occur in field and sweet corn, rice, blueberries, orchard products, grapes, and holly groves, to some degree in most areas of the country. A partial survey made by the American Farm Bureau Federation a year ago indicates losses ran between $50 to $100 million a year or more. In their 1965 annual convention 15 State farm bureaus passed resolutions requesting greater Bureau effort in bird control.

Industrial urban services: Manmade facilities are frequently the object of animal depredations in one form or another. Technical services are provided to minimize the damage by such measures as are necessary, practical, and safe.

Wildlife damage to personal property is common, but is usually a matter for action by the property owner, for which practical recommendtaions are developed and furnished by the Bureau. Often it becomes a matter of community concern, requiring concerted action and organized efforts. Many cities and towns are assited in developing rodent (rat and mouse) control programs. Public property, such as water facilities and impoundments, airfields, storage facilities, dumps, housing and industrial developments, utilities and even highways require protection from commensal rodents, native mammals, and some species of birds.

The total wildlife services estimate of $2,541,000 is broken down geographically in the following table. (In addition to the estimate, State and local organizations will, in accordance with over 900 cooperative agreements, provide an estimated $4,400,000 for use in animal damage control programs in 1967.)

Wildlife services program

State	Fiscal year 1966 amount available	Increase	Fiscal year 1967 estimate	State, private and other cooperative funds	Fiscal year 1967 total program
Pacific region:					
Alaska				$20,000	$20,000
California	$178,500	$1,500	$180,000	774,000	954,000
Idaho	125,500	1,000	126,500	247,000	373,500
Montana	112,500	500	113,000	240,000	353,000
Nevada	129,500	1,000	130,500	238,000	368,500
Oregon	115,500	500	116,000	297,000	413,000
Washington	65,000	1,000	66,000	67,000	133,000
Pocatello Supply Depot				47,000	47,000
Regional office (Portland)	63,000	[1] 16,000	79,000		79,000
Total	789,500	21,500	811,000	1,930,000	2,741,000
Southwestern region:					
Arizona	87,000	1,000	88,000	196,000	284,000
Colorado	126,500	1,000	127,500	255,000	382,500
New Mexico	126,500	1,000	127,500	153,000	280,500
Oklahoma and Kansas	89,500	1,000	90,500	181,000	271,500
Texas	178,000	1,000	179,000	819,000	998,000
Utah	116,500	500	117,000	169,000	286,000
Wyoming	115,500	500	116,000	185,000	301,000
Regional office (Albuquerque)	71,500	[1] 16,000	87,500		87,500
Total	911,000	22,000	933,000	1,958,000	2,891,000
North-central region:					
Illinois, Indiana, Iowa, and Missouri	46,500	500	47,000	14,000	61,000
Minnesota and Wisconsin	17,500		17,500	10,000	27,500
North Dakota	39,500		39,500	79,000	118,500
Ohio and Michigan	27,500		27,500	36,000	63,500
South Dakota and Nebraska	90,500	1,500	92,000	135,000	227,000
Regional office (Minneapolis)	30,500	[1] 15,500	46,000		46,000
Total	252,000	17,500	269,500	274,000	543,500
Southeastern region:					
Arkansas	36,500		36,500	50,000	86,500
Florida and Georgia	28,300	200	28,500		28,500
Louisiana	38,500	500	39,000	200	39,200
Maryland, Virginia, West Virginia, and District of Columbia	31,500		31,500	102,000	133,500
Mississippi and Alabama	18,200	300	18,500		18,500
North and South Carolina	25,300	200	25,500	16,300	41,800
Tennessee and Kentucky	14,200	300	14,500	46,000	60,500
Regional Office (Atlanta)	31,500	[1] 15,500	47,000		47,000
Total	224,000	17,000	241,000	214,500	455,500
Northeast region:					
Connecticut	3,100		3,100	7,000	10,100
Maine	10,100	200	10,300	200	10,500
Massachusetts and Rhode Island	12,200	200	12,400	16,000	28,400
New Hampshire and Vermont	8,600	100	8,700	300	9,000
New Jersey, Delaware, and Long Island	11,700	200	11,900		11,900
New York	10,600	200	10,800		10,800
Pennsylvania	10,600	200	10,800		10,800
Regional office (Boston)	29,600	[1] 14,900	44,500		44,500
Total	96,500	16,000	112,500	23,500	136,000
Central office: Supervision	148,000	[2] 26,000	174,000		174,000
Grand total	2,421,000	120,000	2,541,000	4,400,000	6,941,000

[1] 1 additional biologist in each regional office.
[2] 2 additional personnel in central office.

Examples of recent accomplishments

The Division of Predator and Rodent Control was replaced by the Division of Wildlife Services on June 7, 1965, and new responsibilities assigned to this Division to achieve long-range goals.

A new program of wildlife enhancement has been initiated to provide assistance to Federal, State, local and private agencies and organizations, urban and rural groups and private individuals for the purpose of realizing the full poten-

tial of wildlife resources with initial emphasis on assistance on public lands, primarily military and Indian lands, with particular attention to migratory species.

The 52-year-old Government-cooperative animal control program is being modernized. When the program first began, over 50 years ago, the ratio of man and animals necessitated an approach of practically all-out control. The tremendous increase in population—particularly during the last two decades—has brought about a drastic need to change objectives of this Bureau function. The majority of the people are now showing an increasing and very encouraging interest in the nonconsumptive use of all wildlife species; included are the photographers, the bird watchers, the backyard enthusiasts, the protectionists—all served by a host of private organizations, but with no tie to the Federal Government. Neither this Bureau nor any Bureau in the Federal Government has heretofore served this increasing segment of the public. The new Division of Wildlife Services was organized to meet this need.

Conferences of supervisory personnel of this Division were held in late 1965 to acquaint these employees with their new responsibilities. All memorandums of understanding with other agencies and organizations are being reviewed to assure that they are in compliance with new policy and Bureau goals. Further steps are being undertaken as rapidly as possible to expedite the implementation of the Bureau's goals to provide wildlife services to a waiting public.

The Wildlife Services activities now include portions of the Bureau's responsibilities for the national pesticides monitoring program and began sampling duck wings being collected for other purposes. Samples will be taken from each flyway and submitted for laboratory analysis to determine pesticide residue levels. Later on, starlings will be used as one of the monitoring species.

The Bureau has, in the past, worked closely with local, State, and Federal health officials. The control work done this year near Gallup, N. Mex., in the plague suppression program was a model of cooperation and will be extended in the future, working closely at the request of and with the approval of the Public Health Service to coordinate rodent and flea control work.

Plague situations are unpredictable and money is not specifically budgeted to cover this activity. It is, however, costly and when plague occurs, we must spend whatever is necessary, obviously reducing other control activities.

9. River basin studies

Fiscal year 1965, amount available	$1,337,411
Fiscal year 1966, amount available	1,414,000
Fiscal year 1967, estimate	1,423,000
Increase (+) or decrease (−), 1967 compared with 1966:	
Total	+9,000
Pay cost [1]	+9,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $1,423,000, and 119 permanent positions, an increase of $9,000 over 1966. The increase is for pay costs.

Program of work

The estimate of $1,423,000 will be used for carrying out the river basin studies program of the Fish and Wildlife Service at approximately the same level as 1966. The Bureau carries out the responsibilities of the Fish and Wildlife Service under the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) and section 12 of the Watershed Protection and Flood Prevention Act (16 U.S.C. 1008). It studies water-use projects of Federal agencies and other agencies under Federal license or permit throughout the United States and plans measures for inclusion in these projects to conserve and improve fish and wildlife resources and human utilization related thereto. It also carries out a national program directed toward the preservation of wetland areas of importance from a fish and wildlife standpoint. Investigations by this Bureau are conducted through close cooperation with the Bureau of Commercial Fisheries and with the State fish and game agencies concerned.

State fish and game agencies depend on the Bureau to investigate and report on water-use projects and to recommend appropriate fish and wildlife measures. In lieu of preparing separate reports as permitted under the Fish and Wildlife Coordination Act these agencies submit letters of concurrence which become a part of the Bureau reports. The workload of the river basin studies program

is not controlled by the Bureau but depends entirely upon the size of the water-use programs of other Federal and private agencies which have been increasing substantially each year. It is expected that more and larger Federal projects will be included in these programs in 1967 than in 1966. This will have an increasing impact on fish and wildlife resources. It is expected that more substantial fish and wildlife enhancement measures will be incorporated in project plans during fiscal year 1967 as a result of the Federal Water Project Recreation Act (Public Law 89-72; 79 Stat. 213, approved July 9, 1965) which authorized up to 50 percent Federal cost sharing for land acquisition and other specific fish and wildlife enhancement measures. Through improved manpower utilization and cost reduction measures the Bureau expects to meet these growing needs within the funds available. In 1967 the river basin studies activity will be continued as follows:

Wetlands preservation program, $322,000.—This phase of the activity will be continued at about the same level as 1966. The act of October 2, 1962 (16 U.S.C. 590, p. 1), prohibits the Department of Agriculture from providing technical or financial assistance in the drainage of wetlands on farms in North Dakota, South Dakota, and Minnesota if the Secretary of the Interior finds that such drainage will be harmful to wildlife. The Bureau of Sport Fisheries and Wildlife inspects applications for this drainage in cooperation with the Agricultural Stabilization and Conservation Service and the Soil Conservation Service of the Department of Agriculture. On areas found to be of value to wildlife, the Bureau makes offers to landowners under authority of the act to buy or take easements on the wetlands during a 1-year period in which no assistance will be given. If the offer is not accepted, the landowner is not eligible for Federal assistance in drainage for a period of 5 years. During 1967, it is expected that the Department of Agriculture agencies will refer to this Bureau for review 6,500 drainage applications from 158 counties in Minnesota, North Dakota, and South Dakota which are critical from a waterfowl production standpoint. The Bureau will be able to inspect about 3,500 of these applications during 1967.

Throughout the remainder of the United States, proposals affecting wetlands will be studied, and, when harmful, appropriate corrective action will be recommended to Federal, State, and other conservation organizations. Liaison will be carried out with appropriate agencies and organizations to keep them advised as to wetlands offering opportunities for preservation and development as wildlife habitat.

Surveys of water-use projects, $793,500.—This represents a $54,100 decrease in funds which will be used to increase the level of participation in the comprehensive river basin planning of the Department of Agriculture. It is expected that this phase of the program will be somewhat larger than in 1966. Investigations will be conducted of Bureau of Reclamation projects; Corps of Engineers projects; hydroelectric projects subject to Federal Power Commission license or permit; small reclamation projects; private dredging, filling, and other projects subject to the Corps of Engineers permits; and projects subject to Forest Service and Bureau of Land Management permits. Studies of Corps of Engineers and Bureau of Reclamation projects under this activity are of a reconnaissance nature and will be used in determining the extent to which further detailed studies will be required. It is expected that improved efficiency in the operation will permit the Bureau to carry out the somewhat larger program which is anticipated in fiscal year 1967.

Small watershed program, $118,000.—Work under this program will be conducted at approximately the same level as 1966. Both reconnaissance and detailed studies will be carried out on projects proposed under the Watershed Protection and Flood Prevention Act administered by the Department of Agriculture.

Section 12 of that act specifically assigns to the Secretary of the Interior responsibility for investigation of the fish and wildlife aspects of these projects and for assistance in planning federally cost-shared fish and wildlife developments. This program provides an excellent opportunity for State fish and game departments to obtain needed fish and wildlife developments at a reasonable cost. Interest among State fish and game departments and among local project-sponsored groups in this program is increasing rapidly. This Bureau and the Soil Conservation Service established a joint coordinating committee to insure more effective planning for fish and wildlife and related recreation under the small watershed program. To achieve this objective the Bureau plans to par-

ticipate more effectively in the small watershed program during fiscal year 1967.

Urban planning assistance program, $12,000.—This program will be continued at the same level as 1966. Close cooperation will be maintained with State and municipal governments in planning fish and wildlife areas for urban and rural development programs. Such cooperation by this Bureau has been urged by the Federal Housing and Home Finance Agency at both the Washington and regional levels. Section 701 of the Housing Act of 1954 (40 U.S.C. 461) authorized the urban renewal program of the Housing and Home Finance Agency to administer Federal grants to State planning agencies for use in planning for development of urban and rural areas. On September 23, 1959, the act was amended to provide broader authority for participation by State planning agencies and to increase the Federal grants and aid available for such agencies. Through close coordination with State and private planners and with local residents and governments, fish and wildlife planning is effectively introduced into county zoning plans, and areas thereby set aside for future fish and wildlife benefits. Similar areas are set aside by municipal governments in the development of plans for urban expansion.

Followup program, $64,000.—This phase of the activity will be conducted at approximately the same level as 1966. Under this program, basic information is obtained on completed projects for use in analyzing future water resource projects more effectively. Projects previously studied by the Bureau are reanalyzed to determine whether or not recommendations were adopted, to evaluate the biological soundness and results of conservation measures incorporated in these projects, and to evaluate the estimates of fishing and hunting utilization made prior to project construction. Data of this type are vitally needed to forecast as accurately as possible future fishing and hunting use of proposed projects.

Comprehensive river basin planning, $113,500.—This represents a $54,100 increase in the continuing item for participation in the comprehensive river basin planning being carried out by the Department of Agriculture. The Departments of the Interior, Army, Agriculture, and Health, Education, and Welfare submitted a consolidated interagency budget for comprehensive river basin planning in fiscal year 1965. The budget requests of the Departments of the Army and Health, Education, and Welfare for their various river basins projects included funds needed for participation by the Bureau of Sport Fisheries and Wildlife. However, section 12 of the Watershed Production and Flood Prevention Act prevents the transfer of funds from the Department of Agriculture for participation by this Bureau in the small watershed program. An expansion in this effort is needed in 1967 to bring the fish and wildlife planning into a proper balance with the planning for other functions under the comprehensive study, as shown in the attached tabulation. The Bureau expects to finance this expansion from savings derived from better manpower utilization and other cost reduction measures in its surveys of water projects.

Comprehensive river basin planning

River basins	Principal States	1966	1967
Region 3:			
Grand River	Michigan	$1,000	$1,000
Big Muddy	Illinois	1,000	
Upper Mississippi	Minnesota, Iowa, Indiana, Missouri, Wisconsin, South Dakota.	1,000	3,100
Wabash	Indiana, Illinois, Ohio	3,000	13,200
Region 4:			
Pascagoula	Mississippi, Louisiana	2,000	3,100
Big Black	Mississippi	1,000	1,000
Pearl	Mississippi, Louisiana	2,000	2,100
Red River below Denison Dam.	Arkansas, Louisiana, Oklahoma, Texas	12,000	27,300
White	Arkansas, Missouri	9,000	17,400
Region 5:			
Connecticut	Connecticut, Massachusetts, Vermont, New Hampshire.	7,500	12,200
Genessee	New York	1,000	1,600
Susquehanna	New York, Pennsylvania, Maryland	10,400	25,400
Kanawha	West Virginia, Virginia, North Carolina	2,500	6,100
Total		53,400	113,500

Examples of recent accomplishments

Corps of Engineers projects.—Studies by the Bureau of Sport Fisheries and Wildlife of Corps of Engineers water development projects have indicated that the Federal waterfowl management program could be benefited significantly by the establishment of waterfowl refuges in conjunction with certain projects. As a result of the Bureau's program, the Congress authorized at the last session the acquisition of about 88,035 acres of land specifically for wildlife purposes at the John Redmond Reservoir project in Kansas, the John Day lock and dam project in Washington and Oregon, the Big Stone Lake-Whetstone River project in Minnesota, and units of the Mississippi River and tributaries project. These lands which will be acquired by the Corps of Engineers would be utilized in conjunction with about 37,550 acres of other project lands for the development of four major national wildlife refuges.

While the primary purpose of the national wildlife refuge system is to provide nesting, feeding, and breeding areas for waterfowl, these refuges would substantially benefit both the birds and the hunter. The dispersal of the flocks of ducks and geese more evenly along their traditional migration routes will provide better hunting over a wider area and also aid in extending the time the birds travel from the nesting grounds of the North to the wintering areas of the South. The refuges will also assist in preventing agricultural crop depredation.

The establishment of a national wildlife refuge at the John Day project, while significantly benefiting both waterfowl and hunters, will also compensate for the loss of 2,054,000 duck-days and 615,000 goose-days. The corps' Big Stone Lake-Whetstone River project is unique as being the first such proposal in which benefits are primarily for wildlife. The annual benefits are fish and wildlife—73 percent, flood control—10 percent, and recreation—17 percent.

Garrison diversion unit.—Public Law 89-108 authorized the acquisition of 146,530 acres of land and water areas for fish and wildlife development in connection the authorization of the Garrison diversion unit in North and South Dakota. These areas are assured of a firm water supply from project canals and other works. This means that these waterfowl lands, in the heart of the best waterfowl-producing area in the 48 contiguous United States, will produce a full crop of ducks every year even during serious droughts. Additional public benefits will accrue from hunting of waterfowl, upland game and big game, and from fishing. About 39,000 acres of these lands will be made available to the two States for administration and the balance will be added to the national wildlife refuge system.

Highway-fish and wildlife coordination.—After several years of coordination effort, officials of the Bureau of Public Roads agreed to issue a policy, known as Instructional Memorandum 21-5-63, on June 12, 1963, which instructed State highway departments to fully cooperate with State fish and wildlife agencies in highway construction matters of concern to fish and wildlife interests.

On two occasions in the past fiscal year, the Bureau has conducted an evaluation of the programs status within the States. Initially, the mechanics of coordination were surveyed, and several difficulties corrected after BPR review of the Bureau report. The second survey was more intensive and resulted in highlighting 11 major problems faced by State fish and wildlife interests within the highway program. A brief report which summarized the findings was distributed to all 50 States, Puerto Rico, and 20 interested government and private conservation organizations. An exchange of know-how in matters of both working for fish and wildlife enhancement and the mitigation of damages thereto has increasingly become apparent among the States as a result of these efforts in coordination.

The 1967 estimate is broken down by areas as follows:

	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase
Region 1 (Pacific)	$276,000	$278,000	$2,000
Region 2 (Southwest)	245,000	247,000	2,000
Region 3 (North Central)	362,000	364,000	2,000
Region 4 (Southeast)	178,000	179,000	1,000
Region 5 (Northeast)	159,000	160,000	1,000
Washington office	194,000	195,000	1,000
Total	1,414,000	1,423,000	9,000

Detailed studies of projects being planned and constructed by the Corps of Engineers and Bureau of Reclamation and also reconnaissance surveys in the Missouri River Basin will be financed by funds included in the public works appropriation estimates.

Financing the river basin studies program.—The following tabulation shows by sources total funds available to the Bureau in 1966 and 1967 for financing river basin studies:

	Fiscal year 1966 amount available	Fiscal year 1967 estimate	Increase or decrease (−)
Annual definite appropriation: Management and investigations of resources	$1,414,000	$1,423,000	$9,000
Transfer appropriations:			
Bureau of Reclamation	423,215	425,000	1,785
Bureau of Reclamation (Missouri River Basin studies)	355,904	344,000	−11,904
Corps of Engineers	832,122	991,000	158,878
Area Redevelopment Administration program	3,500		−3,500
Subtotal	3,028,741	3,183,000	154,259
Anticipated reimbursements	644,400	533,800	−110,600
Total	3,673,141	3,716,800	43,659

The following is a statement of studies and number of project reports under the river basin studies program:

	Fiscal year 1965		Fiscal year 1966		Fiscal year 1967	
	Studies	Reports	Studies	Reports	Studies	Reports
Corps of Engineers projects	840	445	881	522	900	602
Bureau of Reclamation projects	208	100	210	91	220	120
Department of Agriculture small watershed projects	187	117	207	116	218	182
Projects subject to Federal Power Commission license	116	106	149	133	161	149
Bureau of Land Management permits	20	9	20	15	20	15
Forest Service permits	15	8	15	8	17	15
Urban planning assistance projects	2	2	2	2	2	2
Projects requiring permit by Atomic Energy Commission	2	2	5	5	8	8
Miscellaneous	23	17	5	5	10	10
Small reclamation projects	12	6	14	9	14	10
Total	1,425	812	1,508	906	1,570	1,113

10. Pesticides registration

Fiscal year 1965 amount available	$105,336
Fiscal year 1966 amount available	210,568
Fiscal year 1967 estimate	212,000
Increase (+) or decrease (−), 1967 compared with 1966:	
Total	+1,432
Pay cost [1]	+969

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $212,000 and 11 permanent positions, an increase of $1,432 over 1966; $969 of this increase is for pay costs and the $463 for program is due to rounding.

Program of work

The estimate of $212,000 will be used to fulfill the responsibility of the Department of the Interior under the agreement for "Interdepartmental coordination of activities relating to pesticides," between the Departments of Agriculture, Interior, and Health, Education, and Welfare. Review will be continued for the steadily increasing lists of applications for label registration of new chemical formulations under the Federal Insecticide, Fungicide, and Rodenticide Act as received from the Department of Agriculture and to assist and advise the Food

and Drug Administration in establishing tolerances under the Food, Drug, and Cosmetic Act. This program involves extensive reviews and evaluations of literature, reports, correspondence, and data; frequent consultations with research and individual scientists; and requires the establishment of a system of data storage for rapid data retrieval. Also, information will be compiled on chemicals previously registered which are considered to be dangerous to fish and wildlife. These activities, initiated in 1965, will be expanded within the estimate of $212,000 to assure that fish and wildlife resources are given maximum protection against environmental pollution.

The widespread use of certain types of pesticidal chemicals has created a new kind of environmental pollution. The chemical stability of some of these products has resulted in pesticidal residues in soils and waters. The tendency of many of these toxicants to persist for long periods and to concentrate in fish and wildlife food organisms has caused acute or chronic poisoning of fishes, birds, and mammals. Mortality of this nature is likely to become increasingly serious as more land and water areas of the country are subjected to treatments by such pesticidal materials and as the accumulative effects of these chemicals build up in areas subjected to repeated treatment.

Pesticide applications sometimes are the only immediate answer to serious economic or health problems. A careful review of the various chemicals is required and well defined application instructions need to be developed, and applied to these chemicals. Scientists on the staff who have intimate knowledge of research and research results do not conduct any research but evaluate the toxicities and potential hazards of such pesticide chemicals to different species of fish and wildlife. Recommendations deemed necessary to safeguard the valuable fish and wildlife resources of the Nation are forwarded to the other departments.

The review of referrals from the Department of Agriculture of applications for label registration of chemicals under the Federal Insecticide, Fungicide, and Rodenticide Act determines the actual or potential hazards to fish and wildlife from the proposed use of the chemical. Reports are prepared recommending to the Department of Agriculture the approval or disapproval of the application or essential changes in the labeling of the product so that fish and wildlife resources may be given maximum protection while the beneficial uses of pesticides are realized. To a similar but lesser extent the Food and Drug Administration is assisted in establishing food residue tolerances.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
Program and financing:				
Total obligations	$35,121,818	$36,729,533	$37,304,000	$574,467
Unobligated balance lapsing	336,841			
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	−151,148	−143,537		143,537
Transfer to "Operating expenses, Public Building Service," General Services Administration (75 Stat. 353)	22,489	26,335		−26,335
Appropriation	35,330,000	36,612,331	37,304,000	691,669
Obligations by objects:				
11 Personnel compensation	21,266,055	23,143,000	24,230,000	1,087,000
12 Personnel benefits	1,662,077	1,888,000	1,997,000	109,000
21 Travel and transportation of persons	1,603,262	1,699,000	1,700,000	1,000
22 Transportation of things	212,810	222,000	213,000	−9,000
23 Rent, communications, and utilities	904,286	919,000	870,000	−49,000
24 Printing and reproduction	197,577	227,000	251,000	24,000
25 Other services	2,380,648	2,025,000	2,005,000	−20,000
Services of other agencies	445,753	467,000	475,000	8,000
26 Supplies and materials	3,630,313	3,970,000	3,709,000	−261,000
31 Equipment	1,660,110	2,044,000	1,765,000	−279,000
32 Lands and structures	396,060	505,000	468,000	−37,000
42 Insurance claims and indemnities	86,368	1,000	1,000	
91 Unvouchered	6,070	10,000	10,000	
Total costs, funded	34,451,389	37,120,000	37,694,000	574,000
94 Change in selected resources	981,766			
Subtotal	35,433,155	37,120,000	37,694,000	574,000
95 Quarters and subsistence charges	−311,337	−390,467	−390,000	+467
99 Total obligations	35,121,818	36,729,533	37,304,000	574,467

Chairman HAYDEN. Would you please discuss briefly the fish hatchery program, indicating the needs which will be met with the increase requested?

DISTRIBUTION OF HATCHERY FISH

Mr. GOTTSCHALK. The Federal fish hatchery program is primarily organized to supply fish for Federal areas such as in reservations and military establishments, for projects constructed with Federal funds, such as major reservoir programs, for waters coming forth below those reservoirs, and for making contributions to the agricultural programs which involve the construction of farm ponds.

I am sure the committee is well aware there has been a growth in all these activities over the years. There has been a growth in the number of people who fish and our hatchery program has grown also.

The funds we are asking for this year include an item of $52,000 for increased pay costs and $45,000 for wage board increases, an increase of $152,000 which would involve eight permanent positions for the operations of new facilities at national fish hatcheries, and $37,000 for the operation of a spawning channel in the Tehama-Colusa-Red Bluff project in California.

Finally, $146,100 which involves three permanent positions for the operation of the National Fishery Center here in Washington.

ARTIFICIAL SPAWNING CHANNEL—A UNIQUE VENTURE

By way of explanation I would like to say that the $37,000 for the spawning channel represents a rather unique venture. We have attempted to solve the problem of fish passage at high dams by providing fishways and trying to develop means of getting the sea-run salmon or steelhead back through the dams and through the works into the rivers.

This has not always been satisfactory and so we have resorted to hatcheries in many instances to supply the young fish.

At this particular location we were able to identify a section of a floodway which could be developed artificially so that it simulates the spawning gravel of a natural stream.

Working with the Bureau of Reclamation our men have designed what amounts to an artificial river. Water will be diverted down through this wasteway at the time the salmon are coming upstream and it is anticipated a number of salmon and steelhead can be accommodated in this structure.

It is somewhat unique and we believe represents an ability to identify possibilities that are different.

We would be glad to answer any further questions on this.

HATCHERY OPERATION AT OPTIMUM

Chairman HAYDEN. Beginning at page 13 of the justification book is a listing of certain hatcheries in the country. A part of the listing is a column indicating the production and cost if operated at 100 percent capacity.

Is such operation desirable for all hatcheries at this time or even all these hatcheries; and if you had the money could you get necessary personnel?

Do you have any suggestion as to which ones should be operated at 100 percent capacity in fiscal 1967?

Mr. TUNISON. Generally speaking full financing of any activity does not encourage the degree of efficiency and manpower utilization that a somewhat lower level would. The optimum level is that which managers try to achieve. In the case of fish hatcheries, we have attempted over the years to try and program optimum financing for the salmon and lake trout hatcheries. In addition, many of those hatcheries established as a result of water development projects have received priority in budgeting for operating funds.

The need for financing the hatchery operation at the optimum level must be weighed against several factors; in particular, the need for fish at the various hatcheries and the ability of the local State to supply a part of that need and, secondly, the relationship of the hatchery program to other Bureau programs and our overall budget ceilings. As of today, it would require somewhere around one and a quarter million dollars in additional funds to operate the hatchery system at full capacity. I question whether our ceilings will permit such budgeting in the immediate future and, as mentioned previously, full financing would not be appropriate in my opinion. The crux of the problem is, what is an optimum level. It is somewhere between our present level and the one mentioned previously.

We are aware that Congress has appropriated funds for the construction of new hatcheries and new facilities at existing hatcheries. We also know that many of these require additional operating funds. We shall budget for these in keeping with the overall needs of the Bureau and in keeping with the ceiling allowances provided us.

Frankly, my discussion has attempted to give you some idea of our priorities for hatchery operations and I have not attempted to specifically name certain hatcheries as having greater needs than others.

DEMAND FOR HATCHERY FISH FOR RESEARCH

Chairman HAYDEN. In your statement you indicate that the Bureau and the Public Health Service use selected species of fish for research purposes which has placed an increased demand on the hatcheries.

Would you give the committee some examples of these uses and needs?

Mr. GOTTSCHALK. Pollution is probably more closely related in the public mind, and perhaps in other respects, with our waters than any other way and, of course, our waters are the places that we find our food and game fishes.

We have found that in order to determine the quality standards for waters in our streams it is frequently necessary, and always desirable, to test the water against an actual fish that might inhabit a particular body of water or stream.

Further we have found fish make an excellent indicator organism for use in determining the toxicity of various substances that are sometimes accidentally or otherwise introduced into streams.

Therefore, we have ourselves been using various kinds of fish for test organisms in some of our studies on pesticides, chemical controls, and

other types of fish controls, and the Public Health Service has been coming to us with requests that seem to be increasing consistently for fish of the same type; that is, fishes which would be used for testing water quality and chemicals that might go into water.

The kinds of fishes have a great deal to do with determining the toxicity. By this I mean that no two fish species respond to a given substance in exactly the same way.

We cannot use goldfish, for example, and assume trout will react in the same way goldfish will, so we are finding a great increase in our requests for different species, different sizes, because there again there is a difference in the reactivity of a species.

If it is just hatched out of the egg, it is quite sensitive; if it is an older fish, it is not quite so sensitive. This is the sort of thing we are talking about in this particular item.

Our plans are to produce these fish for the laboratories at La Crosse, Wis., and Atlanta, Ga. Some of our pesticide work is at Columbia and Denver.

National Fisheries Center and Aquarium

Chairman Hayden. Funds have been provided in prior years for the National Fisheries Center and Aquarium. What has been accomplished with these funds?

Mr. Gottschalk. I would like to introduce Dr. Warren Wisby who is the Director of the National Fishery Center and Aquarium.

Mr. Wisby. We are still in the planning stages of the aquarium and will probably be in that stage for several more months.

Meanwhile, we are conducting experiments and research which we hope will result in savings in the cost of the building.

Chairman Hayden. When will the building be completed?

Mr. Wisby. We expect to let contracts toward the end of this next year.

Chairman Hayden. I note that certain publications and pamphlets are to be prepared in advance of the opening date of the Fisheries Center. Will any of the funds requested in fiscal year 1967 be used for this purpose?

Aquarium Publications and Pamphlets

Mr. Gottschalk. Prior to the opening date we will be getting out only technical publications relating directly to the aquarium itself.

Fishery Research Program

Chairman Hayden. Please discuss briefly your fisheries research program and indicate where you intend to do additional work this year and what your goals are.

Mr. Gottschalk. Our fishery research program is broken into several categories. We have for years carried out a program that is related to enhancing our capabilities in fish culture, in other words, research that is related to fish hatchery obligations.

We have been carrying out a program that is related to the development of fish cultural methods in the rice fields of Arkansas. We have our fish control research which deals with methods of trying to find

how to control excess populations of unwanted fish such as carp and suckers, which sometimes become excessively numerous.

We have in addition a rather new program of marine game fish research which is going along at the present time.

Additional Funds for Fish-Pesticides Research

Finally, we are participating in the pesticide program. Our program this year, our increase we are asking for this year is primarily related to the fish pesticide work.

We are scheduling $100,000 to go into additional facets of the relationship of pesticides to fishes which involves a certain amount of testing of new chemicals.

We are still in the general area of basic search for knowledge of how pesticides actually affect fishlife. We have $28,000 for increased pay costs and wage board increases and we have $19,000 which will be spent at three of our laboratories.

The latter includes a sum of $5,500 at our fish farming operation, $5,500 at our Tiburon Marine Laboratory located in California and $8,000 in our fish genetics laboratory located in Wyoming on the edge of the Black Hills.

Marine Research

Chairman Hayden. Last year the Senate added funds for the Sandy Hook Marine Laboratory in order to permit an increased operation of your research vessel there and of the fish behavior tank. What results have you been able to obtain with this additional money?

Mr. Gottschalk. I would like to call on Dr. Ray Johnson, Assistant Director of Research, to answer this question which has to do with fish behavior.

Mr. Johnson. Very briefly the funds provided last year allowed the construction and operation of a tank right in the laboratory big enough and complete enough so we could watch the fish right there instead of trying to find them in the ocean all the time.

We learned quite a bit from their behavior that way. In addition, we operated a research vessel on the east coast that was able to get out on some investigation of shark abundance, bluefish studies and other game fish interesting to sport fishermen.

Flood Damage at Beulah, Wyo.

Chairman Hayden. As I recall a couple of years ago the genetics program at Beulah, Wyo., was disrupted because of floods. Has this situation been corrected and is your program now on a satisfactory plane?

Mr. Gottschalk. I would like again to call on Dr. Johnson, who heads up our research work, to talk about this.

Mr. Johnson. The flood that came through that valley was unprecedented and unexpected and did stop us for quite a while. We were able to put the pieces back together, though, utilizing the spaces in buildings around the place, and begin these experiments all over again.

There is a good start made once more. We are working at a rather low level and making slow progress, but at least we are alive in that program yet.

MOURNING DOVE RESEARCH

Chairman HAYDEN. What are you doing in connection with mourning dove research, and how much of your 1967 budget is devoted to that purpose?

Mr. GOTTSCHALK. The estimate for mourning dove research in fiscal year 1967 is $45,000. I can tell you very briefly what we are doing.

Our dove work primarily is aimed at expansion and refinement of our banding program. We have to depend upon the identification of birds by banding to establish population levels which, of course, we need to know before we can determine what the seasons ought to be.

We have worked closely with the States, primarily in the Southeast, but our problem is that many of the doves are harvested in the South. The dove is a migratory bird. Actually he nests in the North. We need to intensify our program in the North where these birds actually nest, and this is needed to tie in with the banding recovery work done in the southeastern end of the flyway.

Dove research is important work. Many people have overlooked it. In many areas it is considered a songbird and is protected completely but in the South the dove is probably the most important single game bird.

The Southern States are doing a great deal in dove management and in dove research but again they are handicapped by the fact they can only work within their borders and it is our job to carry out the research necessary to get a total comprehension of the dove population and dove problems across the country.

PESTICIDE-WILDLIFE RESEARCH

Chairman HAYDEN. Please discuss your research on the pesticide-wildlife relationships.

Mr. GOTTSCHALK. Again I call on Dr. Johnson.

Dr. JOHNSON. The pesticide-wildlife studies are being carried on primarily at our laboratory near Laurel, Md., and one out near Denver to find out, first of all, what the immediate effects are on the animals of all these chemicals now in use and, second, to find out what the long-term effects may be on their life history and their behavior.

The work is progressing steadily, interrupted once in a while by an emergency when we find a new chemical or a new effect that has come on us unexpectedly.

On the whole the continuing production of new types of chemicals is keeping us a little off balance because we are not able to anticipate what may appear next and what the effect may be on our wildlife.

Chairman HAYDEN. Concerning various control methods, what success have you had in developing means of controlling starlings and nutria?

Mr. GOTTSCHALK. Dr. Johnson?

STARLING CONTROL

Mr. JOHNSON. The problem of controlling starlings is almost nationwide and has a varied aspect, depending on where the starlings are; roosting on roofs is one thing; contaminating feedlots is another problem. We have worked throughout the year on methods

for scaring birds away from where they are not wanted, or means of actually killing or thinning the flocks through contact poisons.

The study at the Denver laboratories are most interesting to us because they show promise of another type of control. That is, using one of the birds themselves as the scaring agent. If we can feed the right material to one of these birds he emits the warning cries and scares the flock, and the flock moves. That may only move the problem to the next field nearby, but we are working on the problem.

Promising results in controlling starlings around livestock feedlots are now appearing through the use of Denver Research Center compound No. 1339. This compound, now registered with USDA for widespread testing, is a slow-acting, lethal poison 300 to 500 times more toxic to birds than to mammals. Feed pellets scattered in appropriate places in feedlots are consumed by the starlings with fatal results. The compound is also effective in blackbird control if it is applied on cracked corn and wheat.

Control of Nutria

Nutria control now appears possible by using techniques devised at the Houma, La., subsidiary of our Denver Research Center. Studies continue there on basic biological characteristics and behavior of this introduced pest animal, and records are kept of the nature and scope of damage done to cultivated crops and native vegetation. Our primary goal has been the devising of control methods. It now seems that control is possible through baiting with carrots treated with zinc phosphide. Bait stations spaced one mile apart along bayous and canals in agricultural areas give 90-percent control of nutria causing damage. There is minimal hazard to wildlife and domestic animals. The technique and use of chemical is registered with the U.S. Department of Agriculture for experimental use by our Bureau and by cooperating agents supervised by us.

Fishery Management Projects

Chairman Hayden. Do you have any particular comment on your new fishery management projects at Yellowstone National Park and the Great Smoky Mountains National Park?

Mr. Gottschalk. The fisheries of Yellowstone National Park are judged to be among the finest anywhere in the world and, of course, are appreciated by the millions of visitors coming out there every year.

In order to maintain a satisfactory rate of catch these fisheries must be managed properly and this involves determining the number of adults that escape capture and which run up the adjacent streams to spawn. This work, of course, is confined to Yellowstone Lake.

In addition, we conduct a creel census and determine the number of fish caught there every year and by keeping a sample weight and measure and getting an average, we can determine whether the population is going up or going down.

COOPERATION WITH NATIONAL PARK OFFICIALS

By working with park authorities we can establish regulations which control the number of fish actually caught, limit the number of fish the people can keep or catch, and we think this is an extremely important and valuable adjunct to the total park management because we have been able to sustain the fishery at Yellowstone at a relatively high level.

The program that has been carried on down at Great Smoky National Park is being carried on on a part-time basis. We no longer have under our own jurisdiction a man who spends all of his time in Great Smoky although our man does spend a great deal of his time there cooperating with the ranger staff in efficient management of that park.

FISHING FOR FUN STREAMS

Fishing was so intense it was necessary for us to recommend, in order to get the best fishing, that some of these streams, which are called Fishing for Fun Streams, be established. On these streams you can fish and catch the fish but you have to throw them back. The result is you get bigger fish because they are returned and you catch them again.

This makes it more exciting but it doesn't do much for your skillet. Nevertheless, it has been very popular. Our fishery biologists are working not only in this area of the park but also in cooperation with the Forest Service on some of the streams in the adjacent national forest.

Chairman HAYDEN. Wildlife services is a new activity, in name at least, since it is the one to which the former activity called control of predatory animals and injurious rodents has been transferred.

REDUCTION IN PREDATOR CONTROL

Last year there was much discussion concerning the proposed reduction of $350,000 for cooperative work. As I recall, at that time you indicated that control of these animals would be accomplished by dealing with the specific individual animal which was causing damage, and in the words of your justification "control action would be taken only to limit animal numbers to tolerable limits and not to exterminate any species."

How has this worked out in actual practice?

Mr. GOTTSCHALK. I would have to say in this program we have not carried it far enough to either say we have been successful or have given it a fair trial.

Actually the operation of this division, which was the former Division of Predatory and Rodent Control, is in the process of a rather far-reaching and fundamental reorientation or redirection.

Trying to carry out a program which will be sensitive to the fact that many people across the country believe that a program that is so absolute that it would eliminate most of the predatory animals is reprehensible.

There are also relationships which involve the public's objection to the use of violent poisons, and objections to poisons that might have

secondary effects on animals other than those the poison was intended for.

Aside from these considerations what we are basically trying to do is reorient this program so we will satisfy the real, and they are real, and demonstrated needs of the livestock industry because it is true, and we recognize this ourselves, that the sheep industry in particular simply cannot operate unless there is some control on adjacent coyote populations.

We believe by the studies we are just now beginning to get into with this revised program that we can identify areas where a special problem exists and maybe in that area take out all the coyotes or as many as we can get.

Another area, for the sake of this discussion, would be back in the forest mountain area where the sheep were not being run and we would reduce the scale of our program.

As of the present time we are still engaged in the very intensive program of reorienting this Division.

Cooperation With Other Groups

As I say, we have had meetings with our field people; we have met with woolgrowers; we have had a lot of discussion but we still have a long way to go before we actually accomplish the goals we have set out for ourselves. This is not something that can be accomplished overnight.

I would say generally the reception has been good. I met with woolgrowers in Portland last January and spoke there with them, met with many of the people and obviously there are many sheepmen who are adamant that the only way to run a predatory program is to kill every last predator.

They just cannot understand what I am talking about when I talk in terms of those words I have just used.

By the same token there are ranchers who are appreciative of the fact the predator program is going to have to be carried out on a more sophisticated basis and we believe the leadership of the program is basically behind the change in emphasis which was an outgrowth of the so-called Leopold report.

I would not want to give the committee the impression we are satisfied with what we have done so far. We have evidence we think shows that the program has not suffered unduly this past year.

Indeed the reduction in funds that we underwent in this activity in the Western States was nearly compensated by increased contributions from State and local cooperators. We are optimistic and confident we are on a sound position with respect to our responsibilities in this program.

Fund Shortage in North Dakota

Senator Young. This is a letter from James H. Lemmon, Lemmon, S. Dak., and I would like to read four short paragraphs from his letter.

We sheepmen are facing a serious loss from predators unless the control program of the U.S. Fish and Wildlife Service allocates more funds to intensify the program.

Day before yesterday the plane used by the U.S. Fish and Wildlife Service flew over the Cedar Creek area in Sioux County, N. Dak., directly north of Watauga. In a little over 2 hours they killed six coyotes, and one dog coyote got away.

Some of our neighbors in Sioux County had notified Rew V. Hanson, State supervisor, of the division of wildlife service, that these coyotes were in that area, which resulted in him accompanying the pilot to this area himself. The coyotes are now getting ready to den and you can see what will happen to the sheepmen during the lambing period that is just ahead, if something isn't done to make it possible for the U.S. Fish and Wildlife Service at Bismarck to put on a more intensified program.

Throughout the year, the division of wildlife service at Bismarck has given us good service, but unless sufficient funds are allocated to them for predator control, predators will continue to increase and we will have much greater losses in our lambs and sheep. Predators are now on the increase.

PREDATOR AND RODENT CONTROL

How would you finance operations of this kind?

Mr. GOTTSCHALK. We are not asking for any substantial increase for wildlife service, which includes predator control for this year. You may recall this is where we underwent a reduction of funds in the amount of $350,000 for the present year.

For the actual predator and rodent control activity we are only asking for pay cost increases amounting to $20,000.

If I can take just 1 second I will comment very briefly along the lines of the remarks that I made last year. At that time I told you that we were endeavoring to reorient our predator control activity and to make it a part of what you might call a broad overall wildlife management effort rather than to concentrate specifically on the killing of predator animals.

TECHNIQUE OF SELECTIVE CONTROL

I said that we are going to make an effort to identify the animals which were causing the most damage and also identify areas in which there were heavy losses and to concentrate our forces there and, in spite of the reduction, I hope we would be able to do a competent job of keeping the predatory losses under control.

We are in the process of carrying out this shift in emphasis in our program. I said then, and repeat now, it is not anything that can be done overnight. The fact remains that we recognize a responsibility to these sheep ranchers and we are working out a program which we think will enable us to put more men and more effort into particular trouble spots.

In other words, instead of having a broad effort scattered over a wide area, we are going to be concentrating our work in areas where sheep losses, or other losses to agriculture, are obviously more acute than they may be in surrounding areas.

Senator YOUNG. You won't be able to do much of a job with that amount of money, though, will you?

Mr. GOTTSCHALK. Well——

Senator YOUNG. Did you ask for more money for this program?

Mr. GOTTSCHALK. No, sir; we did not. The reason we did not was because we felt, again, with the limitations we are operating under, this was a program where we would not be in a position to justify an increase.

We have asked for an increase in the total program that we list in our budget as wildlife services. We have asked for actually an additional $120,000. This concerned the pay increase I spoke of before.

NEW WILDLIFE MANAGEMENT PROGRAM

The $100,000 we are requesting is for the purpose of expanding another facet of our total wildlife management program. It deals with providing assistance to municipalities, even the State commission game departments in some cases, the Indians, in particular, military installations where they have wildlife problems requiring skilled and technical advice, but which in the past we have not been able to give and the $100,000 is set up for that purpose.

Senator YOUNG. Apparently the sheepmen don't think you have enough money. If you got more money would you put more emphasis on killing these predators?

Mr. GOTTSCHALK. I would tell you that if we were given more money and the committee concurred, the Congress concurred, we would put the emphasis into refining our capabilities in this field rather than just going out on what might be termed a shotgun approach to killing more predators.

We think the sheepmen do have a problem but we would organize more of these flying squads instead of hiring two or three trappers for North Dakota. We would hire a half dozen to work in a three-State region and with another plane go in to work on a hotspot.

We think our animal control has to go in this direction: We have to be more specific, more refined, and more sophisticated in our approach.

Senator YOUNG. Thank you, that would help.

WILDLIFE ENHANCEMENT

Chairman HAYDEN. In the wildlife services appropriation request there is a proposed increase of $100,000 to initiate a program of wildlife enhancement. Would you discuss for the committee the aims and methods of this program?

Mr. GOTTSCHALK. With us here today is Mr. James T. McBroom, Assistant Director for Cooperative Services, and I would like to call on him to respond to that question if I may.

Chairman HAYDEN. Yes, you may. What are the aims?

Mr. MCBROOM. Our aims are to help people make the most of their wildlife resources. We hope, for example, to get into 11 Indian reservations as soon as possible in the Southwest—in your part of the country—to help the people in the management of their wildlife resources in the same way we help them with their sport fisheries program. We have requests for this wildlife service from all 11 reservations. This would be of economic benefit to the Indians and provide the public in general with an important recreational opportunity.

We also hope to offer similar service to duck clubs who are doing a good conservation service to the United States in the management of their lands. We also have requests for this wildlife service from some of the duck clubs.

We propose to assist military reservations around the country in the management of their wildlife resources, and they have many. We expect to help them out so the military men and the public in general can enjoy them more.

Generally speaking, we propose for the first time to meet adequately our responsibilities to assist in the management of wildlife as specified in the Fish and Wildlife Coordination Act and the Sikes Act.

River Basin Studies

Chairman Hayden. Your estimate for river basin studies in fiscal year 1967 is the same as for last year except for the small increase to meet additional pay costs.

Would you please explain your activity in connection with river basin planning?

Wetlands Preservation Program

Mr. Gottschalk. River basin work we carried out can be divided into several categories. The first I will mention is the so-called wetland program. You may recall that 4 years ago the Congress passed a law which prohibits the Department of Agriculture from providing technical assistance to farmers in the drainage of wet lands without a particular wetland having first been studied by our agency to see whether it had special value for duck breeding. In fact, $322,000 of our total estimate will be used in this activity.

The work that we are doing in studying water use projects will be reduced somewhat this coming year so that our participation in comprehensive river basin planning can be increased.

Surveys of Water-Use Projects

We work with the Corps of Engineers, Federal Power Commission, Bureau of Reclamation, and establish in conjunction with State fish and game departments the beneficial or detrimental effects of these problems on fish and wildlife.

We studied with the Department of Agriculture certain projects on their fish and wildlfe program to create more opportunities for recreation through fishing and hunting.

Here again we work in cooperation with the State fish and game departments. We have a very small program related to urban planning under various Federal laws that provide funds for State planning agencies for open space for planning for towns and cities and so forth.

It is possible to set aside areas for park and wildlife space for open space services.

Our river basin study group works to a limited degree with city planners on this type of program.

River Basin Follow-Up Program

Our work also involves a limited amount of followup to determine whether the work we have done in past years was accurate. We can go out and make a study before a reservoir is in existence but it is not until it is actually there that we know what is going to happen.

So we have a limited program of following up to see what actually does transpire as a result of the completion of a project either from the standpoint of increasing the amount of fish and wildlife available or a reduction. These are the general things carried out under this program.

Great Strides Made at Garrison Project

We believe that some of our greatest contributions are made as a result of this program. One of the things that we have done, working with the Bureau of Reclamation, is work with the Garrison project which Congress authorized last year.

On the Garrison project alone over 100,000 acres of wetlands were identified by our staff working with reclamation people in North Dakota. This is an amount of land which was greater than the amount of land purchased last year by this Bureau under the Migratory Bird Conservation Act.

Of course, that is a different authorization but ultimately it will be there for wildlife production and is a direct result of this river basin activity. These men frequently get involved in some of the most controversial projects that we get involved in and as a result we do find ourselves sometimes at odds with someone who doesn't like to have any project identified as having any adverse effects, but overall, I think it can be shown that this activity has done the Nation a tremendous good in reducing the amount of damage that a project might do and building up its potential advantages. This is the emphasis we try to put in all these projects.

We try to play up all the contribution we can make by modification of the projects to get more efficient wildlife rather than taking a negative view that some people have termed one of obstructionism.

CONSTRUCTION

Justification

Chairman Hayden. For construction in fiscal year 1967 you propose an appropriation of $3,169,000 which is $15,130,200 less than the amount appropriated in fiscal year 1966.

However, of that appropriation $11,222,000 was in a supplemental estimate to meet emergency situations. The justification for this estimate will be printed in the record.

(The justification follows:)

Highlight Statement

The purpose and long-range objectives of the program for construction are to provide land, buildings, and other facilities for the conservation, management, and investigations of the Nation's sport fish and wildlife resources.

The 1966 program provided for replacement of raceways at the Pisgah Forest No. 2 National Fish Hatchery in North Carolina; planning, initiation of construction, continuation of construction, completion of construction, completion of redevelopment or improvement, or expansion of facilities at 24 fish hatcheries; completion of construction of the Narragansett Marine Laboratory; rehabilitation and repair of dock facilities at Sandy Hook Marine Laboratory; site selection, architectural and engineering design and planning for 2 marine game fish research laboratories on the eastern and western Gulf of Mexico; complete construction of an operable unit at the fish-pesticide laboratory in Columbia, Mo.; construction and development of 22 refuges; engineering planning at refuges; storm damage repairs at 5 refuges; completion of operable facilities at the Northern Great Plains Research Station in Jamestown, N. Dak.; and the pesticide research laboratory at Denver, Colo.; and land acquisition for the Northern Wildlife Research Center at Jamestown, N. Dak.

Supplemental appropriation provided for repair of hurricane and storm damage to hatchery, refuge, and research facilities and the construction of the National Fisheries Center and Aquarium.

The estimates for fiscal year 1967 provide for design and site preparation for replacement of a fishery research facility, construction and development on 26 national wildlife refuges, engineering planning at refuges, and construction of a general purpose laboratory-office building for the Migratory Bird Population Station at Patuxent, Md.

Construction

Appropriation, 1966	$18,299,200
Unobligated balance from prior years	+1,521,657
Total available for obligation, 1966	19,820,857
Decreases:	
Fish hatchery facilities	12,904,306
Fishery research facilities	959,469
Wildlife refuge facilities	5,505,201
Wildlife research facilities	451,881
Total	19,820,857
Increases:	
Fishery research facilities	84,000
Wildlife refuge facilities	1,985,000
Wildlife research facilities	1,100,000
Budget estimate, 1967	3,169,000

Analysis by activities (total funds)

Activity and appropriation	Amount available 1965	Amount available 1966	Estimate 1967	Increase (+) or decrease (−)
1. Sport fish facilities:				
Construction	$5,663,571	$13,863,775	$84,000	−$13,779,775
Construction of recreational and fish and wildlife facilities, Bureau of Reclamation	391,887	2,839,086	932,200	−1,906,886
Subtotal	6,055,458	16,702,861	1,016,200	−15,686,661
2. Wildlife facilities:				
Construction	3,515,970	5,957,082	3,085,000	−2,872,082
Construction of recreational and fish and wildlife facilities, Bureau of Reclamation	156,000	579,021	348,200	−230,821
Subtotal	3,671,970	6,536,103	3,433,200	−3,102,903
Total, direct appropriations	9,179,541	19,820,857	3,169,000	−16,651,857
Other funds	547,887	3,418,107	1,280,400	−2,137,707
Grand total	9,727,428	23,238,964	4,449,400	−18,789,564

Analysis by activities

Activity	Fiscal year 1966 amount available	Fiscal Year 1967			Total available, 1967 compared to total available 1966
		Unobligated balance from prior years	Budget estimate	Estimated total available	
1. Sport fish facilities	$13,863,775		$84,000	$84,000	−$13,779,775
2. Wildlife facilities	5,957,082		3,085,000	3,085,000	−2,872,082
Total	19,820,857		3,169,000	3,169,000	−16,651,857

1. SPORT FISH FACILITIES

Fishery research facilities, $84,000

The estimate of $84,000 is for detailed engineering design and site preparation for replacement of the Eastern Fish Nutrition Laboratory's research facility. This unique laboratory, in spite of its dilapidated, outmoded, and unsafe physical plant, has a long history of successful operation as an applied research installation and an inservice training center operated in conjunction with the Cortland National Fish Hatchery with cooperative assistance of the New York Conservation Department. Replacement of fish hatchery structures is currently underway. The estimated cost of complete construction of the new research building is $575,000.

2. WILDLIFE FACILITIES, $3,085,000

(a) *Wildlife refuges facilities, $1,985,000*

The estimate of $1,985,000 consists of $1,785,000 for development on 26 national wildlife refuges, and $200,000 for advance planning, as follows:

Imperial, Ariz	$50,000	Mattamuskeet, N.C	$100,000
Wapanocca, Ark	100,000	Des Lacs, N. Dak	15,000
Lower Klamath, Calif	38,000	Tewaukon, N. Dak	69,000
Modoc, Calif	20,000	Ottawa, Ohio	71,000
Sacramento-Colusa-Sutter-Delevan, Calif	67,000	Malheur, Oreg	56,000
Loxahatchee, Fla	95,000	Willamette, Oreg	24,000
Savannah, Ga	105,000	Erie, Pa	98,000
Grays Lake, Idaho	100,000	Aransas, Tex	50,000
DeSoto, Iowa and Nebr	130,000	Buffalo Lake, Tex	15,000
Quivira, Kans	190,000	Ouray, Utah	75,000
Shiawassee, Mich	20,000	Missisquoi, Vt	152,000
Sherburne, Minn	50,000	Columbia, Wash	30,000
Tamarac, Minn	40,000	Advance planning	200,000
Sheldon-Hart Mountains, Nev	25,000	Total estimate	1,985,000

The Nation's wildlife habitat is shrinking at an alarming and accelerating rate under the twin pressures of population growth and developments demanded by an affluent society. Small portions of the country's original vast acreage of water and marshland are retained as national wildlife refuges and must be developed intensively to partially offset the loss of wildland areas.

This Bureau is charged with the responsibility for perpetuating the migratory bird resource. Other goals include the preservation of rare and endangered species such as the whooping crane, key deer, the protection of certain big game species that require special management such as bighorn sheep and bison, and the preservation of unique ecological areas which would otherwise be lost. All of the management and protection afforded wildlife and its habitat would be meaningless unless the Nation's people could enjoy their wildlife. The national wildlife refuge system was host to over 14 million visitors in 1964. Most people came to observe wildlife, to picnic in the unspoiled out-of-doors, to swim or boat, and to hunt or fish. These visitors require major expenditures for roads, parking lots, picnic areas and swimming beaches.

Refuge lands must be developed to their maximum to provide food, cover and sanctuary for wildlife while permitting public enjoyment of this valuable resource. The 1967 estimate will provide 2 percent of annual capital investment needed for full development of the refuge system. The estimate will provide:

Water impoundments for wildlife facilities	$1,256,000
Biological development	141,000
Buildings	7,000
Fencing	73,000
Roads and trails	22,000
Structures and utilities	5,000
Recreational development	281,000
Advance planning and water rights	200,000
Total	1,985,000

The construction outlined below will create operable management units within the refuges. Master plans or specific biological and engineering reconnaissance plans are the basis for the estimates. Recreational development is compatible with wildlife management and is in accordance with the act of September 28, 1962 (16 U.S.C. 460k et seq.).

Imperial, Ariz., $50,000.—The Imperial refuge is situated on both the Arizona and California sides of the Colorado River about 18 miles above the city of Yuma, Ariz. It was established in 1941 to manage and protect wildlife attracted by the backwaters that formed following the construction of Imperial Dam. It has since become of outstanding value in providing a protecting wintering area for the Great Basin Canada goose, whose status is presently threatened. In order to replace present obnoxious marsh and phreatophytic plants with foods attractive to waterfowl, it is essential that these areas be cleared and planted to suitable food plants. Land development here involves irrigation water, and the water rights available must be protected by proof of beneficial use. The estimate of $50,000 will permit development of 240 acres of farmland and 100 acres of flooded lands necessary for intensified and diversified management of the area.

Wapanocca, Ark., $100,000.—Wapanocca refuge, located a few miles west of the Mississippi River, occupies an important place in the main stream of the Mississippi Waterfowl Flyway. The refuge provides wintering habitat and sanctuary for Canada geese, mallards, wood ducks, pintails, ringnecks, gadwalls, and most other species of waterfowl that migrate the Mississippi Flyway route. This estimate will initiate the water development phase of the refuge program including renovation of dikes and widening, sloping and graveling levees.

Klamath Basin refuges, California-Oregon, $38,000.—This refuge complex constitutes the most important waterfowl concentration area on the North American Continent and produces approximately 90,000 birds annually. A total development program has been master planned. The first phase of new development was started in fiscal year 1966 on the Lower Klamath refuge and included major dike rehabilitation to handle the heavy intermittent discharges from Tule Lake, and to properly control water in units 2, 3, 5, and 12A. Of this estimate for Lower Klamath, $8,000 will complete 2–5 dike and make unit 5 fully operable. This unit of 300 acres will be maintained in marsh and water and will accommodate about 3,250,000 waterfowl use-days. The $30,000 for construction of a water control structure in Sheepy West unit, will be the initial step in development of 3,900 acres of water and marsh which when completed will accommodate 31,250,000 waterfowl use-days and produce 5,000 ducks and geese. Over 100,000 visitors came to the refuge complex in 1964 to observe the spectacular concentrations of waterfowl and to take advantage of the public hunting areas.

Modoc, Calif., $20,000.—This relatively new refuge of 5,966 acres is strategically located in the eastern section of the Pacific flyway. It provides nesting habitat for Canada geese and ducks and food and protection for migrating waterfowl. In addition, it provides an opportunity for public enjoyment of the waterfowl resources through hunting and wildlife observation. The estimate will provide for 15 miles of interior and boundary fencing. The refuge pastures, hay lands, croplands, and marshlands must be protected by adequate fencing in order to maintain economic uses which are major tools in the management of waterfowl at this refuge. "Good fences make good neighbors," is especially true in a ranching community like the one surrounding the Modoc refuge.

Sacramento-Colusa-Sutter-Delevan, Calif., $67,000.—These waterfowl refuges, administered as a unit, are located in the Sacramento Valley, in the heart of the wintering grounds of the Pacific flyway, and are some of the most intensively used wildlife refuges in the Nation. As many as 2 million ducks and geese may be present at one time. These areas are intensively farmed to produce rice and native moist soil plants for the ducks and geese that winter in the Sacramento Valley. Refuge crops also serve as a buffer, protecting private agricultural lands in the valley from depredations by birds until crops can be harvested. Essential in management and development of habitat are adequate water impoundment facilities. This estimate will provide $23,000 for dikes and ditches at Colusa; $11,000 for dikes at Sutter; $13,000 for rerouting present ditches and constructing a new ditch system and $10,000 for fencing at Delevan; and $10,000 for graveling and improving 10 miles of the road system at Sacramento. Parts of these refuges are open to waterfowl hunting.

Loxahatchee, Fla., $95,000.—This refuge provides valuable wintering habitat for mottled and wood ducks and permanent habitat for thousands of marsh and

wading birds. Of special significance is the occurrence of the extremely rare Everglades kite. Loxahatchee provides a home for almost the entire population of this interesting species. This is an area that also provides over 200,000 annual visitor-days for outdoor recreation for hunting, fishing, wildlife observation and photography, and picnicking. The estimate will permit the Bureau to meet obligations for recreational facilities described in the agreement with the central and southern flood control district, under which the refuge was established, as well as to facilitate the expanding public use and enjoyment of the area. This estimate covers the construction of recreational facilities which will include necessary fill for a picnic area at the headquarters landing, picnic shelters, comfort station, boat ramp, and parking areas.

Savannah, Ga., $105,000.—Savannah refuge provides a sanctuary and winter feeding ground for large numbers of migratory waterfowl and a permanent home for other birds and wildlife. Since the original development of the refuge pools, management has indicated the necessity for dividing these pools into smaller units and for improving the drainage and water supply. Funds were provided in fiscal years 1965 and 1966 to initiate this development. This estimate will complete the development of pool 5 and construct the pool 5A side of Recess Island Canal at a cost of $90,000. Development in pool 5 consists of subdividing this large impoundment into two units, and raising the exterior dike adjacent to Back River to 13 foot mean sea level. A boat launching ramp and parking lots are essential to the success of the public hunting program on the refuge. These facilities will cost $15,000.

Grays Lake, Idaho, $100,000.—The 13,000-acre newly acquired Grays Lake refuge was formerly one of the most productive natural waterfowl areas in the Western United States. Due mainly to the construction of an artificial outlet at the south end of the lake to drain water into Blackfoot Reservoir for use by the Fort Hill irrigation project, the lakebed and surrounding land is flooded in the spring and almost dry in the summer. As a result of fluctuating water levels, dense stands of bulrush have filled in much of the lake and its value to waterfowl and other wildlife has dropped. Under refuge management and development production on the area is expected to increase from the present 3,000 waterfowl produced to about 30,000 ducks and geese annually. It will also harbor large concentrations of waterfowl during spring and fall migrations. Of particular importance will be the production of Great Basin Canada geese. Development of Grays Lake refuge will include construction of a peripheral dike, water control structures, and pumping facilities. This estimate is to initiate a portion of the first planned phase of development which includes the construction of dikes and canals.

DeSoto, Iowa-Nebr., $130,000.—The DeSoto refuge was established in 1958 as a combination waterfowl refuge and public use area. An approved master plan outlines the development required for this heavily used area. This estimate includes funds for the development of a picnic area and for surfacing of the primary access roads to public use areas. Recreational development is essential to meet the demands of one-quarter million visitors annually, most of whom come to the refuge during a 4-month period in the summer. Road and trail development is also necessary for access for wildlife management, fire protection, and law enforcement.

Quivira, Kans., $190,000.—This refuge is most important to the waterfowl resource in providing both fall and spring food and cover for several hundred thousand waterfowl migrating through central Kansas. It is the spring stopover for northward bound white-fronted geese and is becoming increasingly valuable from the standpoint of duck nesting and production. The estimate will continue the water development phase of the master plan. Dikes and water controls are necessary to create march habitat for ducks and geese and to support the declaration of taking action in acquisition of certain properties required for development.

Shiawassee, Mich., $20,000.—This is a major waterfowl nesting and migration refuge in the northern portion of the Mississippi Flyway. This estimate provides $20,000 for rehabilitation of existing dikes in tracts 115, 125a and 143. These dikes protect farm fields from spring floods and permit the shallow flooding of standing crops in the fall. This practice provides ideal habitat for whistling swans, Canada geese, and most species of ducks.

Sherburne, Minn., $50,000.—This new refuge just north of Minneapolis-St. Paul will restore a part of the wildlife habitat destroyed by drainage and agricultural development in the St. Francis River watershed. It will provide

a haven for thousands of nesting and migrating waterfowl as well as deer, pheasants, and other wildlife. The refuge will provide opportunities for many thousands of city dwellers to observe wildlife in its native habitat. Picnic sites, sanitary facilities, and drinking water will be provided at several locations for the convenience of refuge visitors. This estimate is for initial development of dikes and water controls needed to create shallow impoundments attractive to nesting and migrating ducks and geese. Biological studies and engineering feasibility surveys have been made.

Tamarac, Minn., $40,000.—Tamarac is an important nesting and migrational refuge for waterfowl in the transition habitat between forest and prairie zones of Minnesota. The $40,000 will be spent for timber stand improvement and to develop potholes and marsh units, including additional wild rice stands. Tamarac provides a wide variety of public uses from hunting, fishing, and wildlife observation to picnicking, enjoyment of scenic and Indian historical sites, and canoeing trips for Boy Scouts.

Sheldon-Hart Mountain, Nev.-Oreg., $25,000.—These two refuges are managed as a unit. The Sheldon Antelope Refuge was established in 1931, through the cooperation of the Boone & Crockett Club and the National Audubon Society. The Hart Mountain Antelope Refuge was established in 1936. These areas are managed primarily as a year-round habitat for pronghorn antelope, and many other forms of wildlife. $15,000 is required to rehabilitate units 2, 3, A, and B at the IXL area of the Sheldon refuge which were damaged by floods and wave action. Rehabilitation of these units will restore nesting, feeding, and resting areas for over 5,000 ducks, geese, and swans; drinking water for antelope, deer, and cattle; and provide for better water manipulation for a 500-acre hay meadow. At the Hart Mountain refuge rehabilitation of Jacobs Reservoir is urgently needed to protect water rights, restore irrigation storage for 300 acres of hay meadow at the Skirk unit, as well as nesting and resting facilities for ducks and geese; drinking water for antelope, cattle, and other wildlife. The estimate for these repairs is $10,000.

Mattamuskeet, N.C., $100,000.—This refuge established in 1934, includes about 50,000 acres of land and water. As many as 135,000 Canada geese and 240,000 ducks winter on the refuge, which is opened to public waterfowl hunting. Excellent fishing is provided in the lake. Prior to acquisition of the refuge the New Holland Corp., from whom the properties were acquired, excavated two drainage ditches to Pamlico Sound along with a perimeter ditch around their approximate boundary, and a series of internal ditches directing water to the pumping plant. All of the canals to the sound have now silted in. $100,000 were appropriated in 1966 to initiate canal improvement work on the Outfall Canal segment of the project. The estimate will continue the canal dredging project which involves the removal of sediment from the Rose Bay, Outfall, Lake Landing and Waupoppin Canal system. Continuation of this work is essential if the refuge is to remain attractive to waterfowl. Marsh conditions are deteriorating as a result of the lack of mechanical treatment, a practice which is dependent upon low lake levels during the spring and summer months. During the past several years, as a result of ineffective water control, it has been possible to cover only a small portion of the marsh needing treatment to produce the required quantities of waterfowl foods.

Des Lacs, N. Dak., $15,000.—This refuge provides one of the few lakes suitable for recreation in the north-central portion of North Dakota. It is extremely important to the local community for swimming and boating. Minimal public-use facilities including pit-type toilets, a hand pump, and a few picnic tables were constructed about 30 years ago by WPA and CCC labor. These facilities have deteriorated over the years and are grossly inadequate for the present visitor use load. Development will include drilling a new well, constructing modern sanitary facilities, picnic tables, boat launching ramp, and renovation of the swimming beach at the Taskers Coulee Recreational Area. This will bring the sanitary facilities up to the levels acceptable by the State department of health.

Tewaukon, N. Dak., $69,000.—Tewaukon is an important duck production and goose concentration refuge and is also important as a public use area in a region of North Dakota where recreational facilities are scarce. It provides birds for waterfowl hunting on adjacent private and State-owned lands, upland game and big-game hunting on the refuge when it does not interfere with waterfowl management, and fishing and other water-related recreation on Lake Tewaukon. The estimate will provide $45,000 for water control structures to improve and expand waterfowl habitat; $8,000 for improvement of nesting and food cover on up-

lands; and $16,000 for recreational sanitary facilities, access roads, and boat launching ramp.

Ottawa, Ohio, $71,000.—This is a new refuge established to preserve vital wet lands along Lake Erie which are essential to waterfowl management, particularly for diving duck species in short supply. Development must be carried out to make this refuge operational. The master plan of development will be completed in fiscal year 1966. This estimate comprises a portion of the first phase of development, and will initiate the development of water facilities which are required to establish manageable marshes at sites traditionally used by thousands of ducks, geese, and swan. This development will be the construction of a dike for pool 2.

Malheur, Oreg., $56,000.—This 165,000-acre waterfowl refuge is the largest and one of the most important of the national wildlife refuges set aside primarily for nesting of migrant waterfowl. Up to 70,000 waterfowl are produced in years with a favorable water supply. Funds were provided in fiscal year 1966 to permit initial work on subdividing the large shallow Malheur Lake into smaller, more management, water impoundments. This is essential to conserve water in years of short supply and to help maintain higher production of waterfowl in all years. This estimate continues the development of water facilities by providing the Sod House unit with dike and water control structures costing $31,000. This will provide a 300-acre pool for growing waterfowl foods. The development of marshland by brush clearing and seeding at a cost of $13,000; and repair and gravel surfacing of 8 miles of road to provide all-weather travel to the Double-O station and major water control structures costing $12,000 will provide improved habitat and increased management efficiency.

Willamette, Oreg., $24,000.—The Willamette refuge, in the heart of Willamette Valley, is a newly acquired refuge which is an important wintering ground for the western Canada goose which nests in the Copper River country in Alaska. In addition to the geese, great numbers of mallards, pintails, and other ducks use the area. Funds are requested for initial development of the Muddy Creek division consisting of dikes and water controls which will provide for shallow flooding of corn, sudangrass, and wild food plants to attract waterfowl, particularly the dusky Canada goose, to the area during the fall and early winter. When waterfowl populations near objectives, portions of the refuge will be opened to public hunting.

Erie, Pa., $98,000.—This refuge, located in the major flight lane of Atlantic flyway birds, off the eastern end of Lake Erie, plays a vital role in waterfowl management. This estimate is for the construction of water control facilities necessary for creation of waterfowl breeding and feeding habitat and is a continuation of the work started in fiscal year 1966. The scarcity of waterfowl habitat in this part of Pennsylvania makes it essential that the refuge development be carried out.

Aransas, Tex., $50,000.—This refuge is the winter home of the few remaining wild whooping cranes on the North American Continent. It is also a valuable wintering area for other waterfowl. Large populations of deer, wild turkey, javalina, and other wildlife occupy the refuge the year around. The area is extremely attractive to visitors, which use exceeds 31,000 days per year and is steadily increasing. The estimate will provide $43,000 for a 5-mile mammal proof fence which would exclude all mammal life from the "point" area of the refuge, and allow intensive management of the area for our waterfowl resource. An area within the "point" will be farmed to provide additional foods for the whooping cranes. $7,000 is for the construction of a boathouse, near the Intracoastal Canal, which would facilitate water patrol through the whooper territory.

Buffalo Lake, Tex., $15,000.—The Buffalo Lake refuge, comprising approximately 7,700 acres, was established to provide wintering habitat for the Great Plains flocks of ducks and Canada geese. This area is one of the most important waterfowl concentration points in the Texas Panhandle, and is a primary wintering area for lesser Canada geese. Peak wintering waterfowl populations are about 1 million ducks and 20,000 geese. The refuge also has very heavy public use with over 350,000 visitors recorded in 1964. This estimate provides $5,000 to replace two outdated and malfunctioning water measuring flumes which are essential to protect the refuge water rights; and $10,000 to replace badly deteriorated sanitary facilities and picnic tables.

Ouray, Utah, $75,000.—This refuge was established on the Green River in Uintah County to replace Great Basin Canada goose nesting habitat eliminated by the construction of Flaming Gorge Dam and Seekskadee Reservoir, as well as to provide production and migration habitat for other waterfowl. It requires intensive water development in the form of dikes and water control structures to provide essential waterfowl habitat. The estimate will permit continuation of water control facility development work initiated in fiscal year 1964.

Missisquoi, Vt., $152,000.—The Missisquoi refuge has great potential for fulfilling its objectives of becoming an outstanding waterfowl production, resting, and feeding area. Dikes and water control structures are needed to hold floodwater and precipitation on 4,000 acres of potential marsh in five pools. When water levels are stabilized and under control, production should increase from an average of 350 ducks annually to about 5,000 ducks and 200 geese. Waterfowl utilization should increase 150 percent to about 900,000 duck-use days and 150,000 goose-use days. This estimate will complete the 550-acre waterfowl production unit 2.

Columbia, Wash., $30,000.—This refuge in the upper Columbia River Basin is strategically located to meet waterfowl management needs in a region where the rapid expansion of agriculture has created a shortage of habitat. Because of increasing depredation by waterfowl on Columbia Basin corn and cereal grains, it is important that additional refuge croplands be developed to increase waterfowl food production; $20,000 are needed for an irrigation system and $10,000 for the completion of 130 acres of farm units 35 and 36, and an 80-acre development of farm units 71 and 74. These developments will do much to alleviate crop damage by mallards and other ducks.

Advance planning, $200,000.—The orderly development of the national wildlife refuge system is dependent upon a program of master planning. Without long-range planning, it would not be possible to properly balance the total wildlife conservation, resource utilization, and public recreational use of the 28¾ million acres in over 300 national wildlife refuges. The estimate of $150,000 for such planning will provide the master guidelines for 10 units of the system; $50,000 is for the continuation of water rights studies. With water shortages becoming more prevalent in many sections of the country, there is an acute concern for water rights. It is essential that water rights for each refuge be reviewed, and necessary action be taken to file and obtain additional rights where necessary. Without water, waterfowl and other wildlife management cannot be carried out.

(*b*) *Wildlife research facilities, $1,100,000*

The estimate of $1,100,000 is for construction of a general purpose laboratory-office building at Patuxent Wildlife Research Center, Laurel, Md. Forty-eight thousand square feet of additional space is urgently needed to house the bird banding record center, automatic data processing equipment and administrative staff of the migratory bird populations station and Patuxent Wildlife Research Center. The type of space required to provide proper housing for these varied activities will be met by construction of a three-story building of an architectural design that will blend in with existing structures at the Center. The bird banding and distribution work of the Bureau is a cooperative activity involving all of the State conservation departments, the Canadian and Mexican Governments as well as many private groups and individuals interested in bird conservation and management.

Present space is inadequate, both as to amount and quality. Program efficiency is suffering as a result.

Planning the location for the building and developing plans and specifications are being accomplished with $40,000 appropriated in fiscal year 1965 under this appropriation. In addition, $40,000 of reverted Federal aid-wildlife research funds are being requested in fiscal year 1966 to complete planning of the facility and in fiscal year 1967 an amount of $400,000 of reverted research funds is requested to complete construction. This will permit the awarding of a single contract with cost savings and increased efficiency in completing the work.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
Program and financing:				
Total obligations	$9,179,541	$19,820,857	$3,169,000	−$16,651,857
Unobligated balance brought forward	−1,521,897	−1,521,657		1,521,657
Unobligated balance carried forward	1,521,657			
Unobligated balance lapsing	78,499			
Appropriation	9,257,800	18,299,200	3,169,000	−15,130,200
Obligations by objects:				
11 Personnel compensation	1,047,707	1,711,000	713,000	−998,000
12 Personnel benefits	62,145	119,000	52,000	−67,000
21 Travel and transportation of persons	126,154	198,000	70,000	−128,000
22 Transportation of things	14,344	13,000	5,000	−8,000
23 Rent, communications, and utilities	21,329	23,000	9,000	−14,000
24 Printing and reproduction	12,829	38,000	6,000	−32,000
25 Other services	704,515	2,505,867	123,000	−2,382,857
Services of other agencies	116,229	448,000	903,000	455,000
26 Supplies and materials	261,503	495,000	130,000	−365,000
31 Equipment	77,212	183,000	34,000	−149,000
32 Lands and structures	6,735,574	14,087,000	1,124,000	−12,963,000
Total obligations	9,179,541	19,820,857	3,169,000	−16,651,857

NEW BIRD BANDING CENTER

Mr. GOTTSCHALK. The major construction item involves a new laboratory that we hope to build at our Patuxent Wildlife Research Center.

At Patuxent we operate the world's largest bird banding center. This is the nerve center for activities ranging around the world, wherever birds go and can be banded. They are banded and the bands come back to our Patuxent Center for identification and for all the processing that is involved.

To get anything out of a banding program you have to have records, records on where the bird was banded. This involves the kind it is, the age, if it can be determined, specific location, the date and, of course, we have to know the name of the bander and then when the bird is finally picked up at some other place and the band recovered, we have to know where this was, the identification of the bird.

This all has to be pulled back together so it makes a record. Unless you have the banded bird and the recovered bird you have nothing. This all comes back to Patuxent. This activity has grown both because of the responsibility we have in managing waterfowl, which has required great expansion in our waterfowl work, and also because of the growth of interest by the American public and other nations in this type of thing.

So, we are getting a rapidly increasing number of bird bands we have to process.

I made a personal inspection at Patuxent a couple of weeks ago to see for myself the situation and it is difficult to see how any efficient work can be carried out in the crowded conditions of the work there in the bird banding laboratory.

If I may, Mr. Chairman, I should like to call to the committee's attention the request contained in the last paragraph of the printed

justifications, page 122, for this building. Committee authorization is requested therein to use $40,000 in fiscal year 1966 and $400,000 in 1967 of reverted Federal aid wildlife funds, which are permanently authorized appropriations, to complete the planning and construction, respectively, most efficiently and economically. The purpose of this approval is to give us the necessary congressional authorization to use two sources of funds; that is, the annual construction appropriation account and the reverted funds, to construct this building.

What we are most concerned about—I don't mean to say this "most" in connection with our budget request—but we are most concerned about the need for this additional space and this combination office-laboratory building which would house our bird population work at Patuxent Refuge.

Engineering Design at Cortland, N.Y., Laboratory

In addition, we are asking for a small amount, $84,000 to carry out the engineering design and site investigation for an existing activity at Cortland, N.Y., for the site of Eastern Fish Nutrition Laboratory. This will increase the request for funds for construction of a laboratory building once these plans are finished.

Improvements at 26 Wildlife Refuges

In addition, we are requesting funds for improvement of facilities of wildlife refuges for 26 different areas.

This past year under the land acquisition program we acquired 14 new wildlife refuges and we have been adding new wildlife refuges every year under our accelerated refuge program. We have an accelerated program when we acquire one of these to do an increased amount of work there.

Need To Develop Acquired Lands

When we acquire land for waterfowl work and fail to do anything with it, we and the Bureau as representatives of the Government are criticized, and with some justification.

What we are asking for seems quite a bit, $1,985,000 of which $200,000 is for advanced planning, but actually it is a small amount compared with the total demand. We have to make these wildlife refuges more effective in their jobs.

Master Planning at Refuges

Chairman Hayden. Of your construction estimate there is $150,000 for master planning for wildlife refuges. Please indicate the refuges at which this appropriation will be expended.

Mr. Gottschalk. If I may I would like to supply that list for the record. I don't have it at my fingertips.

Chairman Hayden. Very well.

(The information follows:)

Planning of national wildlife refuges is a continuous process because of the intricate biological and physical interrelationships involved. Data collection is the most time-consuming phase of the planning process and on some complex areas requires several years to complete. Planning at some of the refuges listed below has been in process this year while planning will start on others in fiscal year 1967. We expect to complete master plans at the cost estimates indicated on the following refuges in fiscal year 1967.

Mississquoi, Vt	$12,000
Loxahatchee, Fla	6,000
Okefenokee, Ga	10,000
Piedmont, Ga	10,000
Agassiz, Minn	15,000
Fort Niobrabra, Nebr	6,000
Rice Lake, Minn	10,000
Kofa, Ariz	10,000
Santa Ana, Tex	6,000
Red Rock Lakes, Mont	15,000

In addition, $50,000 will be used on preliminary planning to be initiated on seven additional refuges in fiscal year 1967, with completion scheduled for subsequent years.

GENERAL ADMINISTRATIVE EXPENSES

1967 Budget Request

Chairman Hayden. For general administrative expenses in fiscal year 1967 you estimate your needs at $1,564,000, about $38,000 of which is an increase in your proposed program. The justification for this estimate will be printed in the record.

(The justification follows:)

The purpose and long-range objectives of this program are to provide executive direction and general administrative services for the Bureau. Executive direction consists of the services of the Director, a Deputy Director and Associate Director and secretaries at Washington, D.C., headquarters and a regional director and secretary at each regional office. General administrative services include personnel, budget and finance, property management and related business management activities.

The 1966 program provided for a new program of ADP services. A supplemental appropriation is proposed to cover the increased pay act costs.

In 1966, the Office of the Commissioner, Fish and Wildlife Service, was reorganized to transfer operational functions together with the funds and manpower associated with these functions to the two constituent Bureaus of the Fish and Wildlife Service. One permanent position and $20,353 for the safety function is shown as a comparative transfer in the general administrative expenses appropriation. Fourteen positions and $144,000 are shown as a comparative transfer in the management and investigations of resources appropriation. The safety function consists of staff assistance in the development of programs to reduce losses from accidents to employees and property.

The 1967 program includes increases for a resource planning assistant position, within-grade promotions, and annualization of pay act costs.

General administrative expenses

Appropriation, 1965	$1,384,000
Second supplemental appropriation 1965	59 000
Total appropriation, 1965	1,443,000
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	+17,393
Total available, 1965	1,460,393
Appropriation, 1966	1,458,000
Pay cost supplemental	34,359
Total appropriation, 1966	1,492,359
Comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife	+20,353
Total available, 1966	1,512,712

SUMMARY OF INCREASES AND DECREASES, 1967

Departmental expense:	
To provide for automatic within-grade promotions	+6,647
To provide for increased pay costs for fiscal year 1966 positions	+6,000
To provide for a resource planning assistant	+18,000
Total	+30,647
Regional office expense:	
To provide for automatic within-grade promotions	+13,000
To provide for increased pay costs for fiscal year 1966 positions	+7,641
Total	+20,641
Net increase, 1967	51,288
Budget estimate, 1967	1,564,000

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966			
		Total appropriation	Pay cost supplemental	Transfers [1]	Amount available
Departmental expense	$434,269	$442,000	$10,000	$20,353	$472,353
Regional office expense	1,018,011	1,016,000	24,359		1,040,359
Unobligated balance lapsing	8,113				
Total	1,460,393	1,458,000	34,359	20,353	1,512,712

[1] Represents comparative transfer from "Salaries and expenses," Office of the Commissioner of Fish and Wildlife.

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Departmental expense	$434,269	$472,353	$503,000	+$30,647	+$6,000	+$24,647
Regional office expense	1,018,011	1,040,359	1,061,000	+20,641	+7,641	+13,000
Unobligated balance lapsing	8,113					
Total	1,460,393	1,512,712	1,564,000	+51,288	+13,641	+37,647

[1] To provide for increased pay costs for fiscal year 1966 positions.

Analysis by activities (total funds)

Appropriation	Amount available, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
General administrative expenses	$1,460,393	$1,512,712	$1,564,000	$51,288
Migratory bird conservation account	63,924	69,300	69,300	
Appalachian fish and wildlife restoration projects		11,700	10,100	−1,600
Federal aid in fish restoration and management	41,352	45,400	46,500	1,100
Federal aid in wildlife restoration	102,845	99,900	94,700	−5,200
National wildlife refuge funds	77,314	66,700	75,100	8,400
Bureau of Outdoor Recreation			8,500	8,500
Bureau of Reclamation:				
General investigations	15,447	17,400	18,300	900
Construction and rehabilitation	13,891	14,800	14,800	
Construction of recreational and fish and wildlife facilities	8,981	10,500	19,600	9,100
Corps of Engineers, civil:				
General investigations	8,400	13,300	19,000	5,700
Construction, general	19,975	21,500	23,700	2,200
Advances and reimbursements	73,117	97,800	86,400	−11,400
Total, direct appropriation	1,460,393	1,512,712	1,564,000	51,288
Other funds	425,246	468,300	486,000	17,700
Grand total	1,885,639	1,981,012	2,050,000	68,988

Justifications

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
1. Departmental expense	$434,269	$472,353	$503,000	+$30,647	+$6,000	+$24,647
2. Regional office	1,018,011	1,040,359	1,061,000	+10,641	+7,641	+13,000
Total	1,452,280	1,512,712	1,564,000	+51,288	+13,641	+37,647

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $1,564,000 and 154 permanent positions, an increase of $51,288 and 1 permanent position over 1966. The increase consists of:

(1) An increase of $13,641 for increased pay costs.

(2) An increase of $18,000 and 1 permanent position for a resources planning assistant.

(3) An increase of $19,647 for within-grade salary increases which cannot be absorbed within presently available funds.

Need for increase.—An increase of $18,000 and one permanent position is needed for a resource planning assistant who will provide needed expertise and staff guidance in the new Government-wide program of planning, programing and budgeting which is designed to measure program objectives in terms of input costs and output benefits. The increase of $19,647 is for within-grade salary increases which cannot be absorbed within presently available funds. These increases amount, on an average, to approximately 2 percent of total personal services dollars in the general administrative expenses appropriation or $26,000. Because of the relative stability of the staff there is little opportunity to offset periodic increases through turnover. Ninety percent of general administrative funds are either personal services or benefits and there is little or no latitude to compensate for personal services increases in other objects. Out of the $26,000 cost, approximately $6,000 can be absorbed necessitating an estimate of $19,647 for the remainder.

Program of work.—The estimate is for executive direction and general administrative services at the Washington headquarters and regional office. Executive direction is provided by the Director, a Deputy Director and Associate Director at Washington and a regional director at each regional office. Executive direction consists of overall management of the Bureau including program coordination and decisionmaking for all organizational units and functions of the Bureau and a safety program. General administration is provided by an Office of the Assistant Director, Administration and Engineering and five staff and service divisions in Washington and an administrative officer and staff at each regional office. Administrative services consist of inspection of field offices; development, presentation and execution of budgets, including administration

of budgetary limitations and ceilings; administration of equal opportunity under civil rights laws and executive orders; making all payments and collecting all amounts due; maintaining payroll, retirement and leave records; maintaining accounts for control of funds and recording assets, liabilities and income and expense; preparing financial reports; recruiting, training, placing, classifying and servicing employees; developing ADP systems and maintaining administrative and other manuals for Bureau guidance; forms and reports control; organization and staffing management; internal audit; centralized mail, filing and communication services; procurement of supplies, equipment and services; contracting for construction; and control of, utilization and disposition of property. In addition, the Division of Engineering and Job Corps functions are under the Assstant Director, Administration and Engineering; however, the financing of these two functions are not included in the general administrative services program. Administration of Job Corps includes planning and programing of actual operations and general management and supervision of the program.

The 1967 estimate of $1,564,000 will provide executive direction, a safety program, and general administrative services to the programs financed by the "Management and investigations of resources, construction and migratory bird conservation account" (annual definite) appropriations totaling $46,473,000. This is a ratio of 3.4 percent. Executive direction and general administrative services for programs financed by permanent indefinite appropriations, appropriation transfers and advances and reimbursements are provided for by these funds on the basis of predetermined cost or assessment ratios. These ratios are 4.3 percent in the case of funds that are available primarily for salaries and expenses and 0.3 percent of funds that are available for other purposes such as land acquisition and payments to States. The total estimate for executive direction and administrative services from these sources in 1967 is $486,000 which added to the $1,564,000 estimate for the "General administrative expenses" appropriation makes a total estimate of $2,050,000. A summary table comparing the total 1967 estimate with 1966 follows:

[In thousands]

Source of funds	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
1. General administrative expenses appropriation	$1,512	$1,564	$52
2. Financing from permanent indefinite funds, transfer appropriations and advances and reimbursements	469	486	17
Total, general administrative services program	1,981	2,050	69

Following is a table showing the specific sources and details of computation of the 1967 estimate of $486,000 in supplementary financing for general administrative services:

Financing from permanent indefinite funds, transfer appropriations and advances and reimbursements, 1967

[In thousands]

Appropriation or fund	Total available	Assessable at 4.3 percent	Assessable at 0.3 percent	Total assessment
Appalachian region fish and wildlife restoration	$1,350	$150	$1,200	$10.1
Migratory bird conservation account (permanent indefinite)	5,000	1,360	3,640	69.3
Federal aid in fish restoration and management	6,500	674	5,826	46.5
Federal aid in wildlife restoration	17,000	1,092	15,908	94.7
National wildlife refuge fund	1,747	1,747	----------	75.1
Bureau of Outdoor Recreation	1,514	100	1,414	8.5
Bureau of Reclamation:				
General investigations	425	425	----------	18.3
Construction and rehabilitation	344	344	----------	14.8
Fish and wildlife facilities	1,300	392	908	19.6
Corps of Engineers:				
General investigations	441	441	----------	19.0
Construction	550	550	----------	23.7
Advances and reimbursements	2,000	2,000	----------	86.4
Other	1,025	----------	----------	----------
Total	39,196	9,275	28,896	486.0

The total estimate for executive direction and general administrative services is broken down by organizational units, as follows:

	1966		1967		Increase	
	Positions	Funds	Positions	Funds	Positions	Funds
Departmental:						
Office of the Director	7	$129,000	7	$133,000	----------	$4,000
Office of Assistant Director, Administration	2	37,000	3	55,000	1	18,000
Division of Budget and Finance	16	163,000	16	167,000	----------	4,000
Division of Internal Audit	3	40,000	3	41,000	----------	1,000
Division of Management Analysis	6	70,000	6	71,000	----------	1,000
Division of Personnel Management	10	121,000	10	124,000	----------	3,000
Division of Property Management	15	99,000	15	101,000	----------	2,000
Subtotal, departmental	59	659,000	60	692,000	1	33,000
Regional offices:						
Region 1: Portland, Oreg	19	275,000	19	282,000	----------	7,000
Region 2: Albuquerque, N. Mex	32	272,000	32	280,000	----------	8,000
Region 3: Minneapolis, Minn	32	275,000	32	284,000	----------	9,000
Region 4: Atlanta, Ga	32	283,000	32	290,000	----------	7,000
Region 5: Boston, Mass	23	217,000	23	222,000	----------	5,000
Subtotal, regional offices	138	1,322,000	138	1,358,000	----------	36,000
Total	197	1,981,000	198	2,050,000	1	69,000

Examples of Recent Accomplishments

Funds for a separate administrative services organization for the Bureau were first appropriated in 1959 following a reorganization under the Fish and Wildlife Act of 1956. Total funds and positions, exclusive of opportunities program—OEO, of the Bureau in relation to funds and positions available for executive direction and general administrative services in 1959 and 1965 to 1967 follow:

[Dollars in thousands]

	1959		1965		1966 [1]		1967 [1]	
	Positions	Funds	Positions	Funds	Positions	Funds	Positions	Funds
Total Bureau program	2,571	$52,409	3,664	$94,367	4,066	$104,657	4,163	$87,273
Administrative program	161	$1,261	195	$1,886	197	$1,981	198	$2,050
Administrative (percent)	6.25	2.41	5.32	2.00	4.85	1.89	4.76	2.35

[1] Estimate.

In 1959 the executive direction and general administrative services staff numbered 161 out of total Bureau permanent employment of 2,571 or 6.25 percent. The ratio was 5.32 and 4.85 percent in 1965 and 1966 and is estimated at 4.76 percent in 1967, well below 1959. The funds ratio of 2.41 percent in 1959 was 2 percent in 1965 and is estimated at 2.35 percent in 1967.

The following table shows actual statistics on administrative work production units for 1964 and 1965. The reductions in personnel and related budget and finance workload reflect the immediate effects of ceilings on average salary and total employment.

Administrative workload

	1964	1965	Percent increase or decrease (−)
Personnel management:			
Average total employees [1]	4,400	4,178	−5
Major personnel actions	4,140	4,596	11
Short-form appointments	3,223	1,854	−43
Classification actions	1,670	1,428	−15
Wage board surveys	393	368	−6
Property management:			
Contracts awarded	593	485	−18
Purchase orders issued [2]	7,159	8,336	16
Requisitions processed	8,925	9,337	5
Major property cards	13,262	13,963	5
Disposal actions	5,191	4,512	−13
Inventories verified	505	535	6
Duplicating work	28,937	28,572	−1
Budget and finance:			
Payments processed	108,480	106,063	−2
Collections processed	8,365	8,633	3
Items posted in accounts	509,357	518,681	2
Employees payrolled [1]	4,426	4,235	−4
General: Station examinations	75	53	−29

[1] Average.
[2] Includes imprest fund transactions.

Itemization of estimate

	Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
Program and financing:				
Total obligations	$1,452,280	$1,512,712	$1,564,000	$51,288
Unobligated balance lapsing	8,113			
Comparative transfer from "Salaries and expenses," Office of Commissioner of Fish and Wildlife	−17,393	−20,353		20,353
Appropriation	1,443,000	1,492,359	1,564,000	71,641
Obligations by objects:				
11 Personnel compensation	1,225,665	1,276,000	1,324,000	48,000
12 Personnel benefits	90,869	98,000	104,000	6,000
21 Travel and transportation of persons	34,959	35,000	35,000	
22 Transportation of things	1,747	2,000		−2,000
23 Rent, communications, and utilities	23,961	24,000	24,000	
24 Printing and reproduction	4,427	5,000	4,000	−1,000
25 Other services	34,700	14,000	14,000	
Services of other agencies	40,900	40,000	41,000	1,000
26 Supplies and materials	12,042	13,712	13,000	−712
31 Equipment	12,200	5,000	5,000	
Total costs, funded	1,481,470	1,512,712	1,564,000	51,288
94 Change in selected resources	−29,190			
99 Total obligations	1,452,280	1,512,712	1,564,000	51,288

INCREASE IN GENERAL ADMINISTRATIVE PROGRAM

Chairman HAYDEN. Would you please discuss the general administrative program increase which you request?

Mr. GOTTSCHALK. Here I would like to call on Assistant Director Benjamin.

Mr. BENJAMIN. The increase requested in this program will provide the additional funds needed to cover pay increase costs. Compared to the appropriation for fiscal year 1966, there is $13,641 involved. In addition, we shall need $19,647 to cover the periodic step increases that are beyond our capability to absorb.

I should like to point out that this amount pertains to the increased cost of running the current program but is not an expansion of the program per se. The GAE program is characterized with being about 90 percent personal services and career-oriented stability in turnover. As a result the periodic step increases to which the employees are entitled to by law are difficult to absorb either by employee turnover or in the remaining 10 percent of the support expenses of the program. We have absorbed about $6,500 of this requirement which is reflected in the estimate.

Also, we are requesting $18,000 to cover the expense of a staff assistant who will aid our program under the newly established government-wide system of planning, programing, and budgeting.

These constitute the need for the increase.

MIGRATORY BIRD CONSERVATION ACCOUNT

1967 BUDGET REQUEST

Chairman HAYDEN. For fiscal year 1967 you propose an appropriation of $6 million for the "Migratory bird conservation account." This amount together with $5 million expected to be received from hunting stamp sales will provide for acquisition of an estimated 180,000 acres of wetlands. The justification for this estimate will be placed in the record.

(The justification follows:)

The purpose and objectives of the program funded from the "Migratory bird conservation account" are to provide for acquisition of habitat to maintain the national migratory waterfowl resource pursuant to the Migratory Bird Conservation Act (16 U.S.C. 715–715s), and the Migratory Bird Hunting Stamp Act as amended in 1958 (16 U.S.C. 718d). Basic funding is from money available from the sale of migratory bird hunting stamps (16 U.S.C. 718). Hunting stamp receipts were inadequate to enable acquisition of lands at an adequate rate to preserve enough of the habitat that is being rapidly destroyed. Therefore, Congress approved the Wetlands Loan Act of October 4, 1961 (16 U.S.C. 715k–3–5), which authorized appropriation of up to $105 million over a 7-year period (fiscal years 1962–68) as an advance, to be repaid with 75 percent of annual hunting stamp receipts commencing in fiscal year 1969.

The appropriation for 1963 initiated the accelerated program with $7 million, and with the $3,418,638 available from the sale of hunting stamps, provided a total of $10,418,638. In 1964 funds totaled $14,559,564 ($10 million advance and $4,559,564 from the sale of hunting stamps). In 1965 funds totaled $12,622,688

($8 million advance and $4,622,688 from the sale of hunting stamps). These funds were used to acquire the following lands:

	1963 acres	1964 acres	1965 acres
Refuges:			
Fee title	63,253	49,151	56,446
Leases	13,366	20,546	17,844
Refuge total	76,619	69,697	74,290
Waterfowl production areas:			
Fee title	12,554	16,668	27,089
Easements	12,774	71,575	177,796
Leases	1,455	2,590	3,371
Waterfowl production areas total	26,783	90,833	208,256
Fiscal year totals:			
Fee title	75,807	65,819	83,535
Easements	12,774	71,575	177,796
Leases	14,821	23,136	21,215
U.S. totals	103,402	160,530	282,546

The program for 1966, consisting of an appropriation of $7,500,000 and $5 million from hunting stamp sales, will provide a total of $12,500,000 for acquisition of lands. It is planned to initiate an estimated five new refuge areas and acquire a number of small waterfowl production areas totaling an estimated 219,000 acres, of which 200,000 acres will be in breeding habitat, 6,000 acres will be in migration areas, and 13,000 acres will be in wintering habitat.

In 1967, emphasis will continue on the reduction of the backlog of $30 million in Migratory Bird Conservation Commission approved refuge projects. Acquition of waterfowl production area lands will also be emphasized. With an appropriation of $6 million and $5 million from hunting stamp sales, it is estimated that 180,000 acres will be acquired as follows: 37,000 acres of refuge fee lands; 30,000 acres of waterfowl production areas fee lands; and 113,000 acres placed under waterfowl production areas easements.

Migratory bird conservation account

Appropriation, 1965 (total available)	$8,000,000
Appropriation, 1966 (total available)	7,500,000

SUMMARY OF INCREASES AND DECREASES, 1967

Acquisition of refuges and other areas: To provide for continuation of the wetlands acquisition program (net decrease)	—1,500,000
Budget estimate, 1967	6,000,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966		
		Appropriation	Transfers	Amount available
Acquisition of refuges and other areas	$8,000,000	$7,500,000	----------	$7,500,000

Analysis by activities (direct appropriation)

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (—), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Acquisition of refuges and other areas	$8,000,000	$7,500,000	$6,000,000	—$1,500,000	+$22,000	—$1,522,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

Migratory bird conservation account—Analysis by activities (total funds)

Activity and appropriation	Amount available, 1965	Amount available, 1966	Estimate, 1967	Increase (+) or decrease (−)
Acquisition of refuges and other areas:				
Current definite	$8,000,000	$7,500,000	$6,000,000	−$1,500,000
Permanent indefinite	4,622,688	5,000,000	5,000,000	
Total	12,622,688	12,500,000	11,000,000	−1,500,000

Advances to migratory bird conservation account, 1967

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost [1]	Program
Acquisition of refuges and other areas	$8,000,000	$7,500,000	$6,000,000	−$1,500,000	+$22,000	−$1,522,000

[1] To provide for increased pay costs for fiscal year 1966 positions.

The estimate for 1967 is $6 million, a decrease of $1,500,000 under 1966.

The purpose and long-range objective of this program is to accelerate the acquisition of wetlands for the preservation of waterfowl habitat under the provisions of the act of October 4, 1961 (16 U.S.C. 715k–3, –4, –5), which "authorized to be appropriated for the 7-year period beginning with fiscal year 1962 not to exceed $105 million." Appropriations under this act now total $32,500,000: 1963, $7 million; 1964, $10 million; 1965, $8 million; and 1966, $7,500,000. With the 1967 estimate of $6 million, there is a remainder of $66,500,000 that is authorized to be appropriated.

Need for advance.—The advance of $6 million is needed to acquire as much as possible of the goals set by the Bureau in the acquisition of vitally needed waterfowl habitat, much of which may be destroyed by drainage or development unless immediate action is taken to place it in Federal ownership. There now is a backlog of projects approved by the Migratory Bird Conservation Commission totaling $30 million. Included are charts showing these goals and accomplishments for the refuge and waterfowl production area programs. Also included are maps of national migratory bird areas and waterfowl production areas, showing where lands have been acquired under the Migratory Bird Conservation Act and the Hunting Stamp Act, as well as under other acts or established by transfer or by reservation of public lands.

This advance, combined with duck stamp receipts, will enable acquisition of 37,000 acres of refuge fee lands, and 143,000 acres of waterfowl production area lands, of which 30,000 acres will be fee acquisitions and 113,000 acres will be placed under easement. The total amount available will be used for payment of the purchase price for land, direct land acquisition costs, and salaries and expenses for the appraisal of 250,000 acres, negotiations with 3,000 owners, and boundary surveys of 500 ownerships. Location and ascertainment work will also be carried on to provide basic data on 40,000 acres of refuge lands proposed for acquisition in fiscal year 1968.

Program of work.—The items making up the $6 million estimate are as follows:

Realty costs, $800,000.—For location, ascertainment, and appraisal of areas and presentation of proposals to the Migratory Bird Conservation Commission; and, following approval of the Commission, negotiation, title verification, title clearance, and other expenses incident to the vesting of title to areas in the United States. These costs also include acquisition of fee acres and easements under the waterfowl production area program.

Engineering costs, $500,000.—For all engineering costs incident to the preparation of preliminary development plans, outline specifications and estimates and topographic maps, engineering studies and water rights investigations, and other expenses incident to preparing cases for presentation to the Migratory Bird

Conservation Commission and, following approval by the Commission, surveys incident to the vesting of title in the United States. These costs also include engineering costs in the waterfowl production area program.

Acquisition and rental of areas, $4,700,000.—For costs of acquisition or rental of areas, including water rights, rights-of-way, easements, relocation expenses of occupants, and other direct costs of acquiring the areas or rights therein.

The estimate of $6 million will be merged with and supplement the $5 million migratory bird hunting stamps (16 U.S.C. 718d) and will provide a total of $11 million for 1967. This amount will provide for the acquisition of an estimated 180,000 acres.

LONG-RANGE GOALS

History.—In the early years of this program, it was necessary to make a complete survey of wet lands needed and available for future acquisition, and to spend many man-years in accumulating habitat data, mapping, contacting and working with State agencies and other Government agencies to set up the Bureau program. The Bureau worked closely with the four flyway councils in determining what areas should be given priority attention, and which projects should be acquired with Federal funds. It was estimated that as of June 30, 1961, 3,500,000 acres of land and water had been acquired, contracted for, or reserved in Federal ownership for waterfowl use, and that an additional 4,500,000 acres would be acquired by the Federal Government. Included in this total are 1,750,000 acres of waterfowl production areas in the prairie States of Minnesota, Nebraska, North Dakota, and South Dakota (600,000 acres to be purchased in fee, and 1,150,000 acres to be preserved through easements); and 2,750,000 acres for national wildlife refuges, 780,000 acres of which are planned for acquisition as part of water resources projects under the Fish and Wildlife Coordination Act, and 1,970,000 acres are to be acquired with revenue from the sale of hunting stamps.

ACCELERATED PROGRAM

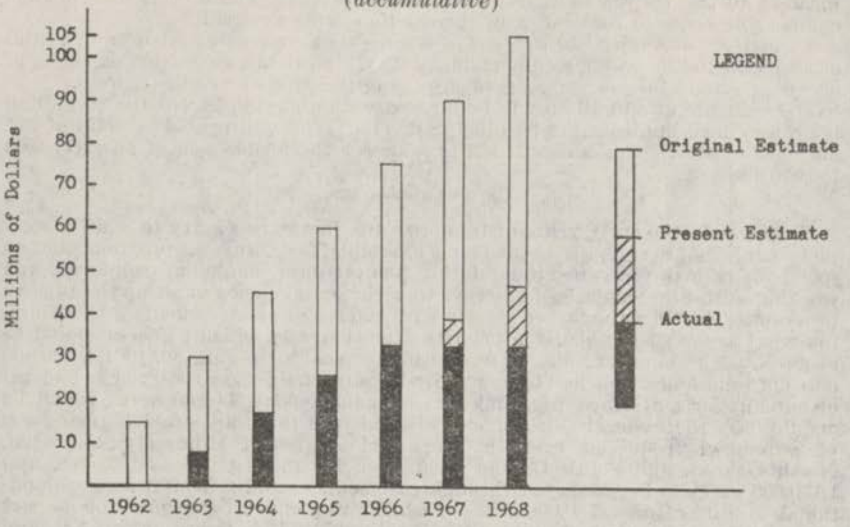
Goals.—Initial goals for the 7-year accelerated program 1962–68 were set at 2,500,000 acres; however, because of reduced appropriations and increasing land prices, these estimates have been reduced to 1,100,000 acres, comprising 800,000 acres in waterfowl production areas, and 300,000 acres for the national wildlife refuges.

Problems.—The cost of lands being acquired has steadily increased, partly because wetlands once considered wastelands have in recent years become valuable for conversion to uses other than wildlife. According to Department of Agriculture statistics, the national average of farm prices has increased at an average rate of 5 percent per year over the last 5 years. Our experience shows some of the land types that are important waterfowl habitat are increasing in value at an even greater rate.

One of the problems which prevented the Bureau's realizing its full land acquisition goals has been the removal of land from tax rolls. The act of August 30, 1964 (16 U.S.C. 715s), which is effective beginning fiscal year 1966, is expected to overcome much of this opposition and result in accelerating the purchase program. This act provides for annual payments to counties in which acquired refuge lands are located three-fourths of 1 percent of the cost of those lands. However, if the present formula of 25 percent of net receipts from a refuge results in a greater sum, the county would be paid the larger amount. On a nationwide basis, the total payments under the new law are estimated to approximate the income the counties would receive if the lands were in private ownership.

Funding.—The original goal (to acquire 2,500,000 acres in the 1962–68 loan-fund period) was established upon future appropriations at the rate of $15 million each year for 7 years. Advances to the account to date total $32,500,000. With the 1967 estimate of $6 million, there is a remainder of $66,500,000 that is authorized to be appropriated. The chart below compares on a cumulative basis the amounts of actual appropriations to the original estimates in accordance with the $105 million authorization.

Comparison—Actual appropriations to original estimates—Loan fund (accumulative)



Accomplishments.—For the period 1962–65, 187,765 acres of land have been acquired, or are in process of acquisition, for the refuge program. The 1967 program will emphasize reduction of the backlog of $30 million in Migratory Bird Conservation Commission approved projects in order to acquire the lands within Migratory Bird Conservation Commission approved costs before prices rise further. The Migratory Bird Conservation Commission meets as necessary to expedite acquisition.

For the period 1962–65, 335,105 acres of land have been acquired for the waterfowl production area program, of which 267,112 acres are under easement. In fiscal year 1965, 177,796 acres were placed under easement as compared to 89,316 acres 1962–64.

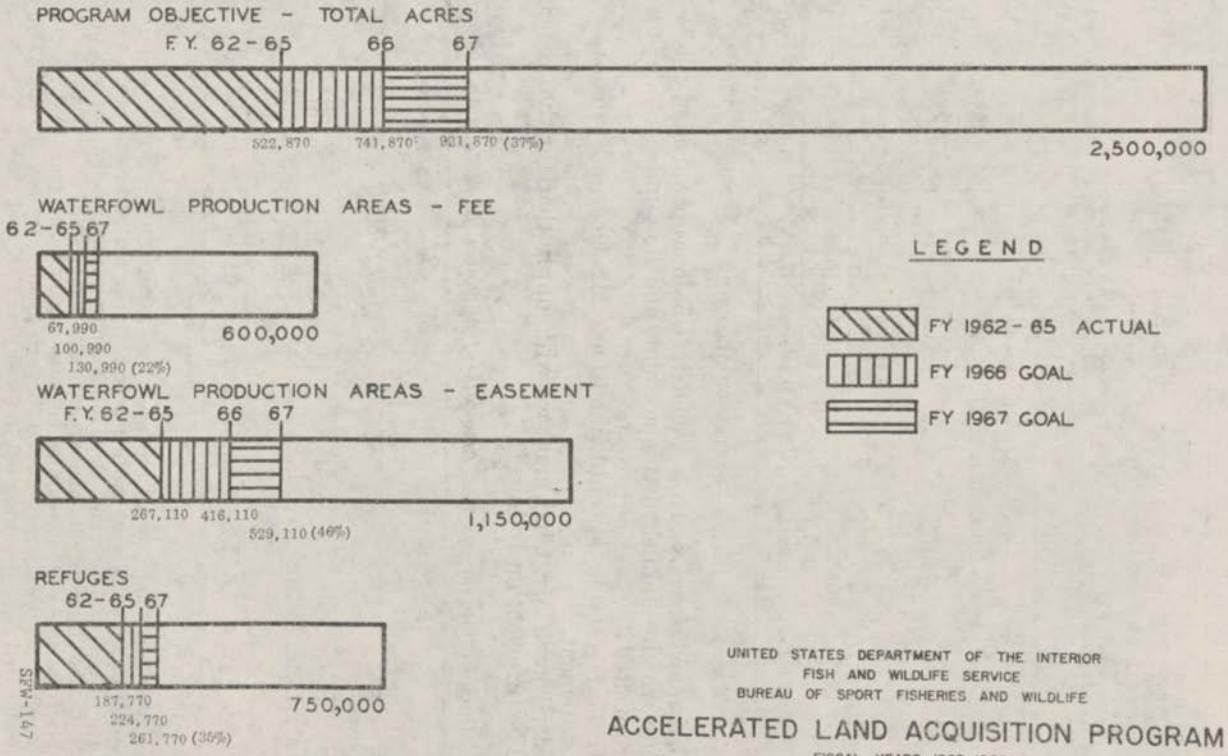
FUTURE PROGRAM

Shown below is a tabulation of accomplishments through fiscal year 1965 and estimated accomplishments through 1967 and future years. Acquisitions in fiscal year 1962 were accomplished with the receipts from hunting stamps. The loan fund appropriation started with fiscal year 1963. The original acquisition goal of 2,500,000 acres cannot be accomplished in the time left under present authority, which expires June 30, 1968. It is estimated that with available funds at the 1966 level, it would take an additional 8 years beyond fiscal year 1968 to accomplish acquisition of the remaining waterfowl habitat of the waterfowl production area preservation program, and acquire 750,000 acres of the estimated 1,970,000 acres for migratory waterfowl refuges.

Estimates of accomplishments, loan fund period 1962–68

	Refuges, fee acres	Waterfowl production areas			Total all
		Fee acres	Easements	Total	
Year:					
1962 to 1965	187,770	67,990	267,110	335,110	522,880
1966 (estimate)	37,000	33,000	149,000	182,000	219,000
1967 (estimate)	37,000	30,000	113,000	143,000	180,000
1968 (future)	40,000	27,000	113,000	140,000	180,000
Total, 1962 to 1968	301,770	157,990	642,110	800,110	1,101,880
Goals of accelerated 7-year program	750,000	600,000	1,150,000	1,750,000	2,500,000
Difference between goals and accomplishment (estimate)	448,230	442,010	507,890	949,890	1,398,120

A chart illustrating accomplishments and goals of the accelerated land acquisition program follows:



UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

ACCELERATED LAND ACQUISITION PROGRAM

FISCAL YEARS 1962-1968

GOAL AND ACCOMPLISHMENT

Itemization of estimate

	Actual 1965	Estimate 1966	Estimate 1967	Increase or decrease (−)
Program and financing:				
Total obligations	$14,688,498	$13,500,000	$11,000,000	−$2,500,000
Unobligated balance brought forward	−3,638,141	−1,572,331	−572,331	1,000,000
Unobligated balance carried forward	1,572,331	572,331	572,331	
Appropriation:				
Current definite	8,000,000	7,500,000	6,000,000	−1,500,000
Permanent indefinite	4,622,688	5,000,000	5,000,000	
Obligations by objects:				
11 Personnel compensation	1,642,058	1,887,000	1,849,000	−38,000
12 Personnel benefits	217,228	139,000	138,000	−1,000
21 Travel and transportation of persons	228,695	229,000	200,000	−29,000
22 Transportation of things	3,998	10,000	6,000	−4,000
23 Rent, communications, and utilities	75,553	78,000	76,000	−2,000
24 Printing and reproduction	125,299	129,000	127,000	−2,000
25 Other services	198,223	198,000	198,000	
Services of other agencies	30,156	33,000	30,000	−3,000
26 Supplies and materials	36,027	41,000	39,000	−2,000
31 Equipment	13,806	21,000	16,000	−5,000
32 Lands and structures	8,712,480	10,710,000	8,306,000	−2,404,000
41 Grants, subsidies, and contributions	10,791	25,000	15,000	−10,000
Total costs, funded	11,204,314	13,500,000	11,000,000	−2,500,000
94 Change in selected resources	3,484,184			
Total obligations	14,688,498	13,500,000	11,000,000	−2,500,000

STATUS OF ACCOUNT

Chairman HAYDEN. How much has been appropriated under the statute which established this account, and how much remains to be appropriated?

Mr. GOTTSCHALK. I would like to ask Mr. George Spoden to make this statement.

Mr. SPODEN. Mr. Chairman, we will supply that for the record.

(The information follows:)

Duck stamp income and amounts of advances from 1962 to 1967

	Duck stamp income	Advance	Total
Fiscal years:			
1962	$4,094,874		$4,094,874
1963	3,418,638	$7,000,000	10,418,638
1964	4,559,564	10,000,000	14,559,564
1965	4,622,688	8,000,000	12,622,688
1966	[1] 5,000,000	7,500,000	[1] 12,500,000
1967	[1] 5,000,000	[1] 6,000,000	[1] 11,000,000
Totals	26,695,764	38,500,000	65,195,764

[1] Estimated.

The Wetlands Loan Act of October 4, 1961 (16 U.S.C. 715k–3–5) authorizes appropriation of up to $105 million over a 7-year period (fiscal years 1962–68) as an advance, and provides that funds appropriated under the act shall be repaid to the Treasury in annual amounts comprising 75 percent of annual receipts from sale of duck stamps commencing in fiscal year 1969. A total of $32½ million has been appropriated through fiscal year 1966, leaving $72½ million authorized to be appropriated in fiscal year 1967 and 1968.

EXTENSION OF LOAN AUTHORITY

Chairman HAYDEN. Would you please explain your plans concerning acquisition of these wet lands under the act inasmuch as there remains only 1 more year for appropriation of funds?

Mr. GOTTSCHALK. Mr. Chairman, we are going to come to Congress with a request for an extension of the program. It was originally authorized for a period of 7 years.

We have legislation pending in the Bureau of the Budget at the present time for an extension of the period of time to 15 years. We would ask for an additional 8 years in which to accomplish the objectives originally set out. We would not ask for an increase in the dollar authorization but only for an increase in the time.

ACCOMPLISHMENTS IN WETLAND AREAS

Chairman HAYDEN. A couple of years ago Congress enacted the law which was to help you because of difficulties experienced in acquiring lands which were removed from tax rolls.

REVENUE SHARING ACT

Has this act been effective in accomplishing its purpose?

Mr. GOTTSCHALK. Yes, it has. As a matter of fact, without this authorization we would have been hard put to buy any areas in the States of North and South Dakota and to some extent Minnesota.

We have been able to accelerate our program this past year. In 1965 we acquired waterfowl production areas under easement at a rate which equalled everything we had done in the preceding program. We got approximately 178,000 acres in fiscal 1965 under easement, in addition to which we acquired about 83,500 acres in fee.

Without the Revenue Sharing Act, I don't think this would have been possible. This is not an act that is going to remove all the obstacles to the accomplishment of this program. Those who object, or are our opponents, will find some other objections, obviously, but it has certainly been a great help and our progress to date would not have been what it is if we had not had this program.

APPALACHIAN REGION FISH AND WILDLIFE RESTORATION PROJECTS (SEC. 205, APPALACHIAN REGIONAL DEVELOPMENT ACT OF 1965)

1967 BUDGET REQUEST

Chairman HAYDEN. To finance your activities under section 205 of the Appalachian Regional Development Act of 1965 you request an appropriation of $1,350,000. The statements in justification of this request will be included in the record.

(The justification follows:)

HIGHLIGHT STATEMENT

The purpose and long-range objective of the program is to assist the States in recovering from the damages caused by strip mine operations where the land is exhausted of its mineral resources and where mining operations have been abandoned. The principal value remaining in such land is its ability to support wild game and a place for people to hunt. One of the principal adverse effects of such lands in their present condition is the destruction of fish life in the streams of the region caused by acid formation in the abandoned strip mine areas. The restoration program will thus improve fishing and hunting and help the local business establishments which serve these sports; i.e., sporting goods and hardware stores, service stations, motels, etc. The program will be accomplished by

restoring vegetation, obliterating strip mine scars, diminishing the formation of acid, and beautifying the landscape. Impoundments will be constructed to provide fishing waters and meet a pressing need for this type of recreation in the area. These works will enhance hunting and other wildlife values as well.

A supplemental appropriation of $1,350,000 late in fiscal year 1965 initiated the program.

The 1967 estimate of $1,350,000 will continue the work by providing funds for planning and apportionment to the States for strip mine restoration.

APPLICATION REGIONAL DEVELOPMENT ACT OF 1965)

Appropriation, 1965 (total available)	$1,350,000
Appropriation, 1966 (total available)	

SUMMARY OF INCREASES AND DECREASES, 1967

To provide for continued fish and wildlife restoration project: Net increase, 1967	+1,350,000
Total	1,350,000
Budget estimate, 1967	1,350,000

Analysis by activities

Activity	Fiscal year 1965 amount available	Fiscal year 1966			
		Total appropriation	Pay cost Supplemental	Transfers	Amount available
Payments to States	$1,000,000				
Planning	200,000				
Administration	150,000				
Total	1,350,000				

Analysis by activities

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
Payments to States	$1,000,000		$1,000,000	$1,000,000		$1,000,000
Planning	200,000		200,000	200,000		200,000
Administration	150,000		150,000	150,000		150,000
Total	1,350,000		1,350,000	1,350,000		1,350,000

Justification

Activity	Fiscal year 1965, amount available	Fiscal year 1966, amount available	Fiscal year 1967, estimate	Increase (+) or decrease (−), 1967 compared with 1966		
				Total	Pay cost	Program
Payments to States	$1,000,000		$1,000,000	$1,000,000		+$1,000,000
Planning	200,000		200,000	+200,000		+200,000
Administration	150,000		150,000	+150,000		+150,000
Total	1,350,000		1,350,000	1,350,000		1,350,000

The estimate of $1,350,000 for 1967 is an increase of $1,350,000 over 1966. The increase consists of:

(1) An increase of $1,350,000 for fish and wildlife restoration projects under section 205 of the Appalachian Regional Development Act of 1965 (Public Law 89–4).

One of the few natural values retained by strip mine areas in Appalachia is their ability to support populations of wild game. Consequently, the program carried out by the fish and game agencies of Appalachian States to obliterate strip mine scars and restore vegetation, can result in significant public benefits from the standpoint of increased hunting opportunities, with corollary benefits of controlling soil erosion, diminishing the formation of acid, and beautifying the landscape.

The fish and game agencies also have much to contribute to the objectives of the Appalachian program through the provision of increased fishing opportunities in the region. This can be accomplished by the construction of impoundments primarily to provide fishing waters. With many of its streams uninhabitable by fish because of acid content in the water and with a relative paucity of natural lakes and impoundments, the Appalachian region is under supplied with fishing as well as hunting opportunities.

For fiscal year 1967, $1,350,000 is requested for use by the Bureau of Sport Fisheries and Wildlife and the 12 States included in the Appalachian region. Of this amount, $150,000 will be used for administration and $200,000 for planning. The remainder, $1 million, will be apportioned to the States for the development of strip mine restoration through earth movement and the construction of fishing lakes in the vicinity of strip mine areas, and, in the process, provide outstanding recreational resources through enhancement of fishing opportunities. The exact amount of the apportionment to the States will be dependent upon results of planning.

This would be primarily a State program, directed and managed by State fish and game agencies. State financial resources equal to one-third of the Federal contribution would be invested from State funds in all phases of the program. The role of the Bureau of Sport Fisheries and Wildlife would be that of an adviser and consultant, with general responsibilities for assuring that the projects and expenditures undertaken by the States would contribute substantially to, and comply with, the Appalachian Regional Development Act of 1965.

For fiscal year 1967, $200,000 is requested for project planning. These funds will be used to cover 100 percent of the cost of planning projects for surveys and studies to determine the feasibility of areas selected for strip mine reclamation projects. These funds will be allocated to the various States on the basis of need. Cost sharing by the States will not be required for the planning activity.

The funds requested for fiscal year 1967 include $150,000 to cover the administrative cost of the program. These funds will be used for the salary and expenses of 10 technical personnel such as biologists, engineers, soil scientists, etc., who will be available to assist the States in planning, developing, and executing projects and to carefully evaluate accomplishments from the standpoint of costs and benefits to the program and the Appalachian region, as well as benefits to the sportsmen in the form of additional hunting and fishing areas.

Itemization of estimate

		Actual, 1965	Estimate, 1966	Estimate, 1967	Increase or decrease (−)
Program and financing: Total obligation			$1,350,000	$1,350,000	
Appropriation		$1,350,000		1,350,000	$1,350,000
Obligations by objects:					
11.0	Personnel compensation		64,000	77,000	13,000
12.0	Personnel benefits		5,000	6,000	1,000
21.0	Travel and transportation of persons		15,000	20,000	5,000
22.0	Transportation of things		2,000	2,000	
23.0	Rent, communications, and utilities		4,000	6,000	2,000
24.0	Printing and reproduction			4,000	4,000
25.1	Other services		14,000	13,000	−1,000
25.2	Services of other agencies		34,000	12,000	−22,000
26.0	Supplies and materials		5,000	5,000	
31.0	Equipment		7,000	5,000	−2,000
41.0	Grants, subsidies, and contributions		600,000	1,200,000	600,000
	Total costs, funded		750,000	1,350,000	600,000
94.0	Change in selected resources		600,000		−600,000
99.0	Total obligations		1,350,000	1,350,000	

New Appalachia Program

Chairman Hayden. This is the first time that this item has appeared in the regular budget, although in the second supplemental act of 1965 you did receive an appropriation of $1,350,000. Would you please explain briefly your goals under this provision of the act?

Mr. McBroom. Mr. Chairman, since this is the first time we have been before this committee on this matter I might briefly tell you some of our goals and activities and reasons why we are in this program.

The abandoned strip mines in the Appalachian country are very difficult to do anything about. They were exploited during the war period when there was a great need for coal in this Nation, but they have very little value now.

One of the greatest potential values is for hunting and for the improvement of fishing. They have little potential value for agriculture or even for forestry. So we entered this program with the idea of working with the State fish and game departments to cure some of the problems of Appalachia by restoring some of these strip mines and making them assets for public hunting and fishing.

Our purpose there is to regrade some of the strip scars so as to reduce erosion and also to construct fishing lakes under authority of the Dingell-Johnson program. We feel that increased tourism and recreation is one of the greatest possibilities we can expect from the Applachian program. It is a beautiful country, and it is a fairly short drive from the great metropolitan areas of the Northeast.

Great Potential in Appalachia

The problem is that there is not much for the potential tourists to do except look at the scenery after they get there. We would hope to provide places for people to fish and hunt so that they could enjoy these activities after they arrive in Appalachia for a vacation.

As you know, one of the principal goals of the Appalachian Regional Commission is the construction of new highways so the people from the Northeast and other places can get there, and we hope to be able to give them something to do when they arrive.

We have a headquarters at Cincinnati, Ohio, to operate our part of the Appalachian program. We have contacted all of the Appalachian States with respect to strip mine restoration projects. There are three in Ohio which have been approved by the Appalachian Regional Commission. We are now negotiating with Pennsylvania and Tennessee for other projects.

Reluctance To Enter Into Appalachian Program

I might say, Mr. Chairman, that the State fish and game departments have been somewhat reluctant to enter into the Appalachian program inasmuch as they have to pay part of the costs, normally 25 percent. With their limited funds they have been hesitant especially since the Appalachian Act requires that only public lands be treated and that the Appropriations Act prevents the acquisition of land. Very few public lands in Appalachia are under the control of the State fish and game departments.

Nevertheless, we hope to find places where we can be effective for the Appalachian program.

I would like to call the attention of the committee, if I may, to the printed justifications on page 153—the last sentence on the page—which indicates that cost sharing by the States will not be required for the planning activity. We would be hopeful of getting specific approval of this from the committee in order to permit us to proceed in a more orderly fashion. The State fish and game departments are reluctant to invest their own funds in a planning activity that is pretty speculative, and we would hope we could get the program going a good deal better with the kind of program where we can bear the cost of all planning activity.

Neither the Appalachian Authorization Act nor the Appalachian Appropriation Act requires State matching funds for planning purposes.

However, the related Dingell-Johnson and Pittman-Robertson Acts limit the Federal contribution to all types of programs to 75 percent of the total cost.

Mr. Chairman, we hope to be able to do a good job in Appalachia which is a country that really needs help, and we are glad to be a part of it.

PROGRAM MOVING ALONG

Chairman HAYDEN. Will you review the results of your activity made possible by the prior appropriation?

Mr. MCBROOM. By the prior appropriation which became available last summer, we have set up a staff at Cincinnati. We also have approval by the Appalachian Regional Commission of three projects in Ohio. When the final engineering data has been achieved and we are able to go forward on that, we expect that those projects will result in the obligation of approximately half—a little over half—of our appropriation that we now have.

As I say, we are also working on proposed Tennessee and Pennsylvania projects, and as soon as possible we hope to expand it to the other Appalachian States.

Chairman HAYDEN. Does the substantive legislation carry any top amount which is authorized for appropriation?

Mr. MCBROOM. $36,500,000 is the authorization contained in section 205(D) of the Appalachian Act. This includes the activities of the Bureau of Mines and everyone else who is participating. There is no specific ceiling on our own activity. We are very much smaller in this picture than the Bureau of Mines.

Chairman HAYDEN. Is there a time limit beyond which you are not authorized to carry on this restoration work?

Mr. MCBROOM. The Appalachian Regional Development Act expires on July 1, 1971.

ESTIMATED APPORTIONMENT BY STATES OF APPALACHIAN AREA REDEVELOPMENT APPROPRIATION

Chairman HAYDEN. Of the $1,350,000 which you request for fiscal year 1967, you indicate that $1 million will be used for payments to States. Would you please advise how much it is expected will be made available to each of the 12 States in the Appalachian region?

Mr. McBroom. I have the distribution of the funds here which I can read now or put in the record, whichever you would prefer, Mr. Chairman.

Chairman Hayden. It may be put in the record.

(The information follows:)

State:	*Fiscal year 1967*
Kentucky	$100,000
Maryland	200,000
Ohio	300,000
Pennsylvania	200,000
Tennessee	200,000
Total	1,000,000

STATES INITIATE AND PERFORM PROJECT WORK

Chairman Hayden. On any agreed-upon programs, who accomplishes the construction work, the State concerned or the Federal Government?

Mr. McBroom. The States, under our Federal aid program which we have run for 25 years, have the initative for choosing projects and has overall responsibility for constructing the projects.

ADMINISTRATIVE PROVISIONS

Chairman Hayden. I will place in the record your statement concerning the required administrative provisions which include program language to separate those for the Bureau of Sports Fisheries from those for the Bureau of Commercial Fisheries.

(The statement follows:)

SEPARATION OF ADMINISTRATIVE PROVISIONS FOR THE BUREAU OF SPORT FISHERIES AND WILDLIFE FROM THE FISH AND WILDLIFE SERVICE ADMINISTRATIVE PROVISIONS

The proposed language change is to establish separate administrative provisions for the Bureau of Sport Fisheries and Wildlife. The Bureau of Sport Fisheries and Wildlife and the Bureau of Commercial Fisheries administrative provisions were previously included as a part of the Fish and Wildlife Service administrative provisions. Separate administrative provisions for the Bureau of Sport Fisheries and Wildlife will permit setting forth specific provisions for the Bureau, such as purchase of motor vehicles and aircraft, and will facilitate preparation of budget estimates.

Passenger motor vehicles

The Bureau of Sport Fisheries and Wildlife 1967 estimates include a request for the purchase of 123 passenger motor vehicles, 113 of which are for replacement as follows:

	Replacements	Additions	Total requested
Motor vehicles:			
Police-type automobiles	63		63
Standard-type automobiles	31	4	35
Total automobiles	94	4	98
Station wagons	19	6	25
Total	113	10	123

All of the vehicles to be replaced will meet the age and mileage replacement standards, or both. Many will have run over 100,000 miles in hard service. In estimating these requirements, careful consideration has been given to the effective use of the service of interagency motor pools where their location and equipment permit.

Sixty-three police-type automobiles are needed for replacement in the management and enforcement activity for use of U.S. game management agents to effectively carry out the responsibilities of enforcing fish and game laws enacted by the Congress. These special-type vehicles are needed for fast acceleration and sustained high speeds necessary to pursue violators of fish and game laws. In addition, these vehicles provide the heavy duty needed to travel in snow or on ice, to pull out of mud, sand, and deep ruts and to haul cargo and boat trailers. The average mileage for these vehciles is 30,000 miles per year, much of which is on unimproved roads and rough, hazardous terrain.

The four additions of standard-type motor vehicles are two at the recently completed Northern Prairie Research Center at Jamestown, N. Dak., one for the new rare and endangered species program at Patuxent Wildlife Research Station, Laurel, Md., and one for the Division of Realty (land acquisition function) in Minneapolis, Minn. All of the vehicles are either for new programs or necessary because of increasing workload. Since there are no new additions to the fleet authorized for fiscal year 1966 and because of expanding programs, a pressing needs exists. The 31 replacements for fiscal year 1967 are for various Bureau programs and will provide safe and economical transportation in areas not serviced by motor pools.

Of the 25 station wagons requested, 6 are additions to the fleet; 4 are for new wildlife refuges coming under administration in fiscal year 1967 in the States of Colorado, New Mexico, Texas, and Wyoming; 1 for the Pennsylvania cooperative fish unit; and 1 for expanding reservoir research investigations in South Dakota. No new additions were authorized for fiscal year 1966. The 25 station wagons will be used principally by biologists, wildlife refuge managers, and wildlife service operators whose activities require extensive driving, the hauling of personnel, scientific instruments, materials, and field equipment.

General Services Administration standards provide for replacement of passenger motor vehicles every 6 years or 60,000 miles. On an age basis this permits an economical replacement of the entire fleet in 6 years. On a mileage basis, because of Bureau usage, economical replacement is every 2 to 4 years.

The request for the purchase of the 123 motor vehicles will permit maintenance of the Bureau fleet on an economical as well as a safe basis in accordance with replacement standards established by General Services Administration.

Aircraft

The fiscal year 1967 estimates include purchase authority for five new aircraft, all of which are needed for replacement.

The five replacement aircraft are needed as follows: Two for use in waterfowl surveys and refuge management including plant control and seeding of waterfowl feeds. One aircraft will be headquartered at Portland, Oreg., the other at Brigham City, Utah. Three, for use in management and enforcement activities, are to be headquartered at Washington, N.C.; Sebring, Fla.; and Jamestown, N. Dak.

Of the five replacement aircraft, one has been grounded as unsafe for use. Three aircraft are beyond normal replacement age and the cost of replacement or overhaul of wornout engines and other parts would be prohibitive and not justified. One aircraft obtained from military surplus, also beyond replacement age, is not suitable for aerial survey work because of poor ground visibility due to design of the unit.

Because of the Bureau's responsibility in maintaining large isolated land and water areas, it is necessary that reliable aircraft be used to insure the health and safety of Bureau personnel; in addition, the use of reliable aircraft help to cut cost of Bureau operations. No aircraft are used to transport personnel as a primary function.

INSURANCE ON OFFICIAL MOTOR VEHICLES, AIRCRAFT, AND BOATS OPERATED BY THE BUREAU OF SPORT FISHERIES AND WILDLIFE IN FOREIGN COUNTRIES

The Bureau of Sport Fisheries and Wildlife engages in aerial waterfowl surveys and waterfowl banding programs in Canada and Mexico and research activities in Canada. Approximately 100 employees spend about 30 percent of their time on this work which involves each year flying six single and three twin-

engine aircraft for about 2,200 hours and 260,000 lineal miles under hazardous low-level conditions; driving 40 automobiles and trucks about 100,000 miles and operation of air boats and other floating equipment.

In Canada, the provisional governments require all vehicle drivers, foreign or resident to have liability insurance and to carry proof of their coverage at all times. The Mexican Federal Government requires all visitors operating vehicles to carry liability insurance issued by Mexican firms. While neither of these countries require operators of aircraft or floating equipment to be insured, the hazards involved and the inapplicability of the Federal Tort Claims Act to accidents in foreign countries clearly indicate the need of commercial liability insurance to protect citizens of those countries as well as the U.S. employee-operators.

The proposed language change would permit payment by the Government of premiums for liability insurance on motor vehicles, aircraft, and boats while operated in foreign countries. Specific statutory authority is required for this purpose (decision of the Comptroller General (39 Comp. Gen. 145)). This authority is similar to that available to the State Department (5 U.S.C. 170h(a)) and to the Foreign Agricultural Service by a permanent proviso in its 1958 appropriation act. It is unreasonable to expect employees to pay for this insurance from their own funds because the expense is occasioned solely because of conducting Government business in foreign countries with no purely personal benefits to the employees. Principal annual costs would amount to approximately $80 for each pilot, $10 for each rider to domestic insurance policies for vehicles in Canada and $50 for each special insurance policy in Mexico or a total of $1,800.

NEED FOR NEW PASSENGER VEHICLES

Chairman HAYDEN. What is your need for 10 new vehicles?

Mr. GOTTSCHALK. Mr. Benjamin will speak to that.

Mr. BENJAMIN. The 10 vehicles will be needed primarily at new locations and for expanded programs.

For instance, we will need two vehicles at the Jamestown Laboratory which is new; we shall need four station wagons at new refuges; a new standard-type vehicle is needed at Laurel, Md., for the new rare and endangered species program.

Chairman HAYDEN. Do you know where you are going to assign these vehicles?

Mr. BENJAMIN. Yes, sir; we can place that in the record.

(The information follows:)

Location of additions to the fleet of passenger motor vehicles

Type	Number	Location
Station wagon	1	Browns Park National Wildlife Refuge, Colo.
Do	1	Las Vegas Maxwell National Wildlife Refuge, N. Mex.
Do	1	San Bernard National Wildlife Refuge, Tex.
Do	1	Seedskadee National Wildlife Refuge, Wyo.
Do	1	North Central Reservoir Investigations Field Station, Yankton, S. Dak.
Do	1	Pennsylvania Cooperative Fishery Unit at Pennsylvania State University, University Park, Pa.
Automobile	2	Northern Prairie Wildlife Research Station, Jamestown, N. Dak.
Do	1	Patuxent Wildlife Research Station, Laurel, Md.
Do	1	Area acquisition office, Benson, Minn.
Total	10	

LIABILITY INSURANCE IN FOREIGN COUNTRIES

Chairman HAYDEN. There is also indication in your justification of a need for the United States to pay premiums for liability insurance on motor vehicles, aircraft, and boats operated in foreign countries. Would you please explain this need.

Mr. BENJAMIN. Mr. Chairman, we need this authority in order to pay insurance premiums for our employees who are engaged in Government work in foreign countries principally in this instance in Mexico and Canada, to protect them from financial loss in case of accident. If the proposed language is included in the Appropriations Act we will have that authority. According to a GAO ruling explicit authority is needed to make these payments.

Mr. GOTTSCHALK. The problem is, Mr. Chairman, the Federal Torts Claims Act does not apply in these other countries and our men are operating frequently under hazardous conditions and they are in jeopardy, as it were, while they are on these assignments.

COMMITTEE PROCEDURE

Chairman HAYDEN. It is necessary for me to leave now and I shall ask Senator Byrd to act for me. I have a number of questions which various Senators want me to ask for them. Also several Senators have addressed letters to me regarding various phases of the sport fisheries activities. I shall leave all of this material, together with other material which I would like to have in the record, with you, Senator Byrd. Would you please include it in the record at the end of today's hearing?

Senator BYRD. Thank you, Mr. Chairman. Yes; I will.

WEST VIRGINIA AND NATIONAL FISH PRODUCTION

Now, can you tell me how West Virginia's production of fish in its national fish hatcheries fits into the overall picture of fish production in the Nation?

Mr. GOTTSCHALK. In West Virginia last year we produced in all approximately 207,000 pounds of fish compared with a national total that is slightly in excess of 4 million, as I recall the figure.

FACILITIES IN WEST VIRGINIA

In West Virginia, we have a pattern which is fairly comparable to that which we have across the country. We have one relatively new and large installation, the hatchery at Bowden, as we have many new hatcheries scattered around the country.

We have the old White Sulphur Springs station which has been the subject of substantial reconstruction in recent years, with a limited production, but a production which has been augmented by virtue of the new wells that we have been able to put down in the last 3 years.

Finally, at Leetown in West Virginia, we have a hatchery which combines both production capability for warm water and cold water fish, and it is the scene of our eastern fish disease laboratory which is one of the great scientific establishments dealing with fish culture.

I would say that as things stand now, West Virginia, in relation to the waters which it has there, is about on a par with the rest of the country.

I think that most people believe that West Virginia can look forward to an economic situation in years to come where tourism will be greatly increased and there will be probable increasing demands for the things which would support tourists.

Whether our facilities will be adequate in the long-term future or not, I am not in a position to say now, but if the growth of the area is as anticipated, if Appalachia works out and more of the streams are rehabilitated and more habitat is made available there will undoubtedly be a need for more fish.

CAPABILITY OF EXPANDING PRODUCTION

Senator BYRD. Do they presently have the capability of expanding the poundage of fish, in one or more of the three hatcheries in West Virginia?

Mr. GOTTSCHALK. There is a limited capability, but it is a limited capability. I could discuss this in additional detail. Perhaps Mr. Tunison would like to make a comment.

EXPANSION OF THE HATCHERY AT WHITE SULPHUR SPRINGS

Mr. TUNISON. Senator Byrd, the hatchery having the greatest potential for expansion would be White Sulphur Springs. This is an old hatchery established along about the turn of the century and I might say that the hatchery building itself is still standing.

We have had some construction funds several years ago to improve the ponds.

Actually, in all three hatcheries the problem for solution by way of expansion is water supply. It would hold true at White Sulphur. There is a possibility of putting down a well there to increase it. In fact we have used wells at Leetown to improve that.

As the director said, in the overall there is somewhat of a limitation in all three of them. We are approaching the final capability, I think, of the stations.

PROBLEMS WITH WATER TEMPERATURE

Mr. GOTTSCHALK. To amplify that a little more, talking about Bowden, for example, we originally anticipated we would have unlimited water supply from Shaver's Fork. We have the spring, but, in addition to that, we are taking large quantities of river water. This has not proven to be very satisfactory. Even though we ran temperature studies on that stream before, we have found the water does warm up substantially in the summertime.

As a result of this warming problem we are encountering some difficulties with fish diseases so we are required to carry out prophylactic treatment almost continuously to avoid calamitous outbreaks of parasites primarily, also some diseases.

Therefore, we are not anticipating that we would want to expand Bowden because of this water supply problem. If we had the same volume of spring water it would be an entirely different question. We have the facilities for making a larger installation but the water supply is limiting and we are pushing the maximum there now.

ADDITIONAL WATER AT WHITE SULPHUR SPRINGS

Senator BYRD. Are you utilizing springs at White Sulphur Springs now?

Mr. GOTTSCHALK. Yes, we are.

Senator BYRD. Are you utilizing them to the maximum?

Mr. GOTTSCHALK. No; that is to say we are using the ones we have to the maximum degree but that country is underlain by irregular aquifers that are related to the joint or fault structure of the limestone bedrock, and we believe that it would be possible to put additional wells down and pick up additional water supplies from these relatively small wells.

The point I am making is, it is not like going down into a gravel stratum and put a well and get 5,000 or 6,000 gallons a minute, but you could put a 6-inch well, hit one of these faults in the bedrock and maybe get 500 or 600 gallons.

Senator BYRD. Have you conducted tests there the results of which support your belief in this regard?

Mr. GOTTSCHALK. This is correct. I am trying to think of the exact year. I believe it was 3 years ago we made an extensive test. We have had the Geological Survey make a very careful study of the area. We think it is possible to put down several additional wells.

HATCHERY OVER 60 YEARS OLD

Senator BYRD. Your plant there is 60 years old, more or less, and in great need of some new construction. What items particularly are you in need of there by way of construction?

Mr. GOTTSCHALK. The first two items that we are most concerned about are the hatchery buildings and the old fish-handling building, the latter being about ready to collapse. The fish hatchery was built in 1902 and as far as I know it is the original building and still standing there.

They built well in those days but there comes a time when the underpinning begins to go and you go up in the attic and the place looks perfectly sound, but you get down and pry around in the sills and the foundations and you see it is not in good condition. Those are the two major construction items that we would want to do something about, and we would be involved primarily in a new hatchery building.

DEVELOPMENT PROGRAM AT WHITE SULPHUR SPRINGS, W. VA.

Our development program for what we call phase 1 at White Sulphur Springs, W. Va., incorporates well development, doing some work at the lower spring, replacing the hatchery building, removal of the old building, expansion of the utility building, visitor parking, display pools, relocation and paving of service roads, raceway lighting, and a visitor center which would be incorporated in the hatchery building, which we think is important in White Sulphur Springs because of the busy load in that popular resort center; it comes to $596,000.

Senator BYRD. I was able to get an amendment adopted last year to increase the amount of the budget estimate by an amount which I do not recall, but it was for the purpose of replacing the hatchery building. It was lost in conference.

TOP PRIORITY ITEMS

You have mentioned a figure of $296,500. What are the top priority items in this listing and what is the estimated cost of those top priority items?

Mr. GOTTSCHALK. The top priority is this hatchery building, which would cost $150,000; the removal of the old building, which would cost us $25,000; and the exhibits for the visitor center which we would need to put in the new hatchery building, $10,000, for a total of $185,000.

ESCALATION IN COST

Senator BYRD. The amount last year was $138,000, so I must have had in mind the replacement of the hatchery which you now have down at a cost of $150,000. Would you say that there has been this much escalation in cost during that period?

Mr. GOTTSCHALK. We reevaluate these programs continuously in trying to keep in touch with what is happening to construction costs in local areas, and the costs are going up and I am sure that this is exactly what we had in mind here.

There has been no change in the basic thinking with respect to the type or character of the building. We have a standard design for hatchery buildings.

Senator BYRD. What are the bare bones top priority items?

Mr. GOTTSCHALK. The hatchery building itself which would cost $150,000, $25,000 to get the old buildings out of the way and to prepare the site for the new building and $10,000 then for the exhibits which would go into this visitor center, part of the newly constructed hatchery building for a total of $185,000.

Senator BYRD. You have a capability of utilizing not only that, of course, but the full $295,000 in fiscal year 1967?

Mr. GOTTSCHALK. That is correct.

Senator BYRD. Just how badly is this $185,000 needed? What do we lose by waiting another year or 2 years?

Mr. GOTTSCHALK. We can suggest one thing that happens, in the difference between the estimate of last year and this year, on a $130,000 building, which 1 year later is estimated at $150,000, so there is a substantial percentage increase right there.

MAINTENANCE COSTS HIGH

Aside from this particular point, we are having to spend some maintenance money every year to try to keep the old facilities in operation. This would be saved. I can't give you an off-the-cuff figure on this, but it would average out at several thousand dollars per year that we are having to put into keeping the old buildings up.

In addition, there would be a factor that would be related to efficiency that would be pretty hard to equate in terms of dollars, but I think it would be realistic to say that our efficiency would go up in the order of 15 percent or so, so that we would be getting the same amount of operational fund a substantial increase in the poundage production down there as the result of the replacement of these facilities.

Of course, this would not be a 1-year operation. This is something that would continue for the life of the new facility.

Senator BYRD. Just as the loss through diminished efficiency at the present time is a continuing thing and probably accelerates as you go along.

Mr. GOTTSCHALK. That is correct.

MAINTENANCE COSTS OF BUILDING

Senator BYRD. Would you place in the record information which would indicate the maintenance costs that can be attributed to the age of that building?

Mr. GOTTSCHALK. Yes, sir.

(The information follows:)

JUSTIFICATION

Total estimated cost of the development program for the White Sulphur Springs National Fish Hatchery is $296,500. A justification and itemization with cost estimates is given below.

The White Sulphur Springs National Fish Hatchery, established in 1902, propagates both trout and warm-water species of fish for distribution in West Virginia and Virginia. The hatchery is located close to the Monongahela and George Washington National Forests, and demand for legal-sized trout in waters of these areas in substantial. The Outdoor Recreation Resources Review Commission, in their study report No. 7, estimates that West Virginia will need a 100-percent increase in hatchery-reared trout to satisfy the sport fishery by 1976. The major portion of the trout fishery in the State is now supported by hatchery fish.

There are many lakes and streams in both the National and State forests within a radius of 35 miles of the hatchery. To cope with the high increased rate of tourism through their forests, the National Forest Service and the State forest service have increased their available visitor facilities by 200 and 50 percent, respectively, in the past 2 years. Requirements for trout have steadily increased in the area served by this hatchery.

Modernization of the present facilities at the White Sulphur Springs hatchery is very desirable. The existing inadequate facilities not only result in elevated rearing costs, but also reduce the production and recreational potential of the hatchery. Annual cost of maintaining the old facilities is $17,500, and will continue to rise each year if they are not replaced. It is anticipated that with new facilities the overall efficiency of the hatchery would be increased at least 15 percent.

This would result in an annual saving of $9,100 in operation and maintenance costs.

With funds provided in fiscal year 1965 ($100,000), replacement of the hatchery's outmoded raceways and related improvements in the hatchery water supply were accomplished.

The most urgently needed item is the replacement of the existing frame hatchery building, constructed some 64 years ago. Excessive humidity in the area has caused serious deterioration of the building. The costs involved in maintaining this antiquated structure continue to rise each year and are, in the long run, a waste of money since replacement is inevitable. The design of the building is not compatible with a modern, safe, efficient fish-cultural operation. Economy could be effected by early replacement, as construction costs are escalating each year. The original engineering estimate in 1964, for replacement of this structure, was $130,000. With increased construction costs since that time, our engineers currently estimate that the cost of a new building will be $150,000. In addition to this, it will cost approximately $25,000 to remove the old facilities and $10,000 for furnishing exhibits and displays for the visitor facilities, thus making a total of $185,000. As White Sulphur Springs is a resort area, frequented annually by thousands of visitors, the esthetic problem is also important. Provision of a new hatchery building and other facilities would go hand in hand with the President's desire for the beautification of America.

The development program outlined provides for the replacement of the hatchery building, plus the additional facilities and equipment required for a modern, safe, and efficient program of operation. Included within the hatchery building will be a visitors' center which will significantly aid in the expansion of the Bureau's recreation and conservation-education program.

Well development (supply lines and pumphouse)	$20,000
Replace dam at lower spring	5,000
Replace hatchery building (incorporating visitors' center and related exhibits)	185,000
Expand utility building (storage 4 stalls)	25,000
Visitors' parking area, 90 by 120 feet	7,500
Display pools	6,000
Relocation and paving service roads	15,000
Raceway lighting system	8,000
Fencing	25,000
Total estimated cost of the program	296,500

CONDITION OF BUILDING

Senator BYRD. So, you have an escalation loss if we wait. You have the continuing and increasing maintenance costs which result from the old facilities, and you have the lowered efficiency which could be raised and maximized if we had the new facility.

Mr. GOTTSCHALK. They are intangibles. The intangible I am thinking of is the overall appearance. This gets into the realm of esthetics, I suppose, but the old fish-handling building is pretty decrepit. It is rather a disgrace for the Federal Government, with affluence in some quarters, to be operating with this kind of a structure.

I am unable to get any good figures to represent what I am talking about here, but it is in the edge of city limits or within the city limits of the city of White Sulphur Springs. It is visited by hundreds of thousands of people.

Senator BYRD. Which have included Presidents, Vice Presidents, leaders from foreign countries, and other dignitaries. Great men have visited the Greenbrier, which is one of the outstanding spas anywhere to be seen.

Mr. GOTTSCHALK. It is a place where we should be putting our best foot forward.

NEEDS AT OTHER FACILITIES

Senator BYRD. Do you have a need for new facilities at either of the other two installations?

Mr. GOTTSCHALK. Nothing that I would say is equal to what we are concerned about at White Sulphur. We have undergone a substantial development at Leetown, as I believe you are aware, and of course Bowden is still quite new. We have a development program for each of these stations but the need is not as critical as it is at White Sulphur.

We are talking about a program at Leetown that ultimately is going to cost us another $150,000 for the first phase. The buildings will require $100,000, well exploration, pumping equipment, and supply lines $50,000, and then in addition to that ultimately we would have a sewage disposal system, outside lighting system and equipment for another $80,000 for a total of $230,000. But I would not be able to urge this with the same degree of sincerity that I would address myself to the case of White Sulphur. I think there we have real need to replace that hatchery building.

Senator BYRD. You are going to have a continuing use for that hatchery at White Sulphur Springs?

Mr. GOTTSCHALK. That is right.

Senator BYRD. Eventually, you are going to have to replace that hatchery building there. There is no question about that.

Mr. GOTTSCHALK. I would not go so far as to say it is a definite safety hazard, but it is approaching the point where we are going to be faced with the necessity of restricting or prohibiting visitors just as a safety measure.

Senator BYRD. So it all adds up to the fact that while we may not have pennies chasing dollars there, we will have dollars chasing dollars. We are going to have to replace it and if we wait we will have lost more in the way of maintenance costs and lowered efficiency, which losses, in the long run, would have contributed greatly toward the replacement of the facility; is that a fair statement?

Mr. GOTTSCHALK. It is. As a matter of fact, I think if I had an opportunity to sit down with a pencil and paper here I could figure out on the basis of rough estimates that the building would almost be paid for in terms of reduced maintenance or increased efficiency in a fairly short time, like less than 10 years.

Senator BYRD. What do you have for operation and maintenance at White Sulphur Springs in the fiscal 1967 budget?

Mr. GOTTSCHALK. In White Sulphur, the amount for 1967 is $62,300 which is a $900 increase over last year and is a pay cost increase only. For Leetown, if you are interested, it is $107,400, an increase of $6,600. This is largely related to a slight increase in production.

In Bowden, the figure is $108,800, an increase of $1,600 which is pay cost increases.

Senator BYRD. You would not have any increased need for personnel at White Sulphur Springs with a replacement of the facility, would you?

Mr. GOTTSCHALK. We do not anticipate any. Part of this depends on the growth of the visitor load there. If our new facility should prove to be very popular, I would favor the addition of manpower that could be used to interpret or explain the function of the hatchery and the total conservation program, but that is not now contemplated.

Senator BYRD. Your visitor load there has been increasing, has it?

Mr. GOTTSCHALK. Yes, it has been increasing, but I expect it to skyrocket at such time as we would have a visitor facility. This would include aquariums and a display of fish of that area and fish reared in the hatchery.

Senator BYRD. Would these be included in the $185,000 figure?

Mr. GOTTSCHALK. That is correct.

Senator BYRD. Do you think you would have this ready for the visitors by fiscal year 1968, if the moneys were to be appropriated now?

Mr. GOTTSCHALK. We would finish it in the summer of 1967. I would not say that we would have it done a year from this coming June, necessarily. If we got money in the appropriations bill carrying it through the planning stage, we would get started about a year from now actually, and we would not get the thing completed until the summer. We could probably start some operations there in the summer of 1967, but it would be 1968 before it was really completed with the landscaping, replacing all of the roads and all that sort of thing.

REFUGE PROGRAM

Senator BYRD. I noted in your enumeration of wildlife habitats you had 45 States listed in one of these pages here.

Mr. GOTTSCHALK. I believe that had to do with wildlife refuges.

Senator BYRD. You had 45 States listed and I did not see West Virginia among them. Why is this?

Mr. GOTTSCHALK. Well, we have several objectives in our refuge program and one of the objectives is the distribution of the birds, but at the moment the program has been organized to acquire key wetland areas in areas where the birds are. As of the moment, West Virginia is speaking of waterfowl, relatively a birdless area.

We have had under consideration, Senator, the possibility of a wildlife refuge on Meadow River, approximately 40 miles west of White Sulphur Springs in a high mountain valley. I had hoped a few years ago that we would be able to incorporate a part of that refuge in the Interstate Highway System by using a part of the highway grade as a dam, and impound behind this a substantial lake, but the alinement for the interstate, according to the last word I had, would not be satisfactory for this.

The refuge, without such a development, would be a high gradient situation which results in a high cost per unit of area developed. We simply have not been able to afford the inclusion of this unit in our development schedules.

Senator BYRD. You have not been able to include it?

Mr. GOTTSCHALK. That is correct.

Senator BYRD. You would still hope to at a future date?

Mr. GOTTSCHALK. Yes, we would. I feel that there is a possibility there. The State fish and game department agrees, but until we can make a little more of a record in our major waterfowl conservation areas, we will have to withhold any action on Meadow River.

Senator BYRD. Until what happens?

Mr. GOTTSCHALK. I cannot give you a specific date, but we have so many other areas located in the principal flyways where there is a need for the protection of waterfowl habitat right now that will support a lot more birds at a lot lower cost. Ultimately, this thing may come in but does not have the priority that we put in our production areas. This is crucial to waterfowl management in America, acquiring and preserving production areas. This area in West Virginia would only be a migrant resting area with possibly some wood duck production as an incidental.

Senator BYRD. You have birds in Ohio, in Pennsylvania and Virginia, to the east, north and west of us, and we do not have them in West Virginia?

FLYWAYS MISS WEST VIRGINIA

Mr. GOTTSCHALK. West Virginia is just in the center of things. If I had a map here, I think I could describe to you the routes the birds take. I do not want to say these are engraved in the air in some way that the birds never get out of them and they do shift, but if you think about the way the birds come down, the birds come down from the north and they swing either to the east in New York State across the Finger Lakes, the Mohawk Valley and down the Hudson, or else they come down, swing around Lake Erie and over toward the Mississippi

and it just makes a natural division there and West Virginia happens to be in the middle of it.

There are some birds in western Pennsylvania up along Lake Erie and eastern Pennsylvania along the Susquehanna and some birds in Ohio, mostly up along Lake Erie, some on the Ohio River. The birds in Virginia are almost exclusively over on the coast. West Virginia is right in the middle of the duckless area.

Senator BYRD. Maybe that is all the more reason why you should put one in West Virginia. You have these all around to attract the birds.

Mr. GOTTSCHALK. We assure you that idea has been suggested and pursued exhaustively and we come back to the hard, cold economic facts in the end.

Senator BYRD. But we might look forward to the development of the area to which you referred. Where was that?

Mr. GOTTSCHALK. This is at Meadow River, on the Meadow River. It is located approximately 40 miles west of White Sulphur.

Senator BYRD. That would not have the priority that White Sulphur Springs fish hatchery would have?

Mr. GOTTSCHALK. No.

Senator BYRD. Mr. Tunison, do you think of anything by way of comment that I have not elicited by way of support for the need at White Sulphur Springs?

Mr. TUNISON. No; I think the Director, Senator, has covered the items that we have in our program when funds do become available. As you know, earlier I mentioned that we approached reaching our total capacity at these three hatcheries in West Virginia, and Director Gottschalk did mention the increased tourism that you have in your State. I am sure that you appreciate that fact. We will do our best with the three hatcheries that we have.

Senator BYRD. But you feel that this does enjoy a very high priority at White Sulphur?

Mr. TUNISON. Absolutely, Senator.

SURVEY ON FISHING DEMAND

Senator BYRD. Has a recent survey been made on the needs for additional national fish hatcheries and, if so, do you believe there is a possibility that one may be placed in West Virginia?

Mr. TUNISON. You may recall, Senator, that prior to constructing Bowden, we, in cooperation with the State people, did make a survey in the eastern part of West Virginia for a hatchery site. As I recall, there was something like nine sites finally, and Bowden was selected as being the best of those. That must have been—I am guessing now—perhaps 6 or 7 years ago. Beyond that, I would say that we now plan to conduct, really, a survey of needs.

We are not satisfied that the production of our fish hatcheries is coordinated with the need in the various parts of the country. We have had difficulties for many years on whether we should expand hatchery A, or postpone that and expand hatchery B in lieu of that.

INFORMATION ON NEED FOR HATCHERIES

One of the reasons for our difficulties in the decision is the lack of good information on the need for hatcheries. We are well aware there is need for more fish, fishermen are increasing in numbers. We, also, have the problem of working with the States and what their share will be. We certainly do not intend to build a hatchery system in the Federal Government to take over the satisfying of all of the hatchery needs. We think that the States should do their part, too.

We hope to get such a survey underway here, even this year. We hope to continue it on through 1968, I am sure.

ADDITIONAL RESERVOIRS TO BE CONSTRUCTED IN WEST VIRGINIA

Senator BYRD. There will be a number of additional reservoirs constructed in southern West Virginia. I am thinking now of the R. D. Bailey Reservoir in the Wyoming County area. That is about a $62 million reservoir, I believe. There will be the East Tynne Reservoir in Wayne County down close to the Kentucky-Ohio border. There is the Summersville Reservoir which is nearing completion and certainly which was just getting underway at the time you conducted the other study. There was the Sutton Reservoir which, I believe, has been completed since you had your other study.

I am wondering if, in view of the fact that we do have these additional reservoirs coming into operation plus the additional fact that the three hatcheries in West Virginia are on the eastern side of West Virginia, and that there might be a need for a hatchery in the southwestern part which could, also, serve northeastern Kentucky and southeastern Ohio, if you feel that it might be desirable and feasible to conduct a survey of that area of West Virginia, and could do it out of available funds?

Mr. TUNISON. I think the need for surveys that you mention are with us constantly. It goes back to what I said previously in trying to determine need. If a need is there, then we decide with the State who builds the hatchery and operates it. In your particular case, I think that is justified in light of the history of Bowden. As to whether we can do it with our present funds, I think we can work that out, Senator.

Senator BYRD. Could this be done prior to the submission of the budget for next year?

Mr. TUNISON. It is unlikely. In fact, it was only yesterday that we started in our Bureau on our next year's budget, so it would be be possible for us to carry on this survey and include anything next year.

Senator BYRD. Could you do it in time for us to consider it when we hear you next year.

Mr. TUNISON. That is a good possibility.

Senator BYRD. Would you try that, Mr. Tunison?

Mr. TUNISON. We shall do that.

Senator BYRD. Do you have sufficient operating and maintenance funds to operate the hatcheries now in West Virginia?

Mr. TUNISON. I think the director mentioned that earlier. All of our activities are operating below 100 percent capability. I suspect, in the case of West Virginia hatcheries, they are no different than the

others. I do not have figures on what percentage they are of capacity. I am sorry, but I just do not have those.

OPERATION OF NATIONAL FISH HATCHERIES IN WEST VIRGINIA

Senator BYRD. Would you supply that for the record?

Mr. TUNISON. I will supply it for the record.

Senator BYRD. Also, indicate the additional poundage of fish you feel may be produced at each hatchery, if you can do that.

Mr. TUNISON. We will be glad to do that.

Operational funds included in the fiscal year 1967 budget for the three national fish hatcheries in West Virginia (Bowden, Leetown, and White Sulphur Springs), will provide for operation of these stations at 100 percent of capacity of present facilities.

Senator BYRD. I certainly want to thank you, Mr. Gottschalk and Mr. Tunison, for the service you have given our hatcheries over there and for the attention you have given to the needs of those hatcheries. I appreciate the fine testimony you have made available here today. I will do whatever I can possibly do to get you the $185,000 that you indicate would be top priority for White Sulphur Springs. As I say, I tried that last year and it fell by the wayside in conference. I will make another effort this year. It is a little more difficult to get money this year than it was last year, but the needs have also gone up in White Sulphur Springs.

Mr. GOTTSCHALK. I think we can say, Senator, we appreciate your interests. I know personally of your interests at the time I was regional director in Boston and we had the opportunity to talk about some of these things and I had the opportunity to get to West Virginia and talk to some of your constituents and to see some of these problems from the ground.

I operate on the basis that our Bureau appreciates the problems of West Virginia, and we would just like to make as definite a contribution as appropriate with all of the other considerations that must be thought of. We do believe that we can make a definite contribution to the enhancement of West Virginia's resources and, thus, possibly make it a little more than enjoyable for people to come to West Virginia, and this, in the end, will help the whole country.

APPALACHIAN PROGRAM IN WEST VIRGINIA

Senator BYRD. While we are waiting for Senator Bartlett, let me ask you a question with regard to your Appalachian program. You spoke of the $1 million which would be apportioned to the States for the development of strip mining restoration and the construction of fishing lakes. You indicated that the exact amount of the apportionment to the States would be dependent upon the results of planning. I suppose at this moment you could not address yourself particularly to West Virginia.

PROBLEM OF LANDOWNERSHIP IN APPALACHIA

Mr. GOTTSCHALK. No, we could not. I can tell you that we are exploring a variety of possibilities in West Virginia. In his testimony, Mr. McBroom indicated some of the problems we are up against on this thing. One of the possibilities that we are exploring is that of

perhaps getting some property actually conveyed to the State of West Virginia by some of the coal companies who have operated down there; at least get title with the possible holding by the company of mineral rights or whatever would be necessary, but to get surface rights.

If this could be worked out, it might be one way to get around this bottleneck that we have encountered with respect to landownership.

I would like to ask Mr. McBroom to comment to whatever extent he would like to on this subject.

Mr. McBroom. We have made a number of efforts with the West Virginia Department of Natural Resources to locate a strip mined area that could be restored under this authority. One of the problems is that the West Virginia department does not have any suitable land for this. We know there are thousands and thousands of acres of strip mined area in West Virginia. We are anxious to do something about it, but one of the problems is in the language of the appropriation act, itself, as I mentioned, which prohibits the use of these funds for land acquisition.

I think it can be said that this has blocked for the time being the progress of this program in West Virginia. These restored stripped mine areas can be real nice spots for tourism. Being on public land, they can be and will be fixed up for people to enjoy them, with access roads, parking, and places to fish, hunt or otherwise enjoy the out of doors. We think we can do West Virginia and the other States a lot of good with this kind of program and we will continue to try, sir.

Senator Byrd. Thank you.

Problem at Spruce Knob, W. Va.

What can you do at Spruce Knob? We have the national recreation area there by virtue of the passage of S. 7 last year. Is there anything you can do up there? We have a lake on top of that mountain, Spruce Knob Lake. Also, we are going to have Trout Pond over in Hardy County in the area of Wardensville. We already have the impoundment down by Brandywine in Franklin County.

Now, with reference to Spruce Knob, the highest peak in the State, is there anything that we might do there?

Mr. Gottschalk. The possibility of doing anything at Spruce Knob under the Appalachian program are nil, as far as I can tell because of limitations with respect to what we can or cannot do.

In conjunction with the overall program of planning for the Potomac River Basin, of which Spruce Knob is actually a part, we have been participating with representatives of the State in the development of a plan to try to accomplish what the President called on us to make the Potomac a model. We do not have anything specific identified in that program that would be an expansion or a refinement of the work that has already been done at Spruce Knob as part of the fish and wildlife plan.

We do now, of course, contribute in the way of fish for stocking at several of these areas. I cannot give you the specifics on this just offhand. But I do know that we are cooperating with the State.

The same thing, I assume, is true of these other specific areas that you mentioned.

The management program at Spruce Knob is carried on by the State fish and game department under the Federal aid program, so in an indirect sense we are already helping with it.

Development of Potomac Basin

Mr. McBroom. I would like to tell Senator Byrd that we have organized a very large task force and invited West Virginia people to participate in developing a model fish and wildlife plan for the Potomac. Certainly the President has made it clear that he proposes to see that this is done, and the Secretary, of course, is just as determined to do it and we are working with him. We think that West Virginia stands to get a great deal of benefit out of the implementation of the Potomac plan.

Incidentally, the Director mentioned the Federal aid program. If you are interested in figures, the apportionment to West Virginia for 1966 under the Federal aid program—this is the Dingell-Johnson and Pittman-Robertson program financed by excise taxes—the apportionment to West Virginia was about $266,000 for fiscal year 1966. That is the regular program which is to be matched by the State—75 cents Federal and 25 cents State. The State has been making good use of that program.

Marine Game Fish Research

Senator Byrd. Why are not the marine game fish research budgetary requests any higher than $83,000 (Tiburon, Calif.), and $464,000 (Sandy Hook, N.J.) when the Marine Game Fish Act of 1957 authorized $2.7 million annually?

Mr. Gottschalk. Public Law 86–359 authorized annual appropriations of not more than $2,700,000 for research on migratory marine game fishes of the United States. The Bureau prepared a prospectus of such research proposing a moderate beginning to construct programs, assemble a highly specialized technical staff, and establish a laboratory base. The prospectus forecast a consistent escalation of research effort to approach the appropriation limitation in about 5 years, at the end of which time we could also forecast very substantial acquisition of knowledge about the marine game fishes themselves, their environmental requirements and relationships, and the magnitude of angling in salt water.

Although the maximum research money available in any one year since passage of the act is the $696,000 for the fiscal year 1966, progress has been made in several areas of biology, oceanography, and statistics, often through extraordinary cooperative ventures with sportsmen's organizations, the Office of Naval Research, the Coast Guard, Columbia and Rutgers Universities and the University of California at Los Angeles, the University of Miami, and Oregon State University. The Navy and the Army have made laboratory spaces available at Tiburon, Calif., and Fort Hancock, N.J., respectively, and ships have been borrowed from the Army reserve fleets.

Certain critical studies have not been possible of more than exploratory or token effort, particularly those involving the big game fishes like marlins, sailfish, and swordfish, although these have become the object of intensive fishing by foreign nationals. Closer to home, the great possibilities of improving fishing through scientifically designed

and managed artificial fishing reefs have not been studied. Not only recreation, but also the possibilities for removing man's discarded wastes (auto bodies, construction materials), are involved.

Budgetary policies, plus the great range of unfilled needs in fish and wildlife conservation research and management, have so far prevented accelerated growth of a national program of marine game fish research commensurate with the recognized needs and values.

Job Corps Conservation Program

Senator Byrd. Do you have any Job Corps operations under supervision?

Mr. Gottschalk. Yes, we do. Right now, we are operating five Job Corps conservation centers that are activated. We will get two more in operation by early summer. These are all located on or in conjunction with national wildlife refuges. The first one that we got started was at Malheur National Wildlife Refuge out in Oregon. We have one going at Crab Orchard National Wildlife Refuge in Illinois, Mingo National Wildlife Refuge, in Missouri, another one called Treasure Lake, at the Witchita Mountains National Wildlife Refuge in Oklahoma, one at Iriquois National Wildlife Refuge in New York and one at Tamarac National Wildlife Refuge, Minn. The seventh one is located at Camp Perry, Ohio National Guard and site of the NRA rifle and pistol matches and designed to provide a work force for the Ottawa National Wildlife Refuge, Ohio.

When we get them all in operation, we will have approximately 1,160 enrollees in these centers, if current plans hold. It is a very fluid type of thing—we found that out—and we may have more than that. Three of the camps are being expanded, and two others may be later.

We are very pleased so far, with the outlook for the program. We have not had some of the really difficult types of social problems that some of the centers have been beset by, or some of the operations that have been beset by. We have had some, but it has not been critical.

The boys have responded wonderfully. It is quite inspirational to go out and see these young fellows who obviously have not had an opportunity to try to lift themselves, except by their own bootstraps, in the past. Many of them have taken to this sort of activity very well.

We have a lot of the same type of problems with maladjusted boys, boys with peculiar personalities, things of this sort, but the whole program is designed to cope with this sort of thing, and we believe that as far as we are concerned, the center is going to prove out very well from the standpoint of the contribution they make to the social improvement of our population.

Education in Conservation

From the conservation standpoint, we are going to get a lot out of it, too, both directly in terms of work done on the ground, and we are going to get a lot out of it, I think, in terms of manpower, because a lot of these boys will become the source of our nonskilled, or semiskilled, laborers. They will move from the job center or the conservation center into a reservoir of experienced help for our manpower requirements on the refuges.

Senator BYRD. I read, last evening, that the Bureau of Land Management was having some problems with some of the young people who were under their supervision and they were taking steps to weed out these troublemakers and mischief causers and misfits and those who constitute discipline problems. I think it would be well for the record if you would supply information, or at least take a good look at your operations, to see if any of the Job Corps camps under your supervision are having problems like this, and if they are, what are you doing to get rid of these people who obviously cannot improve themselves and constitute a burden and a disadvantage to those who may be in the camps and who are trying to make themselves useful.

I happen to be one who believes that we should not tolerate the presence of these misfits in these camps because they detract from the work there, and inhibit, intimidate, and stand in the way of other individuals who might make something of themselves and who might do something for the country. I think it is about time that we weed out these troublemakers. If we can't do anything with them there, and if they are incapable of doing anything with themselves, we ought to do about what the Bureau of Land Management has decided to do.

So I would be interested in knowing what is going on in your operation and if you have any of these mischiefmakers and misfits, sexual perverts, and people who want to fight, and scrap, and destroy, and tear down, and break up, and so on, I would like to know what you are doing to get rid of them.

ADJUSTMENT TO LIVING IN SOCIAL GROUP

Mr. GOTTSCHALK. I can truthfully tell you that I think the habitual character of this group is already made. I don't think that we have been faced with critical problems where we have characters who have been habitual troublemakers. We get boys who come in and it takes them a while to get adjusted to living in a social group. They are in a completely different set of moral circumstances and it takes a little while to get adjusted.

Senator BYRD. We do not want to pollute the rest of them while those are being adjusted.

Mr. GOTTSCHALK. We have not had the real extreme types, I don't believe. We have had some disciplinary problems. I don't think you can get 200 boys of any kind together without having some kind of problems. I think about some of my own youthful experiences, and I know that this is true.

Senator BYRD. Your youthful experiences did not compare with those we have been reading about. You would not, otherwise, be in your position today.

Mr. GOTTSCHALK. I am aware of what you are concerned about and we will furnish you with additional information on that subject.

Senator BYRD. I would like to point out that I am getting a little bit tired of cutting out money from important West Virginia projects, putting telephone excise taxes back on telephone service where it particularly affects a little town in Clay County where telephone service is essential to the residents of that small town to call for an ambulance, for example, and throwing the money away on misfits and chronic troublemakers who will never make anything out of themselves even with the best treatment.

I think it is about time we quit blaming the school systems or the police departments or society in general for this undesirable element.

I do not think agencies like yours should go beyond a certain point in trying to remold these characters. You ought to get rid of them.

The Bureau of Land Management is not an agency within itself or an island to itself. I salute the Bureau of Land Management for its determination to clean the place up.

I don't think we have to tolerate this. Call it poverty or whatever you want to, but I don't attribute it to that. I happen to be one who voted for the program, and I think the objectives were good, and a lot of good is being accomplished by it and a lot can be accomplished, but there are certain elements that you cannot do anything with and you are just wasting your time in making the effort. The sooner they are weeded out, the sooner we will be able to reap the desired results in connection with those people who are willing to face up to law and order and conduct themselves in a rational and reasonable and right way. So would you supply, for the record, something which would indicate what the situation is, when you last took a look, what actions you have taken, if any, and what you intend to take if these situations arise.

Mr. GOTTSCHALK. We will be glad to give you a report.

(The report follows:)

DISCIPLINARY PROBLEMS AT JOB CORPS CONSERVATION CENTERS

The Bureau of Sport Fisheries and Wildlife, in operating its Job Corps Conservation Centers, has not had problems of the magnitude which occurred at Bureau of Land Management's Mountain Home Job Corps Conservation Center in Idaho. However, we have had our share of problems. A review last week of the records at the five centers the Bureau of Sport Fisheries and Wildlife has in operation at the present time showed the following:

	Centers in operation					Totals
	Malheur, Oreg.	Treasure Lake, Okla.	Crab Orchard, Ill.	Mingo, Mo.	Ottawa Ohio	
Date activated	June 1965	Nov. 1965	June 1965	Nov. 1965	Feb. 1966	
Design capacity	220	112	102	112	112	658.
Current strength	160	94	87	110	56	507.
Number that have caused trouble at center.	23	0	7	16	1	47.

Two centers are not yet in operation.

The record for Treasure Lake indicates that more thorough screening can weed out many potential troublemakers; most of the boys here came from a reception center which performed a real service in providing a secondary weeding-out process after initial recruitment.

While the statistics show we do have potential problems, they have been largely kept under control by application of the following principles. First we are trying to tighten up the discipline at our centers, to eliminate the troublemakers. When a corpsman does violate center rules and regulations, his case is studied by a center review board, comprised of four or five staff members. If removal from the center is decided, facts of the case are forwarded to the Office of Economic Opportunity by teletype. If the case is factual and well documented, removal instructions may be received within 24 hours. There have been delays in some instances, and it can take up to 2 weeks, or more, to gain approval for dismissal. If violations of center regulations are involved, the center directors will keep him under close surveillance pending receipt of final disposition instructions from OEO. If the corpsman involved has violated a State or local law, he can be held by police authorities, pending disposition of his case. Any corpsman accused in a criminal court is provided legal services at his own expense. The attorney's fees are deducted from the corpsman's readjustment allowance.

Thorough counseling, well-defined rules and regulations, strict enforcement, and thorough case documentation are essential steps in prevention of trouble and elimination of undesirables. Close cooperation and coordination with local law enforcement officials and community leaders is a very important prerequisite.

Senator BYRD. Senator Bartlett, we were about to recess, but we are ready for you now.

Senator BARTLETT. Thank you very much.

I managed to make it from here to there and back in the meantime. I appreciate the opportunity to ask a few questions.

PROGRAM REDUCTION IN FISCAL YEAR 1967 IN CONSTRUCTION

Did you lower the boom on yourself or was it lowered on you? You said in your statement of the 1967 estimates that they would total $49 million, a decrease of $14 million. That is a rather substantial decrease.

How did all of this come about?

Mr. GOTTSCHALK. The bulk of it came about, Senator, by the elimination of the aquarium, which was in our 1966 budget and the reduction in land acquisition which together amounted to about $11 million.

Senator BARTLETT (presiding). How about the other $3 million?

Mr. GOTTSCHALK. Part of the other $3 million is the hatchery construction program and then the flood and storm damage repair funds in supplemental appropriations.

Senator BARTLETT. You, actually, are not losers, then?

Mr. GOTTSCHALK. Our management resources investigation actually makes us a gainer. Our net increase is actually about $574,000 in our management and investigations of resources. Our decrease was all in the construction appropriation.

Senator BARTLETT. Which one?

Mr. GOTTSCHALK. Our decrease was all in construction.

Senator BARTLETT. So your opening activities——

DECREASE IN LAND ACQUISITION PROGRAM

Mr. GOTTSCHALK. I want to correct that for the record. Our decrease was in the construction and in our land acquisition program. We cut that $1½ million, and that is it.

Senator BARTLETT. Your operating activities would not be impaired in the current fiscal year but it would be in the next one?

Mr. GOTTSCHALK. No, sir; we have asked for more than what we obtained this year for our operations.

Senator BARTLETT. This represents the items you have mentioned?

Mr. GOTTSCHALK. It represents the bulk of it, with the elimination of a one-shot item.

Senator BARTLETT. How much was the aquarium, approximately?

Mr. GOTTSCHALK. $9.2 million.

TEHAMA-COLUSA SPAWNING CHANNELS

Senator BARTLETT. Earlier in your testimony, you mentioned that which you termed as a "structure," as I recall it, to cart salmon up a dam and bring them down.

Is this new?

Mr. GOTTSCHALK. The spawning channel that I mentioned is a new concept.

In leading up to a discussion of a spawning channel, I talked, generally, about the problem of fish passage, and the things I said in those introductory remarks did not represent any new concepts.

These are things that people have been fighting against, trying to figure out how to get fish back down through high dams and up over them, for many years as you know. But the spawning channel is the first I know of and I think it is a new development.

Senator BARTLETT. Would you put a detailed statement in the record concerning this?

Mr. GOTTSCHALK. Yes; we will, Senator. As a matter of fact, I thought we happened to have a little sketch of it with us and I will put that in the record, too, because I think that would be very helpful in explaining it.

(The information follows:)

The Red Bluff Diversion Dam and the Tehama-Colusa Canal were authorized as part of the Sacramento River division, Central Valley Project, in 1950. The canal will extend about 122 miles along the western side of the Sacramento Valley from Red Bluff diversion dam, 2 miles south of Red Bluff, to a point about 4 miles northwest to the town of Zamora.

The Tehama-Colusa Canal will have a capacity of 2,300 second-feet of water near its head and will annually transport about 400,000 acre-feet of water for new and supplemental irrigation. The capacity of the canal will allow for delivery of additional water for fish and wildlife purposes.

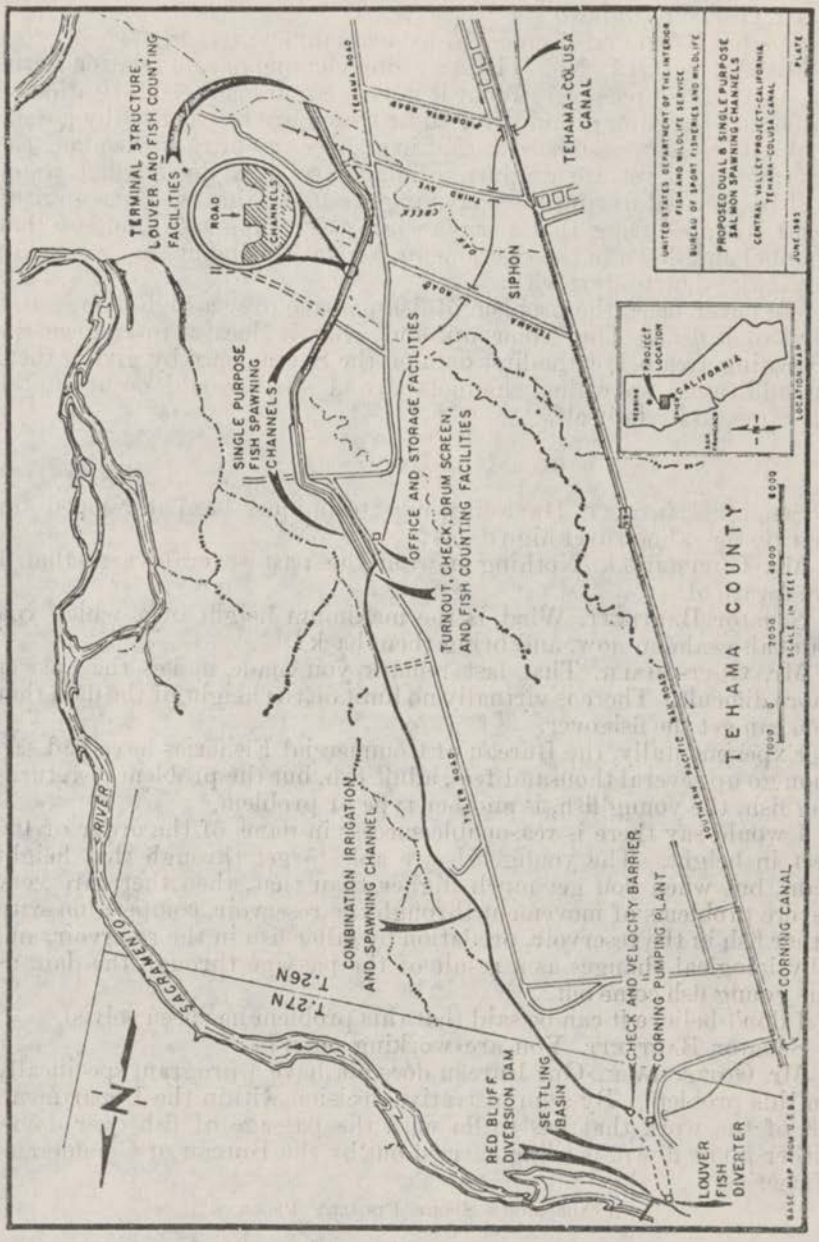
California's Central Valley historically supported vast numbers of Chinook salmon and steelhead trout in thousands of miles of rivers and streams. The activities of man have resulted in destruction of the bulk of the original habitat. Much of the loss has been, and will continue to be, through the construction and operation of water developments.

About 220,000 fall and spring chinook salmon, a large but unknown number of winter chinook salmon, approximately 18,000 steelhead trout, and a few coho salmon spawn in the Sacramento River system upstream from the Red Bluff Diversion Dam. The upper Sacramento River, area for area, is considered to be the most productive spawning grounds for fall chinook salmon in the United States.

Conditions inherent in the Tehama-Colusa Canal project will provide the opportunity to substantially increase chinook salmon production by inclusion of artificial spawning beds within the canal proper and by provision of water to other potential spawning areas.

The dual-purpose irrigation canal will be 3¼ miles long and 100 feet wide, containing about 1.6 million square feet of spawning gravels. The required single-purpose access channel from the Sacramento River to the Tehama-Colusa Canal will be 2.6 miles long, consisting of two 30-foot wide channels with some 500,000 square feet of gravel area. Additionally, flows and channel improvements will create around 330,000 square feet of spawning area in 2.8 miles of Thomas Creek and 770,000 square feet in 11 miles of Stony Creek. In aggregate, the project modifications will create about 20 miles of new spawning stream containing some 3,150,000 square feet of salmon spawning area. Project spawning facilities will accommodate average runs of about 60,000 salmon annually which is a conservative estimate.

In addition to mitigating the loss of salmon spawning area to be inundated by the Red Bluff diversion dam, the fish facilities will support ultimately an additional 256,000 sport angler-days of salmon fishing and a commercial harvest of over 1½ million pounds of salmon. Annual equivalent benefits (100 years) to the sport and commercial salmon fisheries is calculated to be $739,000 and $473,000 respectively. Benefits to the salmon fishery are based on production of fall Chinook salmon only. The full potential of the spawning facilities cannot over 1¼ million pounds of salmon. Annual equivalent benefits (100 years) to anadromous fish, project flows and lands will support an increase of some 120,000 angler-days of trout fishing ultimately in Thomas and Stony Creeks having a 100-year annual equivalent value of $173,000.


TERMINAL STRUCTURE, LOUVER AND FISH COUNTING FACILITIES
ROAD
CHANNELS
SINGLE PURPOSE FISH SPAWNING CHANNELS
OFFICE AND STORAGE FACILITIES
TURNOUT, CHECK, DRUM SCREEN, AND FISH COUNTING FACILITIES
SIPHON
TEHAMA-COLUSA CANAL
COMBINATION IRRIGATION AND SPAWNING CHANNEL
SACRAMENTO RIVER
T.27N
T.26N
RED BLUFF DIVERSION DAM
SETTLING BASIN
CHECK AND VELOCITY BARRIER
CORNING PUMPING PLANT
CORNING CANAL
LOUVER FISH DIVERTER
TEHAMA COUNTY
SCALE IN FEET
PROJECT LOCATION
CALIFORNIA
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
PROPOSED DUAL & SINGLE PURPOSE SALMON SPAWNING CHANNELS
CENTRAL VALLEY PROJECT-CALIFORNIA
TEHAMA-COLUSA CANAL
JUNE 1965
PLATE

IMPACT OF HEIGHT OF DAM

Senator BARTLETT. Is the height of the dam of importance?

Mr. GOTTSCHALK. No.

Senator BARTLETT. You could have a dam 500 feet high?

Mr. GOTTSCHALK. No. The spawning channel has no relation to the problem of fish passage. What it does relate to, is the substitution of different spawning grounds for those which are blocked off by a dam.

What has happened here, is that in a sluiceway or raceway along the Sacramento River, we are putting in a gravel area, down which water will be released during the spawning season so that we have an artificial stream during that period while the young move out of that channel and down in the Sacramento. So at this point they are below any major dam to start with.

We never faced the problem of fish passage over a high dam in this kind of a deal. They come up, and what it does is to enlarge the spawning area below the first dam on the Sacramento by giving them an additional spawning channel beyond what would occur in the Sacramento River itself.

SALMON PASSAGE OVER DAM

Senator BARTLETT. Have any new techniques been developed for getting the salmon over high dams?

Mr. GOTTSCHALK. Nothing new in the past several years that I am aware of.

Senator BARTLETT. What is the maximum height over which you can raise salmon now, and bring them back?

Mr. GOTTSCHALK. That last remark you made makes the answer more difficult. There is virtually no limit on the height of the dam that you can get the fish over.

Experimentally, the Bureau of Commercial Fisheries have had salmon go up several thousand feet, adult fish, but the problem of returning fish, the young fish, is another type of problem.

I would say there is reasonable success in dams of the order of 100 feet in height. The young fish are able to get through that height dam, but when you get much higher than that, then there are very severe problems of movement through the reservoir, competition with other fish in the reservoir, predation by other fish in the reservoir, and physiological changes as a result of the passage through the dam as the young fish come out.

I don't believe it can be said that this problem has been solved.

Senator BARTLETT. You are working on it?

Mr. GOTTSCHALK. Our Bureau does not have a program specifically on this problem. By administrative decision within the Department, all of the work that has to do with the passage of fish over dams, either up or down, is being carried out by the Bureau of Commercial Fisheries.

ANADROMOUS SPORT FISHERY PROGRAM

Senator BARTLETT. You are familiar with Public Law 89-304?

Mr. GOTTSCHALK. Yes.

Senator BARTLETT. If this were to be funded for the next fiscal year in the amount of $5 million, despite the fact that there is no budgetary

request, will you please provide for the record a statement of the sort of program that your Bureau would be ready to undertake.

Mr. GOTTSCHALK. We would be very happy to supply this, Senator.

(The statement follows:)

Anadromous fish stocks, such as salmon and striped bass, constitute major fishery resources of the Nation. The natural habits of anadromous fish involving occupation of extensive marine areas during major portions of their life but spawning in inland streams presents problems in management and development of the resource that cannot and has not been effectively handled on an individual State basis. Public Law 89-304, the Anadromous Fish Act, provides needed Federal authority for cooperatively conserving, developing, and enhancing the important anadromous fish resources. This act excludes the Columbia River Basin because there is a specific Federal program involved in that area but includes States bordering the Great Lakes having fish populations which utilize tributaries to the Great Lakes for spawning. Thus, there are 31 States that are concerned with the Nation's anadromous fishery resources.

While existing Federal programs such as the Federal aid in fish restoration program assist the States in developing the resources, there is need for greater Federal effort. At present no Federal program is specifically and entirely concerned with anadromous fish. Likewise, there is no Federal program which enables use of private capital to match the Federal money; therefore, conservation and development of the anadromous fish resource through this channel is absent. Thus, there is a gap in management of a major national resource.

Preliminary information indicates that 25 of the 31 eligible States propose to benefit their anadromous sport fishery through participation in the Anadromous Fish Act in fiscal year 1967. As indicated in the included tabulation, these States would match $3.1 million in Federal funds on a dollar-for-dollar basis. These funds then would represent a total anadromous fishery effort in fiscal year 1967 of $6.2 million. Approximately one-half of this program would be concerned with research activities to provide needed information on management, utilization, and improvement of the anadromous fishery resource. The remainder would be directed toward development of habitat and construction of installations to benefit anadromous fish. Examples of the type of work which would be done follow.

Oregon would expand artificial propagation for steelhead. Coastal sloughs would be developed for rearing coho salmon and research would be undertaken on salmon and steelhead.

New York would develop rainbow trout spawning channels in streams tributary to Lake Ontario and would conduct research on the Hudson River.

Maine would concentrate on development of fishery ladders and other work necessary for the restoration of Atlantic salmon.

Mississippi would carry on life history studies concerning striped bass.

Louisiana would undertake both research and development in an effort to reestablish striped bass where it has historically occurred.

Maryland and Virginia would likewise carry on research on striped bass.

The Anadromous Fish Act provides for cooperative agreements with non-Federal interests other than the States. Consequently, colleges, universities, municipalities, private organizations, and others may participate. This is an area unknown to existing grant-in-aid programs and provides a potential which may prove of considerable significance.

State interest in the anadromous fish program is strong and there is reason to believe that this new opportunity for conservation, development and enhancement of the anadromous fishery resources of our Nation will experience a substantial benefit.

Through the coordinated approach made possible through the Anadromous Fish Act there is indeed unique opportunity for sound investment of Federal funds.

Based on their indication of needs and ability to match Federal funds, the

$3.1 million needed for anadromous sport fishery work in fiscal year 1967 would be allocated to States as follows:

	Thousands		Thousands
Alabama	$5	New Jersey	$15
Alaska	25	New York	87
Connecticut	20	North Carolina	5
Delaware	10	Ohio	10
Florida	15	Oregon	974
Georgia	25	Pennsylvania	10
Louisiana	50	South Carolina	100
Maine	200	Vermont	50
Maryland	50	Virginia	5
Massachusetts	50	Washington	85
Michigan	1,000	Wisconsin	190
Minnesota	50		
Mississippi	50	Total	3,106
New Hampshire	25		

Twenty States have indicated a need for and ability to use $4.2 million for commercial anadromous fishery work under the Bureau of Commercial Fisheries. The States have also indicated a capability of utilizing $1.1 million for sport fishery and $1 million for commercial fishery under the Anadromous Fish Act in fiscal year 1966.

State Matching Fund Projects

Mr. Gottschalk. You understand, of course, it is a matching program and the work essentially would be carried out by the States.

Senator Bartlett. That will make it difficult for you to supply, or do you have many, many applications already?

Mr. Gottschalk. Yes, we do. We have a substantial number. We have been in touch with all of the States and we are having a series of meetings with all of the States. There will be one in Portland, Oreg., on the 10th of March, and the States are coming in with a large number of projects.

As a matter of fact, in fiscal year 1966 they have indicated that they could supply projects that have to do with sport fishing in the amount of $1,102,000; commercial fishing, $1,049,000. In fiscal 1967, 25 States have indicated a capability of carrying out projects in the amount of $3,106,000 having to do with sport fish and a slightly smaller number of States than that, $4,218,000 having to do with commercial anadromous fish for a total of $7,324,000 that the States themselves have indicated that they would be able to fund in 1967.

Senator Bartlett. This records an extraordinary interest in light of the fact that the law became effective only last October. It did not become effective, really, but at least it was signed.

Mr. Gottschalk. The States have been very anxious to see this thing develop. All of them qualify and have been putting money in the bank, so to speak, to serve as their part of the matching funds, and there has been a very gratifying interest. I think it is going to be a repetition of some of the other Federal-aid programs in terms of the results.

Senator Bartlett. The fish hatchery situation in Alaska is in good stead, is it not?

Mr. Gottschalk. I would say yes, after due deliberation.

Senator Bartlett. As good as it can be and as bad as it might be in light of the fact that there are none there.

Mr. GOTTSCHALK. There will come a time when we will get over the idea that Alaska is a virgin place of unspoiled Wilderness fishing and we will be doing some fish stocking up there.

Senator BARTLETT. This is very true, and the State Department is doing something about that now. Twenty-five years ago streams around Anchorage were filled with game fish. Then the military moved in and there were no restrictions at that time and within 2 or 3 weeks, in some cases, there were no more fish. Yes, indeed, we will have to restock.

ANNUAL SHEEP KILL BY PREDATORS

Do you have any idea how many sheep are killed by predators?

Mr. GOTTSCHALK. Yes, we have a reasonably good estimate. I have to qualify it because we get that information from the man who has lost the sheep, and sometimes he might be inclined to exaggerate his losses a little bit. I would not want to say that is a general characteristic, but it does make the statistics a little bit suspect.

I do not have a copy of the report that we put together each year that contains that information, but I can very readily supply that for the record.

Senator BARTLETT. This relates to the loss of one rancher only?

Mr .GOTTSCHALK. No; I am talking about a national estimate.

Senator BARTLETT. I wish you would do that.

Senator BARTLETT. Taking an uninformed guess, how many do you think it might be?

Mr. GOTTSCHALK. Let me call on someone else who might know a little more that this.

Mr. BERRYMAN. I don't think we could make an intelligent estimate on total numbers. We have several different reports from several groups, such as the Wool Growers Association and various farm organizations, but this relates to the total economic loss rather than the total number of animals lost.

We can supply that information for the record.

Mr. GOTTSCHALK. We would hate to put ourselves on record with a snapshot guess, but we will supply what we can give you for the record.

(The information follows:)

The Bureau does not have reliable data on the number of sheep lost to coyotes over the entire Nation. Generally, losses are reported in terms of percent or economic loss rather than numbers of animals killed. However, there are some examples indicating the extent of losses in local areas.

A survey conducted in 1963 by the South Dakota Crop and Livestock Reporting Service in cooperation with the U.S. Department of Agriculture indicates that South Dakota livestock and poultry losses from predatory animals, other than dogs, amounted to $734,000 for that year. The South Dakota livestock inventory for January 1, 1964, shows 1,641,000 sheep with an estimated value of $23,925,000.

A survey conducted by the Colorado Wool Growers Association in 1965 shows 15,815 sheep lost to predators in that State. This was taken from 239 reports covering 289,003 sheep and is based on only 26.3 percent of the sheep that were reported in the questionnaires. Sheep losses before the start of the Bureau's cooperative predator control program were estimated by the sheep industry at 10 to 15 percent of the total sheep population, and losses last year were estimated at 2 to 5 percent.

More information is needed on losses from predatory animals and it should, for obvious reasons, come from independent sources not directly associated with the industry. Accordingly, we have asked the Department of Agriculture to include losses from wildlife as a part of their annual agricultural census. The Department of Agriculture has agreed, and details for collecting needed information are being developed. The Agriculture Department's Research Service plans to open a new research station at Hastings, Nebr., which will have about 10,000 sheep on it. They have agreed to maintain records on sheep losses from predatory animals for us. Information from this station will be collected in a scientific way and will be used for interpreting data received from other sources.

The fragments of information which have been reported to various offices indicate an increase in sheep losses to coyotes during the past year. Efforts are being directed to reduce these losses as quickly as possible.

CENSUS OF PREDATORS

Mr. GOTTSCHALK. One of the most difficult things about this whole animal control problem is we really do not have a good estimate of the impact of the coyote or other predators on the livestock industry, and we are working right now on this and we have been in close contact with Agriculture and we are working with their specialists for getting a more reliable estimate of the actual economic loss that people suffer as the result of the predatory animal.

Senator BARTLETT. You do not have any systematic means at present for taking a census?

Mr. GOTTSCHALK. No, sir.

PREDATORS OTHER THAN COYOTES

Senator BARTLETT. What animals other than the coyote cause this depredation?

Mr. GOTTSCHALK. The coyote is by far the most serious predator we have as far as the sheep industry is concerned.

We do have a great deal of complaint about the golden eagle. The Secretary has issued special dispensations in Montana and Texas to permit the taking of golden eagles by ranchers to help them protect depradations by these birds.

This is a very controversial subject, too.

Aside from the coyote, perhaps the black bear and the mountain lion are the next most important ones, although when you get into this category, then you get to the point where you are wondering whether the foxes in certain situations might be as bad on chickens as the mountain lion is on calves in another situation, but I would say that the coyote, the mountain lion, the black bear, the minx, and the bobcat are the principal predators in the United States.

Senator BARTLETT. Are there enough wolves in the Western States now to constitute a real and lively present danger?

Mr. GOTTSCHALK. My answer would be "No." There are not enough wolves in any of the Western States, with the exception of Alaska, and I am sure you are more familiar with that situation than I am, but there is a program there that we participate in through the Bureau of Indian Affairs for the protection of the reindeer and to some extent the caribou.

Senator BARTLETT. Thank you very much.

Mr. TUNISON. I would like to expand a little bit on that spawning channel. Perhaps the Director left the impression that this was the first one. That is not true. There is one below the McNary Dam on the Columbia, and I believe there are several in British Columbia.

Senator BARTLETT. As to putting them above the dams, that is a different matter.

Mr. TUNISON. That is entirely different. This is for adults.

Senator BARTLETT. You form an artificial lake with the dam and there is no hope of putting one of these artificial channels in?

Mr. TUNISON. No, sir.

Senator BARTLETT. Thank you very much, gentlemen.

The material which Senator Hayden wanted included in the record will be printed at this point.

(The material follows:)

QUESTIONS SUBMITTED BY SENATOR BIBLE

LAHONTAN NATIONAL FISH HATCHERY

Question. I should like to ask about the status of the Lahontan Fish Hatchery. Under date of December 18, 1965, I was furnished a status report in a letter from Mr. Tunison, a copy of which I request be placed in our hearing record. My understanding is that the budget for fiscal year 1967 does not contain any construction funds for any Federal fish hatcheries. However, I am advised that for the Lahontan Hatchery, $10,900 for operation and maintenance is budgeted and that if we were to add the sum of $59,100 for O. & M. the facilities at the hatchery which will be available in fiscal year 1967 are capable of producing 50,000 pounds of fish. Would someone comment on this matter?

Answer. The fiscal year 1967 budget contains $10,900 in operating funds for the Lahontan National Fish Hatchery. With the facilities and water supply that will be available in fiscal year 1967, it would be possible to produce about 50,000 pounds of trout. This can be accomplished by transferring small fish from other hatcheries for subsequent rearing at Lahontan. However, in order to obtain this production level, $70,000 in operating funds would be required for personnel services, fish food, equipment, and supplies.

When the station is fully developed, the annual production level will be about 125,000 pounds of Lahontan cutthroat and rainbow trout. The annual operating funds requirement at that time will be approximately $135,000.

U.S. DEPARTMENT OF THE INTERIOR,
FISH AND WILDLIFE SERVICE,
BUREAU OF SPORT FISHERIES AND WILDLIFE,
Washington, D.C., December 27, 1965.

HON. ALAN BIBLE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR BIBLE: In response to your telephone inquiry of December 15, we are pleased to provide the following report on development of the Lahontan National Fish Hatchery, Nevada.

To date, $624,000 has been appropriated for planning and construction of the unit. As of December 16, we had obligated a total of $565,058; the unobligated balance was $58,942. The obligations include the following completed actions: Preliminary engineering and planning, site acquisition, geological investigations, acquisition of the Pruett well, and drilling of six other wells. The following items are now in progress under contract with Isbell Industries, Inc.: Roads, bridge, supply lines, brood ponds, rearing ponds, pond supply and drain lines, domestic pump and piping, and a recirculating pumping station.

This work is progressing in a satisfactory manner. The contractor has completed a large part of the excavation work; the entrance road is built; and the concrete piers for the bridge are poured. At the present time, there is about one foot of snow on the ground at the site, and work has been temporarily suspended. We expect work to resume about January 3, and all these items to be completed by April or May 1966.

Most of the unobligated funds will be used to lay a pipeline from well No. 6 to the hatchery (about one-half mile), and to provide a pump and standby generator. Invitations to bid on this job will be issued in January 1966, and work should be completed by April. The balance of the unobligated funds will be used for engineering inspection and various administrative costs.

In order to complete development, an additional $605,000 will be needed for the following items:

Funds needed for the program

1st phase:	
Carson River intake	$40,000
Carson River supply (40 inches)	144,000
Hatchery supply and drain lines	5,000
Hatchery tanks (36)	20,000
Hatchery	150,000
Sewage and domestic water facilities	2,800
Curbing and sidewalk	2,000
Total	363,800
2d phase:	
Shop-feed storage	45,000
Vehicle storage	30,000
Paint and oil storage	4,000
Three residences	60,000
Incubators	6,000
Picnic tables and toilet facilities	3,000
Electrical service (secondary)	3,200
Area lighting	2,000
Roads and drives	25,000
Sewage and domestic water facilities (additional)	2,000
Fire hydrants and sprinkler irrigation	4,000
Gasoline pump and tank	2,000
Landscaping	5,000
Equipment	50,000
Total	241,200
Grand total	605,000

This year, $10,400 in operating funds was scheduled for use at the Lahontan site. With the facilities that will be available in fiscal year 1967, it would be possible to produce an initial 50,000 pounds of trout. However, in order to obtain this production, we would require approximately $70,000 in operating funds for personal services, fish food, and supplies. When the station is fully developed, we anticipate an annual production level of about 125,000 pounds of Lahontan cutthroat and rainbow trout. The annual funds requirement for full operation is estimated to be $135,000.

We are pleased to provide the status report on the Lahontan hatchery. Thank you again, for your continuing support of our wildlife resource management program.

Sincerely yours,

A. V. TUNISON, *Acting Director.*

Question. Mr. Chairman, with reference to the Lahontan hatchery, I should also like to know the amount requested of the Bureau of the Budget for construction funds and if such had been requested in the budget, what facilities were contemplated, the time schedule and so forth. I might say that the Bureau's letter to me which has been placed in the record contains such a schedule but I wish to be sure that it is still firm.

Answer. The fiscal year 1967 budget estimates to the Bureau of the Budget contained $363,800 for construction of the Lahontan hatchery, for the following:

Carson River intake	$40,000
Carson River supply line	144,000
Hatchery building	150,000
Hatchery tanks	20,000
Hatchery supply and drain lines	5,000
Sewage and domestic water supply	2,800
Curbing and sidewalks	2,000
Total	363,800

It is estimated that the above work could be accomplished in fiscal year 1967, if the funds were provided. The next phase, $241,200, could be accomplished in fiscal year 1968, or a subsequent year when funds become available.

QUESTIONS SUBMITTED BY SENATOR MCGEE

FISH GENETICS LABORATORY, BEULAH, WYO.

Question. It was with some concern that I learned from your proposed budget for fiscal year 1967 that no construction funds were requested for use at the proposed Fish Genetics Laboratory at Beulah, Wyo. As I recall, this committee and Congress appropriated $340,000 in fiscal year 1963 to acquire the land on which to construct the laboratory facilities and to conduct the necessary research projects. I am somewhat disappointed that as yet we have not been able to get underway with the major and initial items of construction.

It is my understanding that the Bureau has retained an architectural firm to design facilities for construction at the Beulah site. Would you advise me at this time the status of the architectural contract and what has been accomplished toward the design of the necessary building and facilities. What is the cost of the proposed facilities as designed by the architect involved?

In fiscal year 1965 there was appropriated the sum of $100,000 which I understand was to be used primarily for remodeling and enlarging facilities on the property to be used as dwelling houses for Bureau personnel assigned to the laboratory. Would you advise the committee the status of this particular phase of the project and how that $100,000 has been utilized. In addition to this particular $100,000 appropriation, has there been any substantial construction funds made available since this property was acquired.

Last year in a supplemental appropriations bill this committee and Congress made available some $220,000 to repair damage which was caused by an unprecedented flood which inflicted considerable damage on the improvements. Would you please advise to what extent this damage has been repaired and the condition of the facilities at this time in contrast to their condition before the flood damage.

It is my understanding that the first phase of construction activity which is planned would cost a minimum of $825,000. Would you advise the committee how the $825,000 would be expended if it should be made available to you at this time.

Again in reference to the first phase of the construction program, what would be the absolute minimum under which you could commence activity under the first phase during fiscal year 1967? If this amount were made available to you by this committee and the Congress, how would it be utilized in fiscal year 1967?

What staff do you presently have in the operation of the Beulah facilities and what additional staff do you contemplate will be assigned during fiscal year 1967?

ANSWER. The objective of this planned research installation is the development of strains of fishes that are inherently better adapted to specific production and management needs, fish that can provide more and better sport fishing. The approach will be through long-term selective breeding guided by concurrent studies of fish genetics. The program requires extensive facilities for spawning, rearing, and evaluating many small lots of fish under comparably controlled conditions, as well as the coordinated effort of a multidisciplinary research team. Given these, the assurance of success is high.

In fiscal year 1963, $340,000 was appropriated and spent to acquire the laboratory site, approximately 885 acres. Its primary asset is a water supply of excellent quality. Improvements included a number of sound log buildings and a small fish hatchery and earthen rearing ponds, all adaptable to use in the planned activity. Some 240 acres considered surplus to needs for development or watershed protection, was sold to private ownership in 1965. At the time the site was purchased, in May 1963, one custodial resident was employed.

In fiscal year 1964, $40,000 was budgeted and appropriated to support a staff of three employees to maintain the site and assist in program planning. An additional appropriation of $115,000 of 1-year construction funds was used primarily to contract the architectural and engineering services of J. T. Banner & Associates, Inc. Remaining funds were expended for essential repairs to the domestic water and fire protection system and for protective exterior refinishing of the log buildings. By January 1964, J. T. Banner completed a preliminary plan for development of the needed physical plant for the laboratory at an estimated cost of $2,222,095. This development plan suggested that the construction might be undertaken in phases at a minimum increase in total cost of $50,000, assuming a first-phase costing $999,500 for an operable facility.

A $50,000 increase in operating funds was budgeted and appropriated in fiscal year 1965. This made it possible to increase the staff to five, purchase some essential equipment, and start a series of preliminary and exploratory investigations that completely utilized the fish-rearing facilities acquired with the site. With a portion of the operating funds, installation of laboratory furnishings in the lodge basement was contracted.

One-year construction money, $100,000, was added by Congress to the fiscal year 1965 appropriation to make a start on rehabilitation plans. By contract with these funds, the four small log cabins were extended and the "Babcock" house was renovated, providing quarters for five resident families. Completed by November 1965, two of these new quarters, as well as the apartment above the shop-garage, are now occupied; three await recruitment of needed personnel.

Disaster struck in May 1965 when an unprecedented flood demolished the hatchery and severely damaged the earthen ponds. The destruction of the available fish-rearing facilities abruptly terminated all of the research underway.

Regular appropriations for fiscal year 1966 included no increase in operating funds and no money for construction. However, in supplemental appropriation Congress did provide $220,000 needed for flood damage restoration. Flood debris has been cleared, roads repaired, fences mended, and some of the earthen ponds restored to usable condition. Materials are on hand for permanent replacement of the temporary bridges installed to provide access. By supplemental contract with J. T. Banner, construction drawings and specifications for a replacement fish rearing facility have been completed. According to the planned schedule a construction contract will be invited and awarded by April and by November the replacement facility, called R. & D. No. 1, will have been completed. Because of its improved design, it will accommodate expansion of necessary exploratory and preliminary studies.

A battery of circular tanks has been temporarily installed in the barn by force account. These, and the recently completed chemistry-biology laboratory in the lodge basement, permit interim resumption of limited exploratory investigations.

In addition, a good start has been made on replanning proposed construction. The previous plan is being modified to assure the integrity of the water supply and the safety of structures and programs during future floods. Increased costs of necessary conversion to pumped rather than gravity water supply offset the removal from the 1964 estimate of cost of the residence rehabilitation which has been completed with the 1965 construction funds. Moreover, construction costs for the area have risen by about 4 percent in each of the 2 years since the development plan was drawn up. Thus the total cost of planned construction is now $2,400,000. Pumping water also will raise operating costs somewhat, but it should be added that the pumping also permits desirable flexibility of operations and design.

The accompanying construction breakdown shows a possible four-phase program at current estimated costs. It does not include the additional costs that may be expected to result from phasing or further delay in starting construction. The recommended first-phase construction, at a cost of $825,000, will accommodate the basic research and permit a significant start on the selective breeding program.

By deferring construction of the first-unit selective breeding section and the portion of the building planned for feed storage and preparation, it would be possible to reduce the first-phase construction cost to about $425,000. Some of the laboratory furnishings and equipment also would have to be postponed to pay the extra cost of piecemeal construction, but the resulting facility would be entirely adequate for initiation of the basic research activity only.

Minimum laboratory and office space costing about $270,000 can be useful at this stage for exploration and development of methods, and for advanced trial or pilot plant tests in the genetics program. Rehabilitation of the existing lodge structure to accommodate offices and a working library ($75,000), construction of a research laboratory ($185,000), and appurtenant water supply and waste disposal systems ($10,000) will permit a promising start on the work planned for this fish genetics program.

This fiscal year 1967 budget requests an increase of $12,000 and one supporting position. The present staff includes one GS–13 and one GS–9 fishery research biologist, one GS–12 fishery management biologist, a GS–9 caretaker, and a GS–3 clerk-typist. The proposed addition of a GS–7 fish culturist will allow more efficient utilization of the professional staff. With this addition, financing and staffing are sufficient for presently available facilities with one important exception. A laboratory director is needed now to flesh out the skeleton program prospectus and to work closely with the contract at A. & E. firm in planning

construction that most economically and efficiently meets operational requirements; in short for planning and programing.

Fish Genetics Laboratory, Beulah, Wyo., construction program

[Flood protection revision, 1966 preliminary cost estimates]

Convert lodge to office-library headquarters	$75,000
Research laboratories	185,000
Performance testing section	50,000
Fish feed preparation, storage, and records	75,000
Selective breeding, part of general section	325,000
Water supply system, first unit	60,000
Sewage disposal	13,000
Fire protection	9,000
Flood control	11,000
Drives, parking, and walks	22,000
Beginning operation facilities	825,000
Selective breeding, remainder of general section	500,000
Water supply system, second unit	90,000
Three residences	60,000
Partial operation facilities	650,000
Selective breeding, disease resistance	245,000
Selective breeding, environmental control area	210,000
Water supply system, third unit	70,000
Waste water disease decontamination	10,000
Basic operation facilities	535,000
Water temperature and quality control installation	50,000
Stream sections, raceways, and tanks	275,000
Primary treatment basins for waste water	17,000
Pave drives and parking, fencing, and landscaping	48,000
Completion facilities	390,000
Total, planned construction	2,400,000

JACKSON NATIONAL FISH HATCHERY, WYOMING

Question. In recent weeks I have received considerable correspondence from my constituents in Teton County in reference to the fish hatchery at Jackson, Wyo. These people have expressed the unanimous opinion that the operation of this particular hatchery has not kept pace with the needs or requirements of that particular area.

With this in mind, I would like to determine if the Fish and Wildlife Service has given any serious thought to enlarging its facilities at Jackson. If so, do you have any estmate as to what the cost of the proposed expansion or enlargement might be and how long it would take to complete them? How much money would be required for your use in fiscal year 1967 to undertake such expansion facilities? Do you feel that enlargement of the Jackson facilities would be worthwhile and beneficial and would such a program have the support of the Fish and Wildlife Service?

Answer. The Bureau of Sport Fisheries and Wildlife has given serious thought to enlarging the facilities at this station, and currently has a development program. The cost of the proposed expansion is estimated to be $140,000.

The expansion of this station is considered worthwhile and beneficial. Justification for this is contained in the following program:

The Jackson hatchery was established under authority of the Palisades Dam Act (64 Stat. 1083, approved September 30, 1950). Construction funds were made available by the Bureau of Reclamation in fiscal years 1955, 1957, and 1958, and fish-cultural operations began in March 1958. As originally planned, the Jackson hatchery was scheduled to produce cutthroat trout largely for stocking the Snake River, its tributaries, and the impoundment created by Palisades Dam.

Since then, the distribution area of the hatchery has been enlarged to include waters on other Federal lands and now covers western Wyoming, part of Utah, and eastern Idaho. Projects served by the hatchery include Teton, Targhee, Bridger, and Shoshone National Forests; Grand Teton and Yellowstone National Parks; the Wind River and the Uintah and Ouray Indian Reservations; Palisades Reservoir and Jackson Lake; and Fort Douglass Military Base. Waters in this area total about 100,000 acres of lakes and 4,000 miles of streams.

The current development program is primarily directed toward augmenting the hatchery water supply through development of an additional well and placement of a new pipeline. The production capabilities of the hatchery are currently restricted by low flow rates during the months of April through June. A new supply of approximately 2,000 gallons per minute would enable the hatchery to operate at full capacity. It would also provide protection for the existing supply if current water developments in the area should result in a curtailment of flows from Peterson Springs, the primary supply source.

The development program includes the following items:

New Well	$12,000
Pipeline to Peterson Springs	108,000
Blacktop parking area	20,000
Estimated cost of development	140,000

FISH HATCHERY, SARATOGA, WYO.

Question. What is the status of the modernization project at the fish hatchery at Saratoga, Wyo. Are additional funds required in fiscal year 1967 to complete this project?

Answer. Work for which funds were provided in fiscal years 1965 and 1966 is progressing on schedule and will soon be completed.

Additional funds in the amount of $212,000 could be utilized to advantage in fiscal year 1967 to complete this project. Justification for this work with cost estimate follows:

The Saratoga hatchery was established in 1914 to produce small fingerling trout for stocking high mountain lakes and streams. During the intervening years, a steady increase in fishing pressure on the waters within the Saratoga distribution area has resulted in a different management requirement. Today these waters must be stocked with large fingerling and harvestable trout to maintain populations and provide satisfactory levels of fishing success. The lack of adequate production facilities in good condition has reduced operating efficiency at the Saratoga hatchery, thereby limiting the potential production. In order to correct this situation, funds totaling $376,000 were appropriated in fiscal years 1965 and 1966 for a program to repair, modernize, and expand facilities at this hatchery. On completion of this development, the station will produce several hundred thousand large fingerlings and over 30,000 havestable size trout annually.

In addition to the production element of the station's program, the Saratoga hatchery will also serve as a broodstock and spawning station. Under this segment of the program, a dependable and controlled supply of rainbow trout eggs will be available for other units of the national fish hatchery system. The spring water supply is of good quality and in a favorable temperature range for maintaining broodstock. The well water supplies are highly suitable for incubation of eggs.

With full development of facilities, it will be possible to maintain a broodstock capable of producing about 10 million eggs annually.

Funds needed for full development

Buildings:	
Shop and garage	$42,000
Oil and paint storage	6,000
2 Residences with garages	40,000
Other physical facilities:	
Station roads and parking	60,000
Leveling, grading, site preparation, and landscaping	8,000
Domestic water and sewage	12,000
Utility lines—gas, electric, and telephone	18,000
Fence—chain link	11,000
Equipment	15,000
Total	212,000

QUESTIONS SUBMITTED BY SENATOR MUNDT

SOUTH DAKOTA NATIONAL WILDLIFE REFUGES

Question. Last year you provided me with a statement on the status of the South Dakota national wildlife refuges. Your statement reads in part, as follows: "The Bureau would like to schedule in the fiscal year 1967, an artisan well liner, a service building and an oil house at a total cost of $38,000 for the Lake Andes refuge. We would also like to schedule in 1967 an estimated $100,000 of work for the La Creek refuge in the way of dikes, ditches, culverts, artificial pothole construction, nesting islands, several buildings, fencing, road and trail work, and some recreational development.

"Additional development work at the Sand Lake refuge to the extent of an estimated $300,000 is required for dikes, ponds, bank stabilization, land leveling, nesting islands, buildings, fencing and posting, roads and trails, and some recreational facilities.

"An estimated $115,000 is needed at the Waubay refuge for development work in connection with dike construction, nesting islands, artificial potholes, buildings, roads and trails, and some recreational facilities."

Several of my constituents have also inquired about the scheduling of these improvements. Can you give us an idea of which are most urgently needed and the cost of these improvements?

Answer. Development work on certain South Dakota national wildlife refuges is scheduled when funds are available, as follows, in order of priority:

1. Lacreek refuge (Martin), $100,000

Item A. Ditches, culverts, artificial pothole construction, and nesting islands are needed to fully utilize water rights from the Little White River. This water is now utilized in the Little White River recreational impoundment during the summer. During the spring runoff additional water could, with development, be diverted to a series of artificial potholes to increase the waterfowl nesting potential of the Lacreek refuge. This work will cost approximately $40,000.

Item B. Recreational development, $45,000:

1. Little White River Area, $15,000.—Graveling 1 mile of access road; graveling parking lots at the beach and boat launching areas; construction of a bathhouse and sanitary facilities, and drilling a well for drinking water.

2. Pool 10 area, $5,000.—Graveling 1 mile of access road to the picnic area, graveling parking lots, construction of picnic tables and grills, new sanitary facilities and drilling a well for drinking water.

3. Self-guided tour road, $25,000.—Widening and graveling a loop road so visitors can see waterfowl concentrations and other wildlife on the refuge will cost approximately $25,000.

Item C. Fencing, $15,000: Boundary and interior fences required to manage grazing program on the refuge, with access trails and cattle guards, will cost approximately $15,000.

2. Waubay refuge (Waubay), $115,000

Item A. Waterfowl habitat, $70,000: The most pressing need is for additional dike construction to create more waterfowl habitat. Nesting islands and artificial potholes will be constructed in portions of the refuge while the water is held at a low level for dike construction. Roads and trails to permit travel to the new impoundments will be constructed.

Item B. Recreational development, $45,000:

1. Picnic areas, $20,000.—The existing recreational facilities are now obsolete and must be upgraded. Access roads and parking lots should be surfaced. New picnic tables, fireplaces, sanitary facilities, and drinking water will be required.

2. Self-guided tour route, $25,000.—A self-guided tour road through portions of the refuge should be constructed and graveled to permit interested people to see concentrations of waterfowl and other wildlife.

3. Sand Lake refuge (Columbia), $300,000

Item A. Waterfowl habitat, $180,000: At Sand Lake refuge the greatest need is for the stabilization of shorelines along impoundments and river. Approximately $80,000 will be required for this purpose. The construction of dikes to create impoundments is another high priority item. Nesting islands will be constructed in the impoundments and artificial potholes will be dug along the shorelines of existing potholes.

Item B. Recreational development, $100,000: Recreational facilities consisting of access roads, parking lots, sanitary facilities, picnic tables, fireplaces, and

drinking water will be required at three locations. These facilities plus the construction of a self-guided tour route for visitors will cost approximately $100,000.

Item C. Fences and buildings, $20,000: The existing boundary fence on the refuge is in poor condition and should be rebuilt and reposted. The remainder of the funds will be used for the repair and remodeling of existing buildings including the development of public restroom facilities at the headquarters.

4. Lake Andes refuge (Lake Andes), $38,000

The existing artesian well at the Lake Andes refuge is deteriorating rapidly because of the corrosive action of the artesian water. The well casing should be lined with materials resistent to the corrosive effects of the water. A small oil house at the headquarters and a storage building should also be constructed. These projects will total approximately $38,000.

RELATIONSHIP BETWEEN LAND AND WATER CONSERVATION FUNDS AND ENDANGERED SPECIES PROGRAM

Question. Unfortunately I was at another meeting the other day when the officials testified concerning the Bureau of Outdoor Recreation and the land and water conservation fund. It is my understanding that there are funds in these budgets which are to be used by the Bureau of Sport Fisheries and Wildlife for the endangered species program and for development of recreation areas at several fish hatcheries and wildlife refuges. Can you give us some background details on how these land and water conservation funds fit in with the endangered species program?

Answer. Public Law 88-578, the Land and Water Conservation Fund Act of 1965, provides in part that moneys appropriated from the fund for Federal purposes may be made available for the acquisition of land, waters, or interests in land or waters for the national park system, national forest system, threatened species, and recreation at national wildlife refuges and national fish hatcheries.

The threatened species portion of the act provides that land and waters may be acquired for any national area which may be otherwise authorized for the preservation of species of fish or wildlife that are threatened with extinction.

The recreation at refuges portion of the act provides that land and waters may be acquired for the incidental recreation purposes under the provisions of section 2 of the act of September 28, 1962 (76 Stat. 653; 16 U.S.C. 460 K-1).

A threatened species is one whose prospects of survival and reproduction are in jeopardy, or whose numbers are so few throughout its range that any adverse change in the environment would immediately put it in peril. Threatened species must have attention, or extinction will probably follow. The threatened species program is a program for people. People enjoy animals, birds, and fish. They like to watch and photograph them. They derive a measure of spiritual satisfaction and esthetic pleasure in knowing that a threatened species such as the whooping crane still exists. Future generations will hold us responsible for effective efforts to preserve species now threatened with extinction.

The President's budget for the fiscal year 1967 recommends that $1,514,000 be appropriated for the threatened species program and for the addition of small acreages to nine national wildlife refuges and national fish hatcheries for recreation areas for the greater enjoyment of these areas by the public.

Included in the estimate is an item of 7,040 acres at a cost of $1,335,000 for the threatened population of Florida sandhill cranes. Due to the great influx of people into Florida and resulting developments such as roads, drainage, urban developments, powerlines, rights-of-way, etc., many of the former wild acres in this State have now converted to purposes of civilization. Many lakes, marshes, and swamps which were formerly important habitat for the Florida sandhill crane are gone or going. In 1965, best estimates place the population at less than 2,000 birds. Their numbers are gradually declining as their habitat disappears and unless something definite is accomplished in the preservation of a sizable acreage of suitable habitat for the cranes, their continued existence will be imperiled.

A sandhill crane sanctuary in Florida is needed. Key habitat must be preserved to insure preservation of these cranes. A few more years of change in land use will likely result in it being too late to assure the survival of this species. The proposed refuge area will also benefit other important wildlife species characteristic of Florida which are on a downward trend as are the cranes. Great concern has been expressed in recent years over the caracara, the burrowing owl, and the Florida grasshopper sparrow. The nearly extinct

Everglades kite may also be helped and probably the bald eagle. Substantial benefits to the people of this country would result from the establishment of such an area for the Florida sandhill crane. The opportunity to visit the area and observe the unusual association of plant and animal life is increasingly valuable to the public. People of the future should not be denied this opportunity.

Nine recreational areas totaling 643 acres at a cost of $179,000 are also included in the budget. These small additions are on two hatcheries located in Minnesota and Ohio and on seven refuges in the States of North Dakota, Oklahoma, Washington, Wisconsin, and Wyoming. The additions will be used mainly to provide parking, picnicking, and other visitor support facilities.

Legislation has been introduced in the Congress and passed by the House, H.R. 9424, to provide a comprehensive program for the conservation, protection, and propagation of native species of fish and wildlife, including migratory birds, that are threatened with extinction and to consolidate the authorities relating to the administration by the Secretary of the Interior of the national wildlife refuge system. This legislation is now being considered by the Senate Committee on Commerce.

ENDANGERED SPECIES PROGRAM

Question. Last year the committee adopted my amendment to provide $350,000 for a program to preserve and protect our endangered species of wildlife. Can you give the committee a rundown on progress of the program started with funds made available by my amendment?

Answer. We have put these funds to productive use in the following ways: Topographic maps with 1-foot-contour intervals have been prepared for that part of the Patuxtent Center on which development of the endangered wildlife research and propagation facility will be accomplished; a comprehensive engineering developmental plan for the Endangered Wildlife Research Station at the Patuxtent Center has been completed; site location, design, and preliminary floor plans have been completed for the wildlife research laboratory-administration building; plans and specifications for the first stage of construction of the avicultural complex, including a water supply system, propagation building, service-storage building, and the battery of production enclosures are essentially complete and bids will be let within a matter of weeks; temporary holding facilities, including a prefab incubation-brooder building, pens, ponds, and a water system have been constructed to met the needs of the program until permanent structures are completed. These will continue to serve a useful purpose after the permanent fixtures are in place; the entire captive stock of the Monte Vista Research Station in southern Colorado was moved by commercial airline to Patuxent on February 21, and everything is in a stage of readiness for the current breeding season; and a supervisory biologist with 22 years of Federal service was selected to head up this research program as Assistant Director of the Patuxent Center. Three wildlife research biologists have been assigned to make field studies of threatened wildlife: the Hawaiian species, the California condor, and the black-footed ferret, respectively. A fourth biologist, soon to return from a temporary assignment to Midway Island, will be giving attention to the Florida Everglades kite and other threatened species in the Southeastern United States. Qualified applicants for the two animal caretaker positions are being sought and temporary appontments are serving interim needs. The secretary will be selected shortly. A biologist in charge of the propagation science activity at the station, and his assistant, complete the present complement of 10 positions for this endangered wildlife research program.

Question. How much is included in the budget for the program this year?

Answer. The sum of $350,000 was carried over from the amount appropriated last year which, plus $35,000 previously available, is the entire operating budget for this activity.

Question. What will this amount provide?

Answer. This amount will provide the salaries and other expenses of a staff of 10 employees, the purchase of several vehicles, a tractor and mower, miscellaneous equipment and tools, furnishings for existing buildings, the improvement of roads and trails, and clearing, planting, and maintaining agricultural lands for project purposes.

Question. Does this give you enough money to move this program ahead at a reasonable pace?

Answer. We are highly gratified by the interest shown by you, this committee, and the administration in appropriating funds which have enabled this important work to progress. Nonetheless, we shall have to withhold some needs from our planning this year and rely on temporary holding facilities for at least a year longer than we had hoped.

LABORATORY-ADMINISTRATION BUILDING

Question. You say that you have preliminary drawings for a laboratory completed. When do you expect to request construction funds?

Answer. We plan to ask for laboratory-administration building construction funds in fiscal year 1968. This drawing shows the type of structure that we have in mind.

Question. How will delay here affect the program?

Answer. The laboratory will be equipped and staffed to perform basic biological research in animal physiology, nutrition, pathology, and behavior. These studies cannot be performed by the field biologists or by the staff engaged in propagation science. In addition to fundamental research, the laboratory will provide supporting diagnostic and identification services to the field and aricultural work. For this reason, it is important that all three components of this program move forward simultaneously. Delayed progress in any one of them is bound to be detrimental to the overall research effort on threatened wildlife.

Question. How much could you use for laboratory and other essential construction next year if funds were to be available?

Answer. If available, the sum of $420,000 would permit the construction of the research laboratory containing approximately 12,000 square feet of floorspace. It would also cover site preparation and facilities such as a surfaced access road, a sewage disposal system, and water and electrical service systems. Additional permanent enclosures, including the construction of a battery of roofed enclosures with associated water distribution systems, shelters, feeders, and a perimeter fence, could be built for $120,000. Finally, a residence to house one of the custodial staff is needed to insure continuing surveillance of the captive stock at all times in the event of vandalism or emergencies affecting their welfare. These three items totaling $560,000 would assure continued progress in this program.

PERSONNEL

Question. What about your personnel situation? Do you have enough people to adequately handle the work that is being carried out today?

Answer. The total authorized staff of this program now consists of 10 employes. Six new positions will be needed to carry forward the functions of the Endangered Wildlife Research Station. The salaries and costs of these positions can be borne by operating funds included in our fiscal year 1967 estimates. The six positions include two animal caretakers to provide care of captive stock on a 24-hour day, 7-day week basis, for much of each year and a secretarial position. An animal physiologist-nutritionist is needed to give continuing attention to the dietary requirements and the formulation of foods, as well as to make continuing appraisals of the physical condition of the captive stock. And finally, two wildlife research biologists are needed for assignment to field studies of such species as the Tule white-fronted goose, the masked bobwhite, the Attwater's prairie chicken, and the red wolf.

Question. I notice by your justifications (p. SFW 15) that the Gavins Point Hatchery is operating somewhat below full capacity. We have a severe shortage of fish in South Dakota and the other areas served by the hatchery. What would it take in terms of dollars to bring Gavins Point to full production?

Answer. Funds contained in the fiscal year 1967 budget for this station will provide for only partial operation, for an estimated production of 5,000 pounds. An additional $13,800 is needed for full production (8,000 pounds) of the existing facilities.

MCNENNY NATIONAL FISH HATCHERY

Question. Would you give us a rundown of the present status of the McNenny National Fish Hatchery and outline the cost of figures as to what it would take to bring this hatchery up to operational capacity?

Answer. An improvement program in the amount of $205,000 is needed for this hatchery, which will provide additional facilities, approximately doubling the present fingerling production.

Funds contained in the fiscal year 1967 budget for this station will provide for only partial operation, for an estimated production of 75,000 pounds. An additional $17,450 is needed for efficient operation of the facilities.

With adequate improvement and operational funds, it is believed that existing State and Federal hatcheries can meet the needs for supplying hatchery-reared trout for management programs in trout waters of South Dakota.

GAVINS POINT FISH HATCHERY

Question. Our South Dakota fish and parks people have been interested in, and I have had correspondence with you concerning, a fish hatchery below Oahe Reservoir. This proposed hatchery would supplement production from Gavins Point Hatchery which now goes to four States. It would alleviate a shortage of fish, especially northern pike and walleye which faces South Dakota and the surrounding area in the near future. Wouldn't it be well to plan ahead and begin plans for another hatchery now before the situation turns into an emergency? How much would it cost to prepare plans for such a hatchery?

Answer. At the present time it is our plan to develop the Gavins Point fish hatchery near Yankton, S. Dak. After this is accomplished it is our belief that we should be able to satisfy the fish-stocking requirements in the State of South Dakota. We do not foresee the need for a fish hatchery below Oahe Dam at this time.

FISH GENETICS LABORATORY, BEULAH, WYO.

Question. Senator Simpson has asked me to request a detailed narrative report from you on the status and plans for the Fish Genetics Laboratory at Beulah, Wyo. Would you provide this for the record please?

Answer. Work at the Fish Genetics Laboratory has recovered from the disastrous interruption caused by unprecedented floods in May 1965. With the help of a supplemental appropriation of $220,000, flood debris has been removed and some of the ponds have been restored to useful condition. Circular tanks temporarily installed in the barn, and a chemistry biological laboratory constructed in the lodge basement, permit interim resumption of limited investigations. The development of strains of fish well adapted to management needs and sportsmen's requirements is proceeding.

Although the laboratory site and excellent water supply were acquired with funds appropriated in 1963, and modest appropriations for operating funds were received in 1964 and 1965, much remains to be done before the original plan of construction and operation is fulfilled. The recommended first-phase construction unit, estimated to cost $825,000, will accommodate the basic research required on fish genetics, and will permit a significant start on the selective breeding program. The fiscal year 1967 budget contains an increase of $12,000 and one supporting position to bring the staff to a total of six positions. A laboratory director has not yet been selected, but the program prospectus and the construction plans are far enough advanced to take this important step. (A more detailed answer appears on page 1069.)

QUESTIONS SUBMITTED BY SENATOR STENNIS

COOPERATIVE WILDLIFE RESEARCH UNIT, MISSISSIPPI STATE UNIVERSITY

Question. As a result of correspondence between my office and yours, you are aware of Mississippi's interest in establishing a cooperative wildlife research unit at Mississippi State University. Will you please advise the committee the interest of the Bureau in the establishment of this unit.

Answer. The Bureau, in trying to meet its national responsibilities, is concerned about the rapid growth in outdoor recreation and the added burden this will place on our wildlife resources. To meet the challenge of the future, we must insure that there is an adequate supply of wildlife conservation specialists and that we carry on sufficient research to obtain the basic facts needed to guide management programs. The units are designed to train wildlife professionals and to perform research of importance to the participating agencies. Accordingly, a cooperative wildlife research unit at Mississippi State would increase our opportunities of fulfilling both those needs.

Question. I note in your budget that no provision is made for the establishment of new units in fiscal year 1967. Does this indicate a lack of desire or need for additional units on your part, or is it due to financial limitations?

Answer. It is because of the funding situation. We are, of course, obligated to meet our current commitments first of all.

Question. Do you consider the facilities and staff at Mississippi State University adequate to the proper support of a cooperative wildlife research unit?

Answer. Yes. One of our Washington office staff, at the request of the university, made an informal inspection late in 1964, of the university's wildlife training and research facilities, and was pleased to find them adequate for initial unit operation. In due time, the university would need to add staff and, as the pro-

gram developed, additional space and facilities would become necessary. University representatives on this occasion emphasized their desire and ability to meet any material operational requirements.

Question. What direction do you feel that such a program should go? What special emphasis should be given to the training and research that would be performed?

Answer. First, let me say these units have a 31-year history of working on problems of specific interest to the participating States. Mississippi is an agricultural and forest resources State, in which outdoor recreation is becoming steadily more important. The program, therefore, would most probably be directed toward agricultural and forest wildlife, seeking not only the factors that make for wildlife productivity, but also how more huntable wildlife could best be correlated with your agricultural and forestry needs. The State game and fish commission as a member of the unit coordinating committee would actively participate in determining what research projects would be most valuable for management purposes. And the graduate students trained at the university through the unit would provide an excellent source for recruiting technically qualified personnel in building up its management and research staffs.

Question. How much would it cost to establish a cooperative wildlife research unit in Mississippi?

Answer. We feel that the unit should have both a leader and an assistant leader to insure adequate attention to research, training, and administrative needs. We are finding that the leader by himself cannot satisfy all of the demands made upon his time. The cost to finance the two positions with a nominal fund for operating expenses would be $40,000 annually.

MONTANA COOPERATIVE FISHING UNIT

LETTER FROM SENATOR MANSFIELD

U.S. SENATE,
OFFICE OF THE MAJORITY LEADER,
Washington, D.C., February 15, 1966.

Hon. CARL HAYDEN,
Chairman, Interior Appropriations Subcommittee,
U.S. Senate.

DEAR MR. CHAIRMAN: Enclosed is a letter I have just received from Leon H. Johnson, president of the Montana State University in Bozeman Mont., discussing the need for increasing the Federal contribution to the Montana cooperative fishery unit as authorized under Public Law 86-686.

Dr. Johnson is recommending an increase in the appropriation of $40,000 which would equalize it with those funds made available to newer units. Based on the information contained in his letter, this is a reasonable request and I hope that it might be considered by the subcommittee.

With best personal wishes, I am,

Sincerely yours,

Enclosure.

MIKE MANSFIELD.

LETTER FROM MONTANA STATE UNIVERSITY

FEBRUARY 11, 1966.

Senator MIKE MANSFIELD,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MANSFIELD: The Montana cooperative fishery unit was established at Montana State University, Bozeman, in 1963 under Public Law 86-686. Cooperating agencies include the university, the Bureau of Sports Fisheries and Wildlife, and the Montana Fish and Games Department. The objectives of the unit are to provide professional training in fisheries management, to conduct research on aquatic resources, and to render technical advice to conservation agencies.

The original Government appropriation for the unit was $30,000 with about $6,000 of this available for operations and assistance to students. It was found, however, that the planned position grades had to be raised to acquire and retain

qualified personnel. Also, since establishment, there have been several base pay and increment raises.

At a recent coordinating committee meeting of cooperating agencies, it was apparent that after salaries, personnel benefits, and administration costs are accounted for, there will be less than $500 available for operations during fiscal 1967. We understand that newer units have been established with appropriations of $40,000.

We are very happy with the unit personnel and its program. We would like to see the unit continue to function effectively but to do this we feel that additional funds are necessary and would like to see these increased to $40,000. We feel that the older units with active programs are entitled ot as much as the newer units.

Any assistance you can give us to augment the program will be greatly appreciated.

Sincerely yours,

LEON H. JOHNSON,
President.

DEPARTMENTAL STATEMENT

The Montana cooperative fishery unit was established in September 1963 with an initial appropriation by Congress of $30,000. The unit is now fully staffed with a leader and assistant leader. Federal funds are used to pay the salaries and expenses of these employees, to purchase needed equipment and supplies, and to pay for travel costs and other program related services. The unit has gotten underway in a very successful manner.

Initially, Federal funds were used to support studies by graduate students on trout reproduction, stream ecology and fishery management. Program costs are now such that the $30,000 level of financing is no longer sufficient to cover the Federal share and provide support for graduate students seeking advanced training and degrees in fishery science. Congress recognized this in appropriating $40,000 for the cooperative fishery unit established at the University of Arizona in fiscal year 1965 and a like amount for each of the seven new units authorized for fiscal year 1966.

The Bureau supports the view that all fishery units should be financed at the same level to carry out the most effective program and to meet the goals which have been set forth in cooperative agreements with the universities and the State fish and game departments. The increase of $10,000 proposed for the Montana fishery unit is in accord with out planning for this program. The increase will support the work of three graduate students on fishery projects of interest to the Bureau and to the State conservation agencies.

CRESTON NATIONAL FISH HATCHERY

LETTER FROM SENATOR MANSFIELD

U.S. SENATE,
OFFICE OF THE MAJORITY LEADER,
Washington, D. C. February 5, 1966.

HON. CARL HAYDEN,
Chairman, Committee on Appropriations,
U.S. Senate.

DEAR MR. CHAIRMAN: In recent years the Senate Committee on Appropriations has been most cooperative in recommending the appropriation of funds for a program of improvement and expansion of national fish hatcheries within the State of Montana.

This program has progressed most satisfactorily and has helped to meet the ever-increasing demands brought about by increased tourism and recreation within the State.

It is my general understanding that the Creston National Fish Hatchery is in need of expansion to meet new demands. I would appreciate your asking the Fish and Wildlife Service to present a statement and justification as to the proposed expansion of this facility. I am informed that present plans for expansion would cost something in the neighborhood of $254,000.

I intend to discuss this item with the Subcommittee on Interior Appropriations and the information that might be received from the Fish and Wildlife Service would be most helpful.

Thank you for your cooperation, and with best personal wishes, I am,

Sincerely yours,

MIKE MANSFIELD.

DEPARTMENTAL STATEMENT

The national fish hatchery at Creston, Mont., was established in 1939 to provide fingerling trout for stocking waters in Glacier National Park. The station was operated jointly by the National Park Service and the Fish and Wildlife Service from 1939 until it was transferred to the Fish and Wildlife Service in 1944. Because of increased tourist travel and greater emphasis upon sport fishing in recent years, fishing pressures on trout populations in the waters served by the hatchery have increased tremendously.

The Creston hatchery produces an average of 85,000 pounds of rainbow and west slope cutthroat trout annually. The distribution area covers approximately 22,500 square miles which includes Glacier National Park and three major drainages, the Columbia, the Missouri, and the Hudson Bay. The distribution of fish in this area is worked out under cooperative agreements between the U.S. Fish and Wildlife Service and the management staff of the Montana Fish and Game Department.

The production of fish at Creston National Fish Hatchery is geared to satisfy the needs of management programs in Glacier National Park and nearby national forests and Indian reservations. This area of Montana offers outstanding recreational opportunities, particularly sport fishing. The need for additional hatchery fish continues to increase with the expanding recreational utilization of these Federal areas.

To complete the development program which was initiated in fiscal year 1960, funds will be necessary for the items outlined below. This program includes the replacement of a number of old, antiquated ponds and raceways built in 1939, a pipeline, that would bypass the present hatchery water supply, which is a source of IPN and other diseases, and the paving of station roads to reduce maintenance costs. With the completion of these projects, improved efficiency of operation and increased production of fish can be expected.

Funds needed for the program

Replace old ponds with raceways	$144,000
Replace water supply line to springs	75,000
Storage, add 3 stalls to present building	10,000
Pave roads and parking areas	25,000
Total estimated cost of the program	254,000

VIRGINIA FISH HATCHERIES

LETTER FROM SENATOR ROBERTSON

U.S. SENATE,
COMMITTEE ON BANKING AND CURRENCY,
February 18, 1966.

Hon. CARL HAYDEN,
Chairman, Subcommittee on Interior and Related Agencies, Committee on Appropriations, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: You may recall the interest I have taken in the construction of a new fish hatchery at Wytheville, Va.

You may not know that the first U.S. Superintendent of Fish Hatcheries was from Virginia and the first fish hatchery built in the United States was at Wytheville, Va. At an expenditure of about $840,000, the new Wytheville hatchery is approaching completion and will be dedicated next June. However, it was in partial operation last year, for which we appropriated $23,200.

Since Wytheville is about the only trout hatchery in the State now that is free from disease it is very important for the new hatchery to go into full opera-

tion in the new fiscal year, for which an appropriation of $159,700, or $136,500 more than is now in the budget, would be required.

The output from that Wytheville hatchery is so urgently needed in Virginia that I hope very much that our subcommittee will be willing to include it in the pending bill.

With best wishes, I am,

Sincerely yours,

A. WILLIS ROBERTSON.

FISH PRODUCTION AND FUNDING, NATIONAL FISH HATCHERIES, VIRGINIA

The Bureau of Sport Fisheries and Wildlife operates four national fish hatcheries in Virginia. The greater portion of production from these units is utilized to stock Virginia waters, many of which are located in areas under Federal control.

The Harrison Lake hatchery produces largemouth bass, bluegill, channel catfish, and redear sunfish. At the Paint Bank hatchery, rainbow trout are reared. The old Wytheville unit produces principally rainbow trout; however a limited number of largemouth bass and bluegill are also propagated. The new Wytheville unit will propagate only rainbow trout.

As the table below indicates the greatest need for additional O. & M. funds is for the new Wytheville hatchery which will be completed by June 15, 1966.

	Fiscal year 1966			Fiscal year 1967			Estimated potential production		Funds required for efficient operation
	O. & M. funds	Production		O. & M. funds	Production		Pounds	Fish	
		Pounds	Fish		Pounds	Fish			
Harrison Lake: Warm-water fish	$40,600	5,000	2,500,000	$47,200	5,500	3,000,000	5,500	3,000,000	$47,200
Paint Bank: Trout	97,100	127,000		98,500	132,000		140,000		103,400
Wytheville (old)	35,900			36,200					36,200
Trout		33,000			36,000		36,000		
Warm-water fish		450	123,000		450	123,000	450	123,000	
Wytheville (new): Trout	22,800		None	23,200	20,000		150,000		159,700

DEPARTMENTAL STATEMENT, HARRISON LAKE NATIONAL FISH HATCHERY, VIRGINIA

The Harrison Lake National Fish Hatchery was established in 1934 to provide warm-water fish for farm ponds and reservoirs for a large area in eastern Virginia. Since the original construction, only minor changes have been made to the hatchery facilities, although there has been a major change in production requirements.

The area served by the hatchery has been increased to include approximately half of the State of Maryland. In addition to this, four species of fish are now being produced (bass, bluegill, redear, and channel catfish), whereas 15 years ago only two species were propagated.

Current studies by a Federal agency show approximately 1,200 to 1,400 farm ponds being constructed annually. Reclamation of lakes and ponds is increasing and now averages in excess of 200 acres a year. It is predicted that 6,300 acres of water will be impounded by public and private enterprise annually throughout the next decade. These waters, which are within the distribution area of the Harrison Lake hatchery, will require the stocking of fish from a hatchery source.

Recognizing the need, Congress appropriated $84,000 in fiscal year 1964 and $78,000 in fiscal year 1965 to initiate a modernization and improvement program for the hatchery. This included construction of a new residence, fertilizer and chemical storage building, repairs to the office building, renovation of the water supply canal, replacement of pond supply and drain lines, blacktopping of the roadways and other needed pertinent items.

To continue the improvement of the hatchery as planned, funds in the amount of $163,000 are needed which include the following items:

Purchase of additional land	$8,000
Repair dam and spillway at pond supply lake	85,000
Pond supply well and pump	25,000
Concrete steps in ponds	7,000
Pump houses (2)	10,000
Domestic water supply	6,000
Sewage disposal system	4,000
Landscaping	10,000
Fish cultural and maintenance equipment	8,000
Total cost of the program	163,000

KOOSKIA NATIONAL FISH HATCHERY

LETTER FROM SENATOR CHURCH

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
February 17, 1966.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
New Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: As you recall, Congress last year at the Senate's request approved $255,000 to begin work on a new Federal salmon hatchery near Kooskia, Idaho.

Work was started, and $310,000 is now needed for fiscal 1967. These funds are not in the proposed budget, but are required for the continuation of this important project.

The invaluable Columbia River commercial and sports salmon fishing industry is imperiled by reduced runs of these fish to their spawning grounds in Idaho, and the Kooskia hatchery will be of tremendous help in their rehabilitation.

Urgency of construction is also emphasized by the fact that Dworshak Dam, now a building on the North Fork of the Clearwater in Idaho, will halt the fish runs up that stream before a new hatchery can be constructed there to replace them.

I respectfully request that $310,000 be included in the 1967 fiscal year budget to continue construction of this very essential hatchery.

Sincerely,

FRANK CHURCH.

DEPARTMENTAL STATEMENT

The construction of large dams on the Snake River and its major tributaries has had a detrimental effect on the salmon and steelhead runs of this river system. Although fish passage facilities may be provided at the dams to permit the passage of upstream and downstream steelhead migrants, artificial propagation is needed to supplement the natural reproduction to maintain and increase these runs.

The Middle Snake River Basin is a vast area including some of the richest fish and wildlife resources in the United States. Present and proposed construction of large multipurpose dams in the Snake River drainage is endangering this natural resource.

Congress appropriated $50,000 in fiscal year 1962 to study the feasibility of establishing a hatchery in the Middle Snake River area. A site for the hatchery was subsequently located near the middle fork of the Clearwater River, within a few miles of the town of Kooskia. This site was located on property owned by Potlatch Forests, Inc. An agreement was reached for exchange of some 80 acres of public lands for the 129-acre Potlatch tract required for construction of the hatchery and protection of its water supply. All of the initial appropriation was utilized in connection with feasibility studies and related land negotiations.

An additional $250,000 was appropriated in fiscal year 1966 to begin the construction of the hatchery. Four production wells have been drilled and tested. The design of the facilities is progressing on schedule and bids will be solicited in the spring for the remaining work.

The Kooskia national fish hatchery should be in operation by the spring of 1969 in order to prevent natural spawning on the North Fork of the Clearwater River which would result in young salmon and steelhead trout being trapped in the pool behind Dworshak Dam, scheduled to start filling at that time. The dam will be complete and the pool filled by June 1971, according to present schedules.

To complete development of the hatchery as planned, funds in the amount of $662,000 are required for the program as outlined below:

1st phase:	
48 concrete rearing ponds (8 by 80 feet)	$172,000
3 holding ponds (40 by 140 feet)	96,000
Clear Creek fishway	20,000
Drain lines	22,000
	310,000
2d phase:	
Incubators (30 units)	15,000
48 tanks (3 by 3 by 16 feet)	24,000
Hatchery (40 by 100 feet)	80,000
Service (30 by 50 feet)	27,000
Storage (30 by 50 feet)	18,000
5 residences	100,000
Roads	20,000
Grounds	4,000
Utilities, domestic water supply, etc	39,000
Automotive, fish cultural, etc	25,000
Total	352,000
Total estimated cost of the program	662,000

RAT DAMAGE TO AGRICULTURAL CROPS

LETTER FROM SENATOR FONG

U.S. SENATE,
COMMITTEE ON THE JUDICIARY,
March 1, 1966.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: I respectfully request inclusion in the Interior Department appropriation for fiscal year 1967 the sum of $250,000 for rat control research in Hawaii, for the Bureau of Sport Fisheries, Fish and Wildlife and Parks Service. This amount will provide a professional staff of two full-time biologists, one full-time biochemist, one full-time ecologist, one full-time physiologist, and three research assistants, for scientific studies in Hawaii and Denver, Colo. It will also cover expenses for their office and fieldworkers in those two places. The research will require between 3 to 5 years.

Rats cause extensive damage to many agricultural crops and to sugarcane in particular. They eat the growing cane stalks in the fields. Many of the stalks then die. This reduces the yield. At an estimated reduction of from 25,000 to 50,000 tons of raw sugar annually, there is an annual loss of $3 million to $6 million (on the basis of $131 per ton of raw sugar) to the Hawaiian sugar industry. Sugar in 1965 contributed $175 million, or 49 percent of the agricultural total, to the State economy.

Other agricultural crops affected to a lesser degree are macadamia nuts, coffee, avocados, bananas, sweet potatoes, corn, cucumbers, papayas, pineapples, peanuts, tomatoes, watermelons and mangoes.

Three species of rats are involved in the damage problem: the Norway rat, *Rattus norwegicus;* the black rat, *Rattus rattus,* and the Polynesian rat, *Rattus hawaiiensis.* But the Polynesian rat is causing most of the damage to the sugarcane. The available potent poisons and useful field control methods in eradicating the Norwegian and black rat species have not been successful against this rat. Unlike the Norwegian and black, the Polynesian, the smallest of the three, is a field rodent. It does not seem to live in association with human habitations.

For many years, a locally supported research in rat controls has been conducted. The experiment station of the Hawaiian Sugar Planters Association has carried out rat-control research programs at varying levels since 1922, and has spent about $300,000 for such purpose. But it has not met success with Polynesian rats. From their recent studies they conclude that a major research program will have to be initiated—wide in scope and including detailed studies of the biology of the rat, its physiology and its ecology. They strongly feel that a comprehensive study of the Polynesian rats themselves and the environment which produces them are more likely to give light to finding the weak points of the present eradication methods. The pursuit of this research will develop an entirely new concept of rat control, not only of Polynesian but of other species in Hawaii and in other geographic areas. Such studies are beyond the capabilities of the experiment station of the Hawaiian Sugar Planters Association, the University of Hawaii and other local agencies. They lack technical competence and knowledge, and it is for this reason that I am requesting this assistance.

In addition, there are health implications. Rat-borne diseases, particularly bubonic plague, could affect both military activities and tourism if outbreaks were to occur. Hawaii has a history of bubonic plague epidemics.

To permit better use of expensive equipment and highly trained specialists, the greater part of the preliminary scientific research will be conducted at Interior's Fish and Wildlife Service Center in Denver, Colo. The ecological and field testing phases will be conducted in Hawaii. The experiment station in my State would continue its efforts in rat control and would cooperate in any research program that might be undertaken by the Bureau of Sport Fisheries and Wildlife. The station will lend its existing facilities and supporting personnel to the research. I am assured that no assistance is being sought in carrying out the control measures but only in the conduct of research into the methods of control.

I urge, therefore, that the committee consider favorably my request for $250,000 to research rat control in Hawaii.

With aloha,

Sincerely yours,

HIRAM L. FONG.

DEPARTMENTAL STATEMENT

In May 1965, Dr. R. L. Cushing, director of the experiment station of the Hawaiian Sugar Planters' Association wrote the Secretary of the Interior calling attention to the problem of rat damage to sugarcane and other crops in Hawaii and requesting research assistance in developing a solution. The Bureau's funds and facilities for animal control research were fully committed to ongoing projects but it did send a specialist of the Denver Wildlife Research Center to Hawaii in July 1965, to review the problem and outline what would be needed for a research program if one seemed in order.

It was learned that sugarcane and other agricultural crops were sustaining depredations from three species of rats: the Norway rat, the black rat, and the Polynesian rat. Control procedures which give some relief from damage by the Norway and black rats have not been successful against the Polynesian rat; this animal, because of its different habits, is able to thrive in the face of existing control measures, and is causing an unacceptable level of damage. The fact that it does not confine its activities to the periphery of the fields, as the other species ordinarily do, complicates the application of available population reduction techniques.

The major damage is to sugarcane. The loss is estimated at about $4,500,000 annually. Agriculture is second only to military activities as an economic base for the State. Since sugar constitutes approximately one-half of Hawaii's agricultural income, the significance of the rat damage problem is obvious. Sugar is not the only crop affected by Polynesian rats. Others include: avocados, bananas, coffee, corn, cucumbers, Macadamia nuts, mangoes, papayas, peanuts, pineapples, tomatoes and watermelons.

Long-term solutions to this serious problem in Hawaii and other areas can come only from a detailed study. It would have to include investigations of the biology of the Polynesian rat including its physiology and ecological relationships. While search for more effective control materials and techniques of application should be an important part of the program, the basic studies of the species itself are essential if effective avenues of population management are to be found.

The ecological, field testing, and some laboratory phases should be conducted on the ground in Hawaii. The greater share of the preliminary technique research would best be performed at our main laboratories at Denver in conjunction with closely related studies. This would permit better utilization of manpower and specialized facilities.

It is estimated that the sum of $250,000 and 15 positions would be required to initiate work on the Polynesian rat problem and that 3 to 5 years would be needed to develop effective control methods.

FISH GENETICS LABORATORY

LETTER FROM SENATOR SIMPSON

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
February 14, 1966.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations,
U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: Unfortunately, the Bureau of the Budget has stricken from the budget request for fiscal year 1967 a request for $270,000 that was needed for construction of the Beulah Research Laboratory in northeastern Wyoming.

These moneys are needed to continue the construction program of this fish genetics laboratory that is so meaningful to the Rocky Mountain States.

I am hopeful that your committee, when reviewing the departmental requests for programs of the Interior Department, will consider the need for these funds as set forth by the Bureau of Sports Fisheries.

Sincerely,

MILWARD L. SIMPSON,
U.S. Senator.

DEPARTMENTAL STATEMENT

The program of adapting genetic principles to the breeding of new and superior strains of sport fishes, as has been done with domestic animals and plants, has recovered from the crushing flood damages it suffered nearly 1 year ago. Temporary fish holding facilities have been installed and another promising start is underway. The potential benefits of the planned program to sport fishing are clearly visualized, once an active and continuing research program is assured of support.

Minimum laboratory and office space costing about $270,000 can be useful at this stage for exploration and development of methods, and for advanced trial or pilot-plant tests in the genetics program. Rehabilitation of the existing lodge structure to accommodate offices and a working library ($75,000), construction of a research laboratory ($185,000), and appurtenant water supply and waste disposal systems ($10,000) will permit a promising start on the work planned for this fish genetics program.

JACKSON NATIONAL FISH HATCHERY

LETTER FROM SENATOR SIMPSON

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
February 23, 1966.

Hon. CARL HAYDEN,
Chairman, Subcommittee on Interior and Related Agencies, Committee on Appropriations, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed is a copy of a letter I have received from the president of the Jackson Hole Chamber of Commerce, Jackson, Wyo., setting forth the need for appropriation of funds to permit orderly expansion of facilities at the national fish hatchery.

Mr. May's letter sets forth clearly and concisely the need for this expansion and development; I ask that this letter be recorded for your subcommittee's consideration.

I fully support the position outlined by Mr. May.

Sincerely,

MILWARD L. SIMPSON,
U.S. Senator.

LETTER FROM JACKSON HOLE CHAMBER OF COMMERCE

February 15, 1966.

Senator MILWARD SIMPSON,
U.S. Senate,
Washington, D.C.

DEAR SENATOR SIMPSON: The Jackson Hole Chamber of Commerce encourages the appropriation of additional funds to increase water supply and other facilities at the national fish hatchery at Jackson. With these additional facilities they will be able to produce more native cutthroat trout for planting in Palisades Reservoir and other Wyoming public waters.

The tremendous flow of tourists and visitors now fishing in this area has depleted the fishing so that few fishermen can catch a limit, and many leave highly disappointed. As an example, over 2.7 million people visited Grand Teton National Park last year and it has been estimated that in 5 years over 5 million will be traveling through the national parks and surrounding area. We need to expand this facility now so that it will adequately serve present and future needs of the fishing public.

It is our understanding that approximately $140,000 will be necessary to provide the needed facilities.

Thank you for your consideration of this problem.

Sincerely yours,

JOSEPH L. MAY, *President.*

NORFORK NATIONAL FISH HATCHERY

LETTER FROM SENATOR FULBRIGHT

U.S. SENATE,
Washington, D.C., January 20, 1966.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations,
U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed for your consideration are copies of the following correspondence:

1. A letter dated December 17, 1965, to Mr. Verl Hudspeth by Mr. Andrew H. Hulsey, chief of the fisheries division of the Arkansas Game and Fish Commission;
2. A letter dated December 22, 1965, addressed to me by Mr. Hudspeth; and
3. A letter dated January 18, 1966, addressed to me by the Acting Director of the Bureau of Sport Fisheries and Wildlife in the Department of the Interior.

This correspondence concerns, among other things, the need for additional appropriations to permit the fish hatchery at Norfork Dam, Ark., to achieve maximum production capacity.

You will note that an appropriation of $267,600 would permit this hatchery to operate at full capacity. This level of production is very important to the fishing and tourist industries of Arkansas, and I hope that it will be possible for your committee to recommend an appropriation in this amount.

It might be well to consider that an appropriation for a purpose of this kind, which will help my State in its plans for economic growth and development, might in the long run obviate the necessity for more than an equivalent amount of funds for programs of direct aid to this underdeveloped section of the Nation.

With best wishes, I am,

Sincerely yours,

J. W. FULBRIGHT.

LETTER FROM BUREAU OF SPORT FISHERIES AND WILDLIFE

JANUARY 18, 1966.

Hon. J. W. FULBRIGHT,
U.S. Senate, Washington, D.C.

DEAR SENATOR FULBRIGHT: This is in response to your letter of January 6 concerning increasing trout production at the Norfork and Greers Ferry Dam National Fish Hatcheries, Arkansas.

Construction of the Greers Ferry Dam hatchery is now being completed. The 1966 appropriation provided $39,400 in operating funds for this unit. We will not be able to produce a significant poundage of trout this year due to the construction activities and limitations on funds and personnel. The station should be able to reach a production level of 150,000 pounds in fiscal year 1967. We estimate this production level would require $141,900 in operating funds, an increase of $102,500 over 1966.

An expansion program was undertaken at the Norfork hatchery during recent past years. The program created significant additional production and related facilities. We estimate that it would require $267,600 in operating funds to operate the facilities now available at capacity. A total of $152,700 was budgeted for this station in fiscal year 1966.

It is hoped that the above provides the information desired, but should you require additional data we will be glad to endeavor to furnish it.

Thank you again for your support of our fisheries resource management programs.

Sincerely yours,

A. V. TUNISON, *Acting Director.*

LETTER FROM MR. HUDSPETH

DECEMBER 22, 1965.

Senator J. W. FULBRIGHT,
U.S. Senate, Washington, D.C.

DEAR BILL: You will find enclosed letter which is self-explanatory. And I want you to realize that we do not want to bother you with all of our detail problems, but due to the fishing and tourist industries being so important to the State of Arkansas, we consider this of major importance.

It seems that our two Federal hatcheries, especially the one at Norfork, are not running near to capacity of production, due to the lack of manpower, food for the fish, and general operating expense. It seems to me, after we have the hatcheries, with such enormous expense, and the need of additional fish for our tourists, that certainly the operating expense could be justified.

I would appreciate if your office would look into this to see if you could be of some help.

I want to thank you in advance for all the things you do, as I always feel your influence when you get interested in something, you seem to always get results.

Sincerely yours,

VERL HUDSPETH.

LETTER FROM ARKANSAS GAME AND FISH COMMISSION

DECEMBER 17, 1965.

Mr. VERL HUDSPETH,
Harrison, Ark.

DEAR MR. HUDSPETH: Reference is made to your instructions to me to give you a report on the status of the trout stocking program for Bull Shoals Lake.

You will recall that on August 25, 1965, Mr. Hugh A. Hackler, director, Arkansas Game and Fish Commission, addressed a request to Mr. Walter Gresh, regional director, U.S. Fish and Wildlife Service, Atlanta, Ga., for 200,000 10-inch rainbow trout to be stocked into Bull Shoals Lake during the 1965–66 winter season.

Mr. Gresh answered Mr. Hackler's letter on August 27, 1965, saying that they would study the request. Then on September 28, 1965, after further study, Mr. W. L. Towns, acting regional director, wrote Mr. Hackler and suggested that biologists from the Service get with our State biologists and discuss the problem.

At the southeastern meeting in Tulsa, in October, Mr. Arno Fuller, Branch of Fish Hatcheries, Atlanta, Ga., and I discussed the various possibilities of how to stock Bull Shoals Lake with trout. The Service thought that if we could use smaller fish that they could possibly supply the 200,000 trout which we asked for. Our experience has been that the larger the fish is when it is stocked the better the resulting fishery (small trout can be eaten by the bass and other predators that are in the lake).

The Norfolk national fish hatchery is now in the process of stocking the fish that we asked for; however, in order to do so they are using some fish less than 10 inches in length.

We are grateful for the consideration given us by the Service and I personally would like to state that they are a fine group to work with.

There is one thing, however, that came to my attention during the period of negotiation for the fish. It seems that the two trout hatcheries in Arkansas are not operating at their full capacities.

I have attempted to analyze the production capacities of the Norfolk national fish hatchery and the Greers Ferry national fish hatchery (both are trout hatcheries) and I concluded that if these hatcheries were operated at full capacity that there would be plenty of trout available to meet our present needs. Apparently, harsh and arbitrary ceilings have been placed on both trout hatcheries in Arkansas. I consider it false economy to operate a trout hatchery at less than optimum production. Fixed costs remain about the same, however, with additional expenditure for feed and labor the overall production would be greatly improved.

I realize that there are probably many Federal trout hatcheries in the United States that are marginal operations due to high costs per pound of trout produced. I also realize that federally produced fish are probably stocked in many places in the United States where a limited amount of recreation fishing is created. I can understand, that in such situations, the Service is justified in curtailing operations. However, in the case of Bull Shoals Reservoir, where 2,249,601 people visited last year (Corps of Engineers' figures), the U.S. Fish and Wildlife Service, in cooperation with the Arkansas Game and Fish Commission, has an unusual opportunity to provide relatively high-quality sport fishing for large numbers of people. The reservoir contains thousands of acres of good trout habitat, the water is fertile and there is an abundance of food in the form of threadfin shad and aquatic invertebrates. Our studies show that the released trout actually grow faster in Bull Shoals Reservoir than they do in the hatchery. However, the trout must be large enough when they are stocked to escape being eaten by the predator fishes already in the water.

We have been patiently waiting for the Greers Ferry trout hatchery to come into production so we could stock our other trout areas, such as Lake Hamilton and possibly Lake Ouachita and others. However, with the harsh cutbacks being made on the two Arkansas hatcheries it looks like our trout resources will go underutilized unless something is done to make some people in high places realize what the possibilities are.

I believe money spent on trout in Arkansas is and will produce the best and most economical trout fishery in the southeastern United States.

Very truly yours,

ANDREW H. HULSEY,
Chief, Fisheries Division.

DEPARTMENTAL STATEMENT

An expansion program was undertaken at the Norfork hatchery during recent past years. The program created significant additional production and related facilities.

The fiscal year 1967 budget contains $170,200 in operating funds, of which $152,700 will be available for normal operations and the remaining $17,500 for purchase of equipment and minor rehabilitation projects. To operate the station efficiently, an increase of $112,400 is required making a total of $282,600.

Funds requested would be utilized for personal services, purchase of fishfood, equipment, and miscellaneous supplies.

WILLIAMS CREEK NATIONAL FISH HATCHERY

LETTER FROM WHITE MOUNTAIN APACHE TRIBE

WHITE MOUNTAIN APACHE TRIBE,
Whiteriver, Ariz., February 24, 1966.

Senator HAYDEN,
Senate Office Building,
Washington, D.C.

DEAR SENATOR HAYDEN: The Williams Creek Federal fish hatchery has been operated many years on the Fort Apache Indian Reservation under a cooperative agreement between the U.S. Fish and Wildlife Service and the White Mountain Apache Tribe. The fish produced at this hatchery have been an important factor in the stabilizing and expansion of the recreational resources on the reservation.

In addition to the fish production, the hatchery itself has become an important tourist attraction. This results in increased traffic in the area and greater use of our commercial tourist facilities.

In view of the above, we feel that improvement of the access road, fencing and landscaping, the installation of lights and reconstruction of the earthen ponds and water system would be beneficial to both the Service and to the Tribe. These improvements would greatly enhance the attractiveness of the area and increase its efficiency.

We understand that the Bureau of Sport Fisheries and Wildlife recognizes a need for these improvements and have developed a program calling for the expenditure of about $150,000. We would appreciate any assistance you can give us in having these suggestions considered in the U.S. Fish and Wildlife Service budgets now being reviewed.

Sincerely,

LESTER OLIVER, *Chairman.*

DEPARTMENTAL STATEMENT

The Williams Creek hatchery was established in 1939 to fulfill a Federal responsibility for maintaining the fishery resources on waters of the Fort Apache Indian Reservation and other Federal lands. Since establishment, the area of responsibility has increased to include the Navajo, Hopi, Zuni, and San Carlos Indian Reservations. Fish pressure on these areas has substantially increased to a large extent as a result of opportunities created by the Indian Recreation Enterprises.

Some indication of the rapid acceleration of fisherman use of these waters can be shown by the dramatic increase in numbers of fishermen on the Fort Apache Indian Reservation. Between 1959 and 1963, the number of fishermen increased by 271 percent—from 55,000 to 204,000. This was the result of aggressive development of sport fishing opportunities by the White Mountain Recreation Enterprise—creation of impounded waters, new and improved access, new or enlarged camping areas, and attractive permit rates and regulations. Similarly active and dynamic programs have been undertaken and will be intensified by other tribes on other reservations.

In order to meet the needs for hatchery trout, it will be essential to modernize and repair facilities at the Williams Creek hatchery. This will permit more efficient production of trout, better utilization of funds, and increased production (in pounds of fish) per man-year of labor expended. The redevelopment program required is outlined below:

Funds needed for the program:	
Reconstruct earthen ponds and water supply facilities (1.5 acres)	$30,000
Fence hatchery area and provide 3 cattleguard crossings	23,000
Mercury vapor lamps in production areas	12,000
Grade, compact, and surface 10 miles of access roads	50,000
Landscape hatchery grounds (including removal of excess trees, grading, installation of curbs and sidewalks, shrubbery)	25,000
Total	140,000

CONSERVATION OF ANADROMOUS FISHERIES

LETTER FROM LOUISIANA WILDLIFE AND FISHERIES COMMISSION

LOUISIANA WILDLIFE AND FISHERIES COMMISSION,
Baton Rouge, La., February 21, 1966.

Senator ALLEN J. ELLENDER,
Senate Office Building,
Washington, D.C.

DEAR SENATOR ELLENDER: It has come to my attention that Congress recently passed the conservation of anadromous fisheries bill and it is now Public Law 89-304.

The Louisiana Wildlife and Fisheries Commission is very much interested in this new legislation. We believe the availability of ample Federal aid funds can help reestablish a striped bass sport fishery in Louisiana.

The provisions of this law will allow various coastal States to receive funds on a dollar-for-dollar matching basis to do research, management, and development work on anadromous fishes. Both sport and commercial fisheries resources could benefit from this new Federal program.

We urge your support and efforts to help obtain funds necessary to formulate and carry out work to develop and enhance anadromous fisheries resources in Louisiana.

Sincerely yours,

J. D. HAIR, Jr., *Director.*

DEPARTMENTAL STATEMENTS ON CONSTRUCTION—VARIOUS HATCHERIES

WARM SPRINGS NATIONAL FISH HATCHERY

Established in 1899, the Warm Springs National Fish Hatchery produces largemouth bass, bluegill and redear sunfish for distribution in west-central Georgia. A large share of the hatchery's production is stocked in farm ponds constructed with the aid of Federal funds. State-Federal and cooperative fish management programs are also supported by the hatchery.

Increased demands for warm-water fish for both Federal and State programs in west-central Georgia exceed the hatchery's production capabilities. In recent years, channel catfish, bluegill and redear sunfish have been transferred to the Warm Springs hatchery from other national fish hatcheries to meet stocking needs.

Based on recent figures, the Soil Conservation Service estimates that approximately 1,500 to 2,000 farm ponds are built annually in Georgia under this program. In addition to newly-constructed ponds, the Georgia Game and Fish Commission estimates that approximately 3,000 pounds are renovated each year.

The fishery research station recently established at the Warm Springs hatchery places additional demands on the hatchery's production program. In cooperation with the Division of Fishery Research, the Southwestern Fish Control Laboratory conducts studies on selective piscicides. Large numbers of bluebills are required for these studies, in addition to other species. The Warm Springs hatchery is the most suitable source of supply for these fish. The results of these studies benefit both fish hatchery and fishery management programs.

To meet the increased demands, additional ponds are needed for both research activities and production purposes. All ponds will be equipped with water supply lines and drainage facilities.

With funds provided in fiscal year 1966 ($33,000), a development program was initiated for the Warm Springs National Fish Hatchery. These funds provided for the purchase of 23 acres of land for construction of additional rearing ponds and a storage building. To continue development of the hatchery as planned, the following items are required.

Construct 22 earthen ponds including concrete supply and outlet structures	$227,800
Install 7,300 lineal feet of water supply and drain lines	49,700
Fencing	4,000
Landscaping	3,000
Total estimated cost of the program	284,500

Baldhill Dam National Fish Hatchery

The Baldhill Dam National Fish Hatchery produces northern pike, walleye, largemouth bass, smallmouth bass and bluegill sunfish. It is operated as a substation under the administration of the Valley City National Fish Hatchery. The area of distribution includes the eastern half of North Dakota and the northeastern quarter of South Dakota. Fish are produced for use in managing public waters under management of Federal and State fishery biologists. Such waters include areas of Indian reservations, national wildlife refugees and other public fishing waters.

The demand for warm-water species has increased rapidly during recent years due to several factors. These include: more intensive management of existing fishable waters, creation of new waters by construction of dams, restocking freezeout lakes and increased emphasis upon development of recreational income potential for the American Indian on the several reservations in the area.

Besides the species of fish already being produced, fishery management biologists' requests repeatedly list muskellunge as a species needed in lake management in this area. In order to hold brood stock for establishing this species, deeper winter holding ponds are necessary. This program will provide four new ponds and renovation of one existing pond for this purpose. These ponds will also be used for production of large fingerlings during the summer growing season.

The existing water supply through a siphon over Baldhill Dam must be shut off during winter. It is important that the ponds be supplied with water throughout the whole year. The proposed new siphon will be operable during winter and will take water from a stratified depth, providing temperature advantages.

The program, as outlined below, is designed to provide the facilities required at the Baldhill Dam National Fish Hatchery for producing the species and numbers of fish required for the management needs of the area served.

4 earthen ponds complete with water supply and drainlines	$64,700
Renovate and deepen existing pond	6,100
New catch basins—4 existing ponds	32,000
Siphon from lake water	34,000
5-stall equipment garage	17,000
Modernize existing holding house	6,000
Drainage from toe of dam and pond area	13,000
Sewage disposal system	1,000
Landscaping, fencing and electricity	8,600
Total estimated cost of the program	182,400

Valley City National Fish Hatchery

The Valley City National Fish Hatchery produces northern pike, walleye, largemouth bass, smallmouth bass, and bluegill sunfish. The area of distribution includes the eastern half of North Dakota and the northeastern quarter of South Dakota. Fish are produced for use in public waters under management of Federal and State fishery biologists. Such waters include areas of Indian reservations, national wildlife refuges, and other public fishing waters. The demand for warm-water species has increased rapidly during recent years due to several factors. These include more intensive management of existing fishable waters, creation of new waters by construction of dams, restocking freezeout lakes, and increased emphasis upon development of recreational income potential for the American Indian on the several reservations in the area.

In fiscal year 1966 Congress appropriated $100,700 to initiate a construction program at the Valley City National Fish Hatchery. To complete the modernization and improvement as planned additional funds are required.

Operational activities at Valley City are divided among this headquarters station, the Baldhill Dam substation (6 miles from Valley City hatchery), and a spawning site on Lake Ashtabula (30 miles from the hatchery). Production activities during the spring, summer, and fall months require considerable attention at all three locations, and periodic caretaker attention is necessary at all

times. Adequate housing for three permanent personnel at the headquarters station will permit greater efficiency in handling the workload, and assure improved protection of Government property.

Snow removal and maintenance of station roads and parking areas present major problems. These activities would be simplified and minimized if all driving surfaces were blacktopped with asphalt cement.

The existing combination office, shop and service building is not adequate to handle the growing functions of the station. The building's age and condition are such that remodeling is not practical. It should be replaced with a larger and more efficiently designed building. In addition, there should be an increase in the capacity and efficiency of water filtration equipment necessary for the incubation of 80 million eggs each year.

Present sewage facilities are inadequate and the domestic water supply is unsafe, as well as lacking in quantity. Connection to city water will insure adequate and safe water for domestic and public use.

The subdivision of one pond, new water intake, and new waterlines will provide for winter holding of broodstock, and greater flexibility in production.

Funds needed for the program

Construct water supply lines to ponds	$69,000
Water intake, pump with meter	36,000
Filter system for jar hatching battery	12,000
Shop and storage building	50,000
Oil and paint house	2,000
Residence	20,000
Residence garage (for 2 residences)	4,000
Addition to hatching house	10,700
Roads, parking, blacktopping	31,000
Water supply line, domestic	22,000
Place electric cable underground	1,700
Landscaping, fencing and reshape lagoon	17,300
Recreation facilities	1,500
Easements—city water and connection	4,000
Total estimated cost of the program	281,200

Garrison Dam National Fish Hatchery

The Garrison Dam National Fish Hatchery (established in 1958) produces northern pike, walleye, smallmouth bass, rainbow trout, and brown trout. Most of the fish produced are stocked in public waters of the Dakotas under management of Federal and State fisheries' biologists. The waters include areas on several Indian reservations, national wildlife refuges, national forests, and other public waters.

The station has been in full production only 3 years and it is apparent that the fish needs of the area served are far in excess of those possible with existing facilities. The increased needs have arisen from several sources. Those of primary importance are: more intensive management of existing fishable waters, the formation of new waters, and the increased emphasis of the Department of the Interior to provide a source of income for the American Indian through recreational outlets on the various reservations. Water is available for the expanded facility and production will be about 75,000 pounds annually when the program is completed.

Because of the hatchery's location, about 1 mile from the Garrison Dam powerhouse, it receives a large number of visitors each year. In 1965, the powerhouse had a visitor load of approximately 70,000. The majority of these people also called at the hatchery.

In addition to fish rearing facilities, a suitable entrance to the aquarium located in the hatchery building is urgently needed to handle the public. Other items such as blacktopping the roadways, installation of curbs and gutters, and general landscaping are required to complete the station as planned.

The program outlined below is designed to provide the facilities necessary.

Trout raceways	$60,000
Well	20,000
Garage, 6-stall	14,000
Entrance to aquarium	6,000
Residence with garage	20,000
Paving courtyard, parking lot and entrance road	36,000
Curb and gutter	5,000
Confining waste ditch	6,000
Landscaping hatchery	4,000
Domestic water and sewage	2,000
Equipment	11,000
Total estimated cost of the program	184,000

Santa Rosa National Fish Hatchery

This station was constructed during the early 1930's, under the Works Progress Administration, when labor was readily available but funds for materials were limited. Pipelines are not adequate for supplying and draining holding facilities. Pond modernization, including new pipelines and control structures, is urgently required. The 20 rearing ponds at this station are supplied by means of a cross-drain system from a leader-box-type supply canal. Eleven of these are supplied at one end by gravity flow from the Blue Hole water supply. These ponds, after being filled, flow into others, which in turn, must be filled before the lower ponds can be supplied. This antiquated system presents numerous problems, including contamination from pond to pond and the inability to work ponds independently. The development program is designed to eliminate these undesirable features.

The requirements for pondfish from this hatchery continues to increase. In New Mexico alone, a yearly request for the stocking of pondfish aggregate 5½ million in 1965; most of these fish are for public reservoirs built by Federal agencies, but administered by State authorities in respect to fishery programs.

The Santa Rosa station will have to bear an increasing load in respect to furnishing pondfishes for the State and Federal requirements. Increasing use is also being made of channel catfish and other warm-water species in programs of direct Federal responsibility. In New Mexico and Arizona, the areas of this interest are mostly Indian reservations. In addition, there is the continuing responsibility of furnishing pondfishes for farm and ranch ponds in New Mexico and the Texas Panhandle, a program to which Santa Rosa must contribute.

The program outlined below is designed to provide the facilities required for producing the species and numbers of fish required for the management needs of the area served by this hatchery.

Water supply and drain lines replacement (1.4 miles)	$15,000
Divide pond No. 13 (1.64 acres) into 3 ponds w/structures	16,000
Complete replacement of structures in ponds 1 to 12 w/steps	25,000
1 residence	20,000
Semienclosed visitor aquarium area with public restrooms	10,000
Domestic water supply and sewage facilities (0.6 mile)	3,000
Equipment (fish-cultural and automotive)	10,000
Total estimated cost of the program	99,000

Dexter National Fish Hatchery

This station was established in 1931 to provide small warm-water fish for farm ponds in New Mexico and parts of Texas and Arizona. Requirements in species and sizes of fish have changed substantially, reflecting current management trends.

Bass and channel catfish comprise approximately 95 percent of the total production. These fish are utilized for stocking waters on Federal lands, including Indian reservations throughout the Southwest, numerous State managed reservoirs, and farm ponds under SCS programs.

Extensive replacement and modernization of facilities are required to provide the fish to fulfill existing and projected future demand. No development funds

have been provided for 15 years and available maintenance funds have been inadequate. The fish-holding house is in poor condition—deteriorated far beyond economical repair. Sufficient numbers of fish, to meet scheduled distribution trips, cannot be held in this facility. This results in increased labor costs since it is necessary to move fish out of rearing ponds more frequently than would be required if adequate holding facilities were available.

The garage-shop building is a frame structure that has deteriorated excessively; additional maintenance is unwarranted. Door sizes are not adequate for modern vehicular equipment and a large amount of equipment must be stored in unprotected areas exposed to the elements.

Government-owned powerlines and poles are dangerous and replacement is necessary. Insulation has deteriorated on the wiring, causing a hazardous condition for station personnel and visitors.

A water settling and filter basin for the artesian well is necessary to reduce the high concentration of solids, especially sulfates. This will permit using this water to spawn channel catfish and to maintain pond levels.

The following items include facilities required to complete the improvement program planned for the Dexter National Fish Hatchery.

Reconstruct pond No. 1 and separate into 4 ponds with structures, water supply, and drain lines	$30,000
Install settling and filtering basin for artesian well water supply	10,000
Replace fish-holding house and include visitor display facilities	55,000
Replace 2 residential garages with carports	5,000
Replace existing powerlines and poles	6,000
Blacktop station driveways and construct parking facilities	15,000
Fish cultural and maintenance equipment	10,000
Total estimated cost of the program	131,000

Leetown National Fish Hatchery

The Leetown National Fish Hatchery, established in 1931, is a combination station rearing trout and warm-water species of fish for distribution to waters in Delaware, Maryland, Virginia, and West Virginia. The cold-water sport fishery in these States is supported, to a large extent, by the stocking of hatchery fish. Also, the Bureau's Eastern Fish Disease Laboratory, operated by the Division of Fishery Research, is headquartered at the unit, with its principal activities being devoted to the pathological studies of trout.

One of the Bureau's three inservice training schools is also carried on at Leetown. Employees from National, State, and commercial fish hatcheries, as well as representatives of foreign governments, are selected to participate in this program.

The Eastern Fish Disease Laboratory has come to be recognized as one of the leading centers of research on the nature, treatment, and prevention of infectious fish diseases, and a source of information for Federal, State, and private fish hatcheries on diagnosis, methods of treatment, and general control of fish diseases in hatcheries.

The current annual production at Leetown is approximately 45,000 pounds. Species reared include brown, brook, and rainbow trout, largemouth bass, and bluegill. With improved fishery management practices, the creation of new waters, and opening of additional waters to public sport fishing, the needs of the area served by the hatchery continue to increase.

The need for further expansion in research on fish diseases led to a recent decision to permit the use of the existing hatchery building and laboratory facilities exclusively for research purposes. A new hatchery building and associated facilities were constructed for the production of fish with funds provided in fiscal year 1965. Complete renovation of the old hatchery building, which is a sound stone structure, is necessary to provide adequate facilities for research and experimental activities.

In addition to this, a continuation of the well exploration program is proposed to supplement the existing water supply now utilized by both research and the production unit.

The multiple program being carried on at Leetown makes the unit a center of interest for fishery workers throughout the country. Until complete modernization is accomplished, the facility cannot be expected to make the contribution that is possible to the sport fishery of the Nation.

The program, as outlined below, has been prepared to show the items required and the estimated costs for full development of the Leetown National Fish Hatchery and Fisheries Research Center.

Well exploration (includes development, pumping equipment, and supply lines)	$50,000
Remodel existing hatchery building, air conditioning, electrical and plumbing system, laboratory equipment	100,000
Sewage disposal system	60,000
Outside lighting system	10,000
Equipment	10,000
Total estimated cost of the program	230,000

BOWDEN NATIONAL FISH HATCHERY

Congress authorized the establishment of the Bowden National Fish Hatchery in 1956 and appropriated $80,000 in fiscal year 1957 to begin construction. It was possible to construct most of the planned facilities for the production units and other physical facilities with additional funds made available in fiscal years 1957 through 1963.

Fish cultural operations began in 1960 with the production of 60,000 pounds of brook, brown, and rainbow trout. Production has since been expanded to over 130,000 pounds annually of trout and warm-water species.

Fish produced at the Bowden hatchery are distributed to waters in southwestern Pennsylvania, western Maryland, and West Virginia. These fish are stocked in farm ponds, waters of the Monongahela National Forest, and other waters open to public fishing, in accordance with cooperative stocking agreements between the States concerned and the Bureau. Heavy fishing pressure throughout the Bowden distribution area, coupled with a reduction of productive habitat, have created a situation whereby the bulk of the trout fishing is supplied by hatchery-reared fish.

Nearly all of the State's suitable fishing waters require frequent periodic stocking to maintain adequate sport fishing throughout the season. With the newly instituted year-round open trout fishing season in West Virginia and greater emphasis on development of the State's recreational potential, the demand for hatchery-reared fish has increased sharply. In addition, the construction of a number of reservoirs in the State has materially increased the demand for warm-water species of fish for management programs.

This hatchery has also become an important segment in the recreational complex of the area. Nearly 70,000 people visited the facility during the past year with peak loads occurring every weekend during the tourist season. Use of the hatchery for conservation-education purposes has become an important function of the unit and increased emphasis on this aspect of hatchery use is anticipated.

To achieve greater efficiency and productivity at Bowden, primary consideration must be given to supplementing and improving the hatchery's water supply. A well development and exploration program is proposed to augment the existing supply. Other refinements such as adding infiltration galleries in the Shaver's Fork supply and covering the south spring will alleviate sedimentation problems and prevent contaminants from entering the hatchery's water supply.

Full development of the Bowden National Fish Hatchery must be accomplished to meet the foreseeable needs for hatchery-reared fish in the area served. The program, as outlined below, has been prepared to show the items needed and the estimated cost for full development of the hatchery.

Water infiltration galleries	$20,000
Well exploration	10,000
Well development	15,000
Improve earthen ponds (install 4 kettles and line 1 pond)	25,000
Cover south spring	8,000
Garages for residences (4)	15,000
Enlarge storage building (4 additional stalls)	10,000
Landscaping (includes sidewalks)	5,000
Surface drainage system	5,000
Water measurement and monitoring system	10,000
Total cost of the program	123,000

WHITE SULPHUR SPRINGS NATIONAL FISH HATCHERY

The White Sulphur Springs National Fish Hatchery, established in 1902, propagates both trout and warm-water species of fish for distribution in West Virginia and Virginia. The hatchery is located close to the Monongahela and George Washington National Forests, and demand for legal-sized trout in waters of these areas is substantial. The Outdoor Recreation Resources Review Commission, in their study report No. 7, estimates that West Virginia will need a 100-percent increase in hatchery-reared trout to satisfy the sport fishery by 1976. The major portion of the trout fishery in the State is now supported by hatchery fish.

There are many lakes and streams in both the National and State forests within a radius of 35 miles of the hatchery. To cope with the high increased rate of tourism through their forests, the National Forest Service and the State forest service have increased their available visitor facilities by 200 and 50 percent, respectively, in the past 2 years. Requirements for trout have steadily increased in the area served by this hatchery.

Modernization of the present facilities is very desirable. The existing inadequate facilities not only result in elevated rearing costs but also reduce the recreational potential of the hatchery. With funds provided in fiscal year 1965 ($100,000), replacement of the hatchery's outmoded raceways and related improvements in the hatchery water supply were accomplished.

The existing hatchery building which was constructed shortly after the turn of the century has far surpassed its normal life expectancy. Its condition is such that remodeling is not practical. The development program outlined provides for the replacement of this structure plus the additional facilities and equipment required for a modern, safe, and efficient hatchery operation. Included within the hatchery building will be a visitors' center which will significantly aid in the expansion of the Bureau's recreation and conservation-education program.

The development which is outlined below shows the items required and cost estimates for the program proposed at the White Sulphur Springs National Fish Hatchery.

Well development (supply lines and pumphouse)	$20,000
Replace dam at lower spring	5,000
Replace hatchery building (incorporating visitors' center and related exhibits)	185,000
Expand utility building (storage 4-stalls)	25,000
Visitors' parking area, 90 by 120 feet	7,500
Display pools	6,000
Relocation and paving service roads	15,000
Raceway lighting system	8,000
Fencing	25,000
Total estimated cost of the program	296,500

OPERATION AT FULL PRODUCTION LEVEL

NATCHITOCHES NATIONAL FISH HATCHERY

The budget for fiscal year 1967 contains $61,900 for operation and maintenance of the Natchitoches National Fish Hatchery. Of this amount, $56,500 will be available for the normal operations program and $5,400 is scheduled for special rehabilitation projects and purchase of equipment. With the funds budgeted, the hatchery will be able to produce about 17,000 pounds of fish or approximately 7.6 million bass, bluegill, redear, and channel catfish.

Funds were provided by the Congress in fiscal years 1965 and 1966 for the rehabilitation and expansion of facilities at this hatchery. As a result of this development, the hatchery will have facilities available in 1967 to reach a production level of about 28,000 pounds of fish. This will require additional funds of $27,000 or a total O. & M. of $88,900. Funds requested would be utilized for personal services, purchase of fish feed and fertilizer, equipment, and miscellaneous supplies.

Baldhill Dam National Fish Hatchery

The fiscal year 1967 budget contains $12,900 in operating funds for the Baldhill Dam National Fish Hatchery. The hatchery will produce about 500 pounds of warm water species—northern pike, walleye, bluegill, and largemouth bass. With the existing facilities, this is the full production level possible for the hatchery.

Valley City National Fish Hatchery, North Dakota

The fiscal year 1967 budget contains $24,700 in operating funds for the Valley City National Fish Hatchery. These funds will enable the station to produce about 1,300 pounds of warm water fish. When operating at full capacity, facilities at this hatchery have a production potential of approximately 2,000 pounds. In order to obtain this production level, $35,200 would be required in operating funds for personnel services, fish food, equipment, and supplies.

Garrison Dam National Fish Hatchery, North Dakota

management and investigation of resources, fish hatchery activities

The fiscal year 1967 budget contains $76,700 in operating funds for the Garrison Dam National Fish Hatchery. Additional funds of $17,000 or a total of $93,700 in O. & M. funds would be required to attain full production at the hatchery. With this increase, the Garrison Dam National Fish Hatchery would be able to increase its production potential to approximately 30,000 pounds of trout and warm water species annually. The current annual production from the unit is about 25,000 pounds. Funds requested would be utilized for personnel services, purchase of fish feed, fertilizer, equipment, and miscellaneous supplies.

subcommittee recess

Senator Bartlett. The subcommittee will be in recess until 10 a.m., Friday, when representatives of the Forest Service will testify.

(Whereupon, at 4:45 p.m., Thursday, March 3, 1966, the hearings were recessed to reconvene at 10 a.m., Friday, March 4, 1966.)

INDIVIDUALS AND ORGANIZATIONS INDEX

A

Page

Adams, E. James 1469
Adams, Hon. Tom, secretary of State of Florida 2072
Aiken, Hon. George D., U.S. Senator from Vermont 1759–1765
Aiken, William H., vice president, research and development, Union Bag-Camp Paper Corp., Jacksonville, Fla 1229
Alaska Department of Fish and Game 917
Alaska Department of Health and Welfare 1451
Albert, Edward, Broad Creek Yacht & Recreation Club, Prince Georges County, Md 2015–2019
Albuquerque (Greater), N. Mex., Chamber of Commerce 2049
Allot, Hon. Gordon, U.S. Senator from Colorado 192, 1217, 1771–1776
All-Pueblo Council, resolution 2048
American Association of Nurserymen, Inc 1234
American Farm Bureau Federation 2103–2106
American Hardboard Association 2135
American Medical Association, Journal of 1872
Anderson, Hon. Clinton P., U.S. Senator from New Mexico 192, 1253, 2046, 2050, 2079
Arkansas Game and Fish Commission 1089
Arkansas Wood Products Association 1219
Aspinall, Hon. Wayne N., U.S. Representative from Colorado 192
Atencin, Benny, Treasurer, All-Pueblo Council 2048
Atherton, Charles H 1549

B

Baker, John A 192, 1101–1103, 1252, 1260
Baldwin, Dale M 309
Barnard, Winifred, member, Hardin County Commissioners, Illinois 1235
Bartlett, Hon. E. L., U.S. Senator from Alaska ..... 36, 42, 69, 81, 627, 629, 634, 643–646, 649, 755, 821–825, 884, 889, 905, 912–915, 937–946, 949, 1059–1067, 1099, 1249–1253, 1392, 1434–1436, 1439–1451, 1454, 1458, 1465–1471, 1477–1480, 1499–1505, 1510–1515, 1518, 1530–1541, 1613, 1619, 1622–1627, 1629, 1668, 1670–1688, 1691, 1694–1699, 1835–1838, 1842, 1846, 1848–1850, 1854.
Bearking, Leonard, superintendent of schools of St. John, N. Dak 1908–1914
Beker, Ralph 1555
Beirne, James P 230, 245
Benjamin, Samuel 1042 1208,
Bennett, Robert L 2052, 2057
Bennett, Hon. Wallace F., U.S. Senator from Utah 1803–1808
Benson County Agricultural and Training School, Maddock, N. Dak 1914, 1930
Benson County Auditor's Office, Minnewaukan, N. Dak 1918
Berea College, Berea, Ky 1854
Bernal, Paul J., vice chairman, All-Pueblo Council 2048
Berryman, Jack H 1065
Bible, Hon. Alan, U.S. Senator from Nevada ..... 192, 248, 307–313, 440, 493, 530–538, 542, 705, 738–741, 1067, 1154–1167, 1273–1279, 1297, 1307–1321, 1324, 1326–1328, 1333, 1335–1340, 1344, 1346–1348, 1351, 1701, 1703, 1705–1707, 1720, 1727–1740, 1750–1758, 2091.
Bloom, Kathryn 1551–1557
Bofferding, James J., A.I.A., Seifert & Staszko Associates, Inc., Fargo, N. Dak 1922
Boggs, Hon. J. Caleb, U.S. Senator from Delaware 1765–1767

Page
Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers & Helpers, Kansas City, Kans. 886
Bolen, Ben, Richmond, Va.; president, Association of State Park Directors 1971
Boyd, Kenneth M., staff writer, the Washington (D.C.) Post 1997
Bradley, Harriett F., supervisor, Dranesville District, Fairfax County, Va. 2028
Bradley, James 1499, 1504, 1521
Bremhorst, Robert L., vice president, National Particleboard Association 1940
Brewster, Hon. Daniel B., U.S. Senator from Maryland 2144
Brien, Reginald J., tribal chairman, Turtle Mountain Band of Chippewa Indians 2076, 2078
Brigham Young University, Provo, Utah 1781
Broad Creek Yacht & Recreation Club, Inc., Prince Georges County, Md. 2016
Browning, Dr. Levi M., commissioner of health and welfare of Alaska 1452
Burdick, Hon. Quentin N., U.S. Senator from North Dakota 1905–1907, 1912, 1927, 1930
Burkhalter, H. D., T. L. James & Co., Inc., Ruston, La 1227
Burns, Hon. Haydon, Governor of Florida 2072
Burton, Hon. Laurence J., U.S. Representative from Utah 192
Byrd, Hon. Robert C., U.S. Senator from West Virginia 40–42, 69, 435–440, 473–477, 492–496, 499, 538–542, 646–658, 742–754, 756, 795–805, 826, 884, 887, 890, 933–937, 1043–1059, 1237–1250, 1252, 1254, 1257–1271, 1348, 1353, 1356–1359, 1361, 1384, 1388–1392, 1859–1865, 1868, 1876, 1878, 1884–1887, 1889–1893, 1895, 1897, 1899, 1902–1914, 1925–1934, 1940–1943, 1945–1950, 1955, 1963, 1965, 1970–1974, 1978, 1989–1992, 2028.

C

California Wool Growers Association 2102
Callison, Charles H., National Audubon Society 2090
Carlin, Paul N., assistant director, National Association of Counties 2145–2147
Carver, Hon. John A., Jr. 38, 62–69, 192
Case, Hon. Clifford P., U.S. Senator from New Jersey 2063, 2082
Cenarrusa, Hon. Pete T., Speaker of the House of Representatives of Idaho 2140
Chadwick, Henry V. 1389, 1434, 1438–1440
Chesley, John W., Jr., Silesia, Md.; chairman, South Potomac Citizens Crisis Committee 1999–2001
Christian, Hon. Floyd T., superintendent of public instruction of Florida 2072
Church, Hon. Frank, U.S. Senator from Idaho 930, 1083, 2138–2141
Clark, Hon. Joseph S., U.S. Senator from Pennsylvania 1990, 2062
Clark, Dr. Robert Emmet, Albuquerque, N. Mex. 192
Clear View Trout Farm, Heber, Utah 1784
Clegg, Luke, commissioner, Provo City Corp., Provo, Utah 1779
Cliff, E. P. 1108–1120, 1151–1154, 1159, 1162–1165, 1168, 1172, 1174, 1191, 1237–1240, 1249–1254, 1260–1263, 1266, 1270, 1793–1796.
Clyde, Don, honorary president, National Wool Growers Association 1876–1884
Cochran, Neal P. 794, 798–800
Cohen, Robert A. 1434, 1438
Cole, Bert L., commissioner of public lands of Washington 1212
Collett, Merrill 1590
Colorado Department of Agriculture 1773
Colorado River Indian Tribes, Colorado River Reservation, Parker, Ariz. 327
Connally, Hon. John, Governor of Texas 2110
Conner, Hon. Doyle, commissioner of agriculture of Florida 2072
Conrad, Charles H. 1670–1674, 1678–1685, 1687, 1697
Conte, Hon. Silvio O., U.S. Representative from Massachusetts 2086, 2088
Coombs, L. Madison 325
Cooper, Hon. John S., U.S. Senator from Kentucky 959, 1846–1854
Corke, Charles P. 308
Cottam, Clarence, director, Welder Wildlife Federation 1233
Crafts, Edward C. 448, 466–476, 490–494, 496–503, 521–523, 531–542
Creamer, Howard, member, Hardin County Commissioners, Illinois 1235
Culbertson, J. Steele, National Fish Meal & Oil Association 1884–1887
Curtis, Hon. Carl T., U.S. Senator from Nebraska 1814–1818
Cutler, Rupert, assistant executive director, the Wilderness Society 1950–1954

D

Page
Denit, W. Darlington 68
Dennis, Robert T., assistant conservation director, Izaak Walton League of America 2144
Denton, Hon. Winfield K., U.S. Representative from Indiana 918
Dickey, Leo D 2127
Dickinson, Hon. Fred, Jr., comptroller of Florida 2072
DiLuzio, Fran C 1297–1321, 1324, 1327
Dirkson, Hon. Everett M., U.S. Senator from Illinois 1835–1837
Dixon, Hon. Verl G., mayor of Provo, Utah 1779
Douglas, Hon. Paul H., U.S. Senator from Illinois 1823–1830
Douglas, Philip A., executive secretary, Sport Fishing Institute 1955–1963
Dowe, Thomas W., dean, College of Agriculture, Univeristy of Vermont, Burlington, Vt 1761
Doyle, Mortimer B., executive president, National Forest Products Association 1934–1937
Drevlow, Hon. W. E., president of the senate of Idaho 2140
Droege, R. F 1241, 1243, 1248, 1270
Duncan, Harold J 640

E

Easley, Hon. Mack, president of the senate of New Mexico 2049
Eaton, Eugene D 1346
Eaton, Paul R 1544
Eckles, Howard H 64
Ellender, Hon. Allen J., U.S. Senator from Louisiana 1092, 2115
Ely Daily Times, Nevada 1157
Erwin, Hon. Sam J., U.S. Senator from North Carolina 917, 1223
Eufaula Boarding School, Oklahoma 2055

F

Faircloth, Hon. Earl, attorney general of Florida 2072
Fairfax County, Va 1698
Faust Band Saw Mill, Inc., Helena, Ark 1219
Faust, Thomas E., Faust Band Saw Mill, Inc., Helena, Ark 1219
Finale, William E 272, 348, 2053
Fischer, David C., principal, Benson County Agricultural High School, Maddock, N. Dak 1924
Fischer, Victor 192
Fitzgerald, Joseph H 1613–1619, 1622–1627
Florida State Board of Conservation 2070–2072
Florida State Board of Conservation, resolution 2072
Fong, Hon. Hiram L., U.S. Senator from Hawaii 1085
Ford, Clair, Ford Fisheries, Richfield, Utah 1784
Ford Fisheries, Richfield, Utah 1784
Forest Farmers Association 2123
Fox, W. S., chairman, Southern Pine Industry Committee, New Orleans, La 2134
Franklin, Donald R., unit leader, Utah Cooperative Fishery Unit, Logan, Utah 1786
Freehling, Robert J 1359
Freeman, Hon. Orville L 1253
Frolick, E. F., dean, College of Agriculture & Home Economics, University of Nebraska, Lincoln, Nebr 1815
Fulbright, Hon. J. W., U.S. Senator from Arkansas 1088, 1218
Fumich, George, Jr 781–785, 793–805

G

Gallagher, James F., president, Broad Creek Citizens Association, Silesia, Md 2008–2012
Gallatin County, board of supervisor, Illinois 1235
Galler, Dr. Sidney R 1504, 1534–1536
Gasch, Manning, Georgetown Pike, McLean, Va 2029
Gehrig, Dr. Leo J 1454

Page
Georgia-Pacific Corp 1218
Glascock, H.R., Jr., Western Forestry & Conservation Association 1938
Goddard, Dr. Maurice, Harrisburg, Pa 192
Goding, Hon. M. W 169–176, 181
Gott, Donald H., executive director and secretary, American Walnut Manufacturers Association, Chicago, Ill 1842–1846
Gottschalk, John S 952–960, 1001–1012, 1020–1022, 1027, 1034, 1042–1051, 1053–1066
Grady, Ruby M., Broadcreek Bay, Prince Georges County, Md 1998
Graves, Gene 2130
Gray, Orville, president, the Montana Wilderness Association 1796
Great Falls Tribune, Montana 1792
Greeley, A. W 1151–1153, 1165–1172, 1240, 1244, 1252
Groton, Page, director, Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers & Helpers, Kansas City, Kans 886
Gruening, Hon. Ernest, U.S. Senator from Alaska 2058
Guerrero, Hon. Manuel F. L., Governor of Guam 129, 131
Gutermuth, C. R., vice president, Wildlife Management Institute 2150–2152

H

Hair, J. D., Jr., director, Louisiana Wildlife and Fisheries Commission 1092, 2115
Hamlen, James H., J. H. Hamlen & Son, Inc 1221
Hanna, Jean R 763
Hanrahan, Frank J., executive vice president, American Institute of Timber Construction 1932
Hanson, G. F., State geologist of Wisconsin 2066
Hardesty, Lorraine A., deputy clerk, board of supervisors, Mono County, Calif 2130
Hardin, Clifford M., chancellor, University of Nebraska, Lincoln, Nebr 1816
Hardin County, commissioners, Illinois 1235
Harris, Hon. Fred R., U.S. Senator from Oklahoma 1819–1822
Hart, Hon. Philip A., U.S. Senator from Michigan 1767–1771
Hartzog, George B., Jr 359, 364–369, 392–403, 411, 416–422, 428, 432–440, 1686
Hayden, Hon. Carl, chairman, U.S. Senator from Arizona 1, 10, 22, 27, 31–33, 36–40, 42–45, 62, 64–69, 71, 79–83, 85, 107, 109–111, 121, 123–131, 133, 169, 172–176, 181, 183, 188, 197–199, 201, 204, 207, 224–229, 234–238, 240, 245–248, 250, 253–255, 258, 270–278, 295, 300, 303–308, 312, 315, 320–324, 327–329, 334–336, 338, 343, 350, 355, 357, 359, 369, 392–404, 411, 416–420, 422, 428, 432–434, 440, 445, 447–449, 451, 466, 471–473, 477, 490, 493, 498, 501–503, 521–523, 533, 538, 543–545, 553, 556, 556–559, 572, 621, 624–629, 631, 634, 636–643, 646, 658, 662–665, 670, 702–705, 707, 713–723, 727–738, 741, 757, 759, 763, 769, 772, 775, 777, 781, 785, 793–795, 806, 812, 828, 838, 870–878, 881, 884–891, 897–899, 902–906, 912, 915, 917, 922, 924, 926–930, 933, 937, 951, 956, 959–961, 1001–1007, 1010–1012, 1021, 1027, 1034, 1038–1043, 1078–1088, 1091, 1101, 1103, 1106–1108, 1111, 1113–1120, 1150–1154, 1165–1182, 1185–1193, 1206, 1212, 1214, 1217–1236, 1603, 1686, 1759, 1765, 1767–1769, 1771, 1774, 1776, 1778, 1788, 1791, 1803, 1808, 1811–1816, 1818–1824, 1826, 1830, 1833, 1853, 1978, 1984, 1998, 2052–2057, 2060–2062, 2065, 2068–2070, 2075, 2078, 2082, 2106, 2110, 2116, 2126–2128, 2130, 2133, 2144, 2149.
Hayes, Lloyd D 1467, 1469
Hegner, Casper F 1521
Hendee, C. W 1118–1120, 1150, 1180, 1206, 1262–1266
Hendricks, Ernest L 636–639, 646, 655
Herman, William I 1758
Herrera, Joe H., secretary, All-Pueblo Council 2048
Hetzel, Theodore B., Board of Indian Rights Association, American Friends Service Committee 1859–1864
Hibbard, Walter J 663–665, 702–707, 713–715, 718, 727–729, 732–734, 738–740, 742, 745–754
Hickman, Will, legal council, Lafayette County Board of Beat Supervisors, Oxford, Miss 2131
Hinkle, Gene H., president, Greater Albuquerque Chamber of Commerce, N. Mex 2049
Hodges, Ralph D., National Forest Products Association 1933–1939

Page
Hoff, Hon. Philip, Governor of Vermont 192
Holland, Hon. Spessard L., U.S. Senator from Florida 2070
Holum, Kenneth 1273–1279, 1312, 1321
Hood, Edwin, president, Shipbuilders Council of America 2075
Howe 1553
Hruska, Hon. Roman L., U.S. Senator from Nebraska 1833
Hudspeth, Verl, Harrison, Ark 1089
Hull, Roy W., manager, Clear View Trout Farm, Heber, Utah 1784
Hulsey, Andrew J., chief, Fisheries Division, Arkansas Game and Fish Commission 1089
Hutchins, Francis S., Berea College, Berea, Ky 1854

I

Idaho State Legislature, resolution 2140
Idaho Wool Growers Association 2093
Immer, John R., president, Federation of Citizens Associations, Washington, D.C 1978–1992
Inouye, Hon. Daniel K., U.S. Senator from Hawaii 2079
International Association of Game, Fish, and Conservation Commissioners, resolution 1776, 2151
International Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers & Helpers, Iron Shipbuilders International Marine Council, maritime trades department, executive board, resolution 886
Isher, Tommy, Broad Creek, Md 2012–2014
Iverson, Floyd 1159–1161
Izaak Walton League of America 2144

J

Jackson, Hon. Henry M., U.S. Senator from Washington 192, 930, 2061
Jackson Hole Chamber of Commerce, Jackson, Wyo 1088
James, T. L., T. L. James & Co., Inc., Ruston, La 1227
Javits, Hon. Jacob K., U.S. Senator from New York 2063
Jemison, Dr. George M. 1112, 1175–1180, 1249, 1254–1261, 1268–1270, 1794, 1796
Johnson, Charles C 1441, 1448
Johnson, Hon. Harold T., U.S. Representative from California 2045
Johnson, Leon H., president, Montana State University, Missoula, Mont 1078
Johnson, Hon. Lyndon B., President of the United States 1523, 1607, 1677, 1790, 1871
Johnson, Raymond E 1004–1006
Jordan, Hon. Len B., U.S. Senator from Idaho 192, 193, 930, 1822

K

Kastenmeier, Hon. Robert W., U.S. Representative from Wisconsin 1808–1814
Kelly, Samuel G 1703–1706
Kelly, Thomas C., administrative assistant, County Commissioners of Prince Georges County, Upper Marlboro, Md 1698
Kennedy, Hon. John F., President of the United States 1788
Kennedy, Hon. Robert F., U.S. Senator from New York 2063
Kenner, Harold H., school board member, Benson County, N. Dak 1915–1918, 1929
Kentucky Farm Bureau Federation 2133
Keogh, Hon. Eugene J., U.S. Representative from New York 1544–1546
Kern, Phil, secretary, Washington Wool Growers Association 2102
Kethro, Donald G 321–326
Keyser, Barbara, headmistress, Madeira School, McLean, Va 2019–2022
Kimball, Thomas L., executive director, National Wildlife Association 2149
King, Hon. Bruce, speaker of the House of Representatives of New Mexico 2049
Kirkness, Walter, commissioner, Department of Fish and Game of Alaska 917
Klein, Richard K., chairman, North Dakota State Committee, Department of Public Instruction, Bismarck, N. Dak 1919–1922
Knodel, Walter J 301
Knott, Lawson, B., Jr 1523
Koon, John W., executive secretary, Kentucky Farm Bureau Federation 2134
Kopecky, Frank J 1825
Koppers Co., Inc 2136
Kuchel, Hon. Thomas H., U.S. Senator from California 192, 2129

L

Page
Laffoon, Herman D., Sr., chairman, Colorado River Indian Tribes, Colorado River Reservation, Parker, Ariz. 327
LaFountaine, Edward J., secretary-treasurer, Turtle Mountain Band of Chippewa Indians 2078
Larson, Sidney D. 44, 68
Larson, William H., manager, Washington Forest Protection Association 1214
Lattu, Onnie P. 553, 557
Lausche, Hon. Frank J., U.S. Senator from Ohio 2128
Learned, R. F., R. F. Learned & Sons, Inc. 1227
Lederer, Robert F., executive vice president, American Association of Nurserymen, Inc. 1234
Lee, Hon. R. Rex, Governor of American Samoa 111, 116–126, 128
Lemmon, James H., Lemmon, S. Dak. 1008
LeRoy, Dan C., director of Indian education, Department of Public Instruction, Bismarck, N. Dak. 1930
Levin, Ezra, president, Vio Bin Corp., Monticello, Ill. 873
Linville, Donald, executive secretary, American Hardboard Association 2135
Long, Hon. Edward V., U.S. Senator from Missouri 2126
Longmire, Richard C., National Association of Soil & Water Conservation Districts 1973–1977
Los Angeles County, Calif., Watershed Commission 1858
Louisiana Forestry Association 2120–2123
Louisiana Wildlife and Fisheries Commission 1092, 2115

M

MacDonald, Charles B., Prince Georges County Civic Federation; Potomac Foundation, Oxon Hill, Md. 2004–2008
McBroom, James T. 1010, 1038–1042, 1054
McCarter, Walter J. 1707, 1720–1730, 1732–1737, 1739, 1750–1758, 1984–1986
McCarthy, Hon. Eugene J., U.S. Senator from Minnesota 1225, 1546, 2107
McCune, Shannon, president, University of Vermont, Burlington, Vt. 1760
McGee, Hon. Gale W., U.S. Senator from Wyoming 299, 313, 754, 1069–1072, 1207–1209, 1543–1561, 1567, 1588–1590, 1592–1603, 1607, 1609–1611
McGovern, Hon. George S., U.S. Senator from South Dakota 2052, 2061
McGrath, Kyran, Illinois Department of Business and Economic Investment 1902–1904
McIntyre, Hon. Thomas J., U.S. Senator from New Hampshire 2127
McKernan, Donald L. 815–829, 837, 870–878, 881, 884–809, 897, 902, 905, 912–915, 922, 926, 929, 933–949
Machen, Hon. Hervey, U.S. Representative from Maryland 2141–2144
Maddock Public School, Maddock, N. Dak. 1906, 2060
Magnuson, Hon. Warren G., U.S. Senator from Washington 774, 794, 800–802, 805, 930, 1212, 2069
Magruder, G. C., Jr., president, Texas Sheep & Goat Raisers' Association 2099
Mahon, Hon. George H., U.S. Representative from Texas 1972
Malone, Owen J. 1734, 1740, 1754
Manley, John E. 79–83
Mansfield, Hon. Mike, U.S. Senator from Montana 1078–1080, 1788–1803
Marshall University, Huntington, W. Va. 1350
Maryland National Capital Park and Planning Commission 2004
Mason, John C. 192
Massey, Carlton C., county executive, Fairfax County, Va. 1698
Matlick, J. O. 1853
May, Joseph L., president, Jackson Hole Chamber of Commerce, Jackson, Wyo. 1088
Memmott, Frank C. 714, 740–743, 745, 747, 752–754
Meramec Basin Association 2126
Metcalf, Hon. Lee, U.S. Senator from Montana 249, 930, 1788–1803
Metz, Robert R., commissioner of forestry, Toledo, Ohio 1943–1946
Michigan House of Representatives, resolution 2116
Miller, Joseph S., Western Forest Industries Association 1897–1902
Mindahl, E., school board clerk, Benson County, N. Dak. 1915–1918
Mock, H. Byron, Salt Lake City, Utah 192
Moe, Dr. Henry Allen 1603, 1607–1611
Mondale, Hon. Walter F., U.S. Senator from Minnesota 1225, 2107

Page
Mono County, Calif., Board of Supervisors 2129
Monroney, Hon. Mike, U.S. Senator from Oklahoma 2054
Montague, Harry F., county auditor, Benson County, N. Dak 1918
Montana State University, Missoula, Mont 1078
Montana Wilderness Association 1796
Montana Wool Growers Association 2094
Montana Wool Growers Association resolutions 2095
Montoya, Domingo, chairman, All-Pueblo Council 2048
Montoya, Hon. Joseph M., U.S. Senator from New Mexico 2046, 2050, 2079
Moody, Joe E 192
Moore, Hon. Dan, Governor of North Carolina 917
Morse, Hon. Wayne, U.S. Senator from Oregon 930, 2033–2044
Morton, Hon. Rogers C. B., U.S. Representative from Maryland 192
Moses, Alfred H., Fairfax County, Va 2028
Moss, Hon. Frank E., U.S. Senator from Utah 930, 1222, 1776–1788
Mundt, Hon. Karl E., U.S. Senator from South Dakota 248, 350, 442, 626, 632–635, 659–662, 706, 755, 806, 947–949, 1073–1077, 1209–1211, 1436–1439.
Murdock, Ray, commissioner, Provo City Corp., Provo, Utah 1779
Muschenheim, Dr. Carl, chairman, National Committee on Indian Health, Association on American Indian Affairs, Inc 1864–1876
Myers, J. Walter, Jr., executive director, Forest Farmers Association 2123–2126

N

Naftalin, Micah H., counsel, South Potomac Citizens Crisis Committee, Prince Georges County, Md 1992–2004, 2018
Nakal, Raymond, chairman, Navajo Tribal Council 2048
Nash, Philleo 255, 257–259, 270–278, 300–308, 311–313, 320–329, 334, 338, 343, 348–350.
National Association of Counties 2145–2147
National Audubon Society 2090, 2106
National Council on the Arts, list of members 1589
National Council on the Humanities, list of members 1610
National Lumber & Building Material Dealers Association 2134
National Recreation and Park Association 2063
National Wildlife Federation 2147–2150
Navajo Tribe, tribal council 2047
Nebraska, University of, College of Agriculture and Home Economics, Lincoln, Nebr 1815
Nebraska, University of, office of the chancellor, Lincoln, Nebr 1816
Nelson, Hon. Gaylord, U.S. Senator from Wisconsin 1808, 2117
Nelson, M. M. 494–496, 499, 527, 539, 543, 1117, 1163, 1165, 1169–1174, 1185–1189, 1237–1249.
Neuberger, Hon. Maurine B., U.S. Senator from Oregon 930
Nevada, University of, Reno, Nev 1155, 1344
Nevada Wool Growers Association 2091
New Mexico State Legislature, resolution 2049
New Mexico Wool Growers Association 2092
Newsweek 1561–1567
Niederlehner, Leonard 192
North Carolina State University, School of Forestry, Raleigh, N.C 1223
North Dakota Department of Public Instruction 1919–1923, 1930
North Dakota Department of State 1918

O

O'Brien, Hon. Leo W., U.S. Representative from New York 192
Officer, James E 305
Ogden, Daniel M., Jr 474
Ohio Farm Bureau Federation 1229
Ohio Forestry Association, Inc 1230
Oliver, Lester, chairman, White Mountain Apache Tribe 277, 1091, 2054
Orcutt, John P., commissioner of Agriculture of Colorado 1773
Oregon, Fish Commission of 898

Page
Orr, Duane, district engineer, Port of Corpus Christi, Tex 2111
Overton, W. E., board of directors, New Mexico Wool Growers Association 2092

P

Pacific Marine Fisheries Commission 899–901
Pacific Marine Fisheries Commission, resolution 900
Pacific Salmon Interagency Council 2074
Parr, William A., National Association of State Park Directors 1970–1972
Pastore, Hon. John O., U.S. Senator from Rhode Island 918
Paton, Robert R., executive director, Ohio Forestry Association, Inc 1231, 1941–1943
Patteson-Knight, Mrs. Douglas, Fairfax County, Va 2030
Patton, John M 172
Paulson, Mrs. Thelma, school board member, Benson County, N.Dak 1915–1918
Pautzke, Clarence F 1960
Peabody, H. B. Jr., president, R. F. Learned & Sons, Inc 1227
Pearl, Milton A 192, 197
Pecora, William T 559, 621–636, 639–641, 643–662
Phelps, John E., acting director, Department of Fish and Game of Utah 1781
Pickle, Hon. J. J., U.S. Representative from Texas 2112–2114
Pino, Juanita, chief clerk, Senate of New Mexico 2049
Pomeroy, Kenneth B., chief forester, American Forestry Association 1930
Prendergast, Joseph, executive vice president, National Recreation and Park Association 2063
Preston, R. J., School of Forestry, North Carolina State University, Raleigh, N.C. 1224
Price, Jackson E 536
Prince Georges County, Md., commissioners 1698, 2003
Pritchard, John R 1672
Provo, Utah, City Commission 1779
Proxmire, Hon. William, U.S. Senator from Wisconsin ..... 43, 821, 828, 837, 1254–1257, 1811, 1823, 1992, 1999–2001, 2003–2009, 2011–2015, 2017–2019, 2021, 2025, 2026, 2028, 2030, 20650.
Public Land Law Reveiw Commission, Governors' representatives of the advisory council, list of 193
Public Land Law Review Commission, non-Federal Government members of the advisory council, list of 192
Pyles, Hamilton K 1793

Q

Quenstedt, Warren D 1730–1732, 1734, 1738, 1755, 1757

R

Rabeau, Dr. Erwin S 1384–1391, 1434–1451
Radford, Robert T., president, Watershed Fire Council of Southern California; chairman, Watershed Commission, County of Los Angeles, Calif 1855–1859
Ramey, James T 192
Rampacek, Carl 718, 751
Rasmussen, B. L 1181, 1190–1193
Renne, Roland R 1333–1351
Reno (Nev.) Evening Gazette 1158
Rhode Island Department of Natural Resources 918
Rhude, Maurice J., chief engineer, Unit Structures Department, Forest Products Division, Koppers Co., Inc., Peshtigo, Wis 2136–2138
Rice, Harry W 521
Rigsby, Herschel, chairman, Board of Supervisors, Gallatin County, Ill 1235
Riordan, Laurence E., assistant director of research, Department of Game, Fish, and Parks of Colorado 1776
Ripley, S. Dillon 1471, 1477–1480, 1499–1505, 1510–1515, 1518, 1523, 1530, 1536–1541, 1986–1988
Ritchie, John D., regional vice president, American Plywood Association 1893–1897
Rivers, Hon. Ralph J., U.S. Representative from Alaska 915–917
Robertson, Hon. A. Willis, U.S. Senator from Virginia 946, 1080

Page

Robinson, Clay M., Sandy, Utah; executive manager, U.S. Trout Farmers Association 1783
Robinson, Ruie, member, Hardin County Commissioners, Illinois 1235
Rockefeller, Laurance S., New York, N.Y 192
Rogers, Hon. Walter, U.S. Representative from Texas 192
Romero, Albert, chief clerk, House of Representatives of New Mexico 2049
Roncalio, Hon. Teno, U.S. Representative from Wyoming 2109
Rosenbaum, Joe B 704–706, 727, 740, 745–750, 753
Rovin, Charles B 301, 349
Rowe, Mrs. James, H., Jr 1629, 1668–1671, 1678, 1681–1687, 1694, 1697–1699
Roy, Arda J., St. John, N. Dak 1913
Ruark, H. E., director, Georgia Forest Research Council 1890–1893
Rubin, Henry C 557
Rusk, Hon. Dean 177

S

St. John Public School, St. John, N. Dak 1905
St. Regis Paper Co., Libby, Mont 1792
Saline County, Ill., Board of Supervisors 1236
Sallee, R. E., chairman, Board of Navigation and Canal Commissioners, Nueces County Navigation District, Port of Corpus Christi, Tex 2112
Sandy Hook Marine Laboratory, Highlands, N. J 2084
Santa Barbara County, Calif., Board of Supervisors 1855
Savilla, Agnes, secretary-treasurer, Tribal Council of the Colorado River Indian Tribes, Colorado River Reservation, Parker, Ariz 328
Sawyer, Hon. Grant, Governor of Nevada 1971
Saylor, Hon. John P., U.S. Representative from Pennsylvania 192, 533
Scanlon, Betty H., secretary, Florida Board of Conservation 2072
Scanlon, Edward H., secretary-treasurer, Society of Municipal Arborists 1946–1948
Scherrer, George, manager, Saline Valley Conservancy District, Eldorado, Ill 1825
Schoknecht, Mark, chairman, North Idaho-Montana Forest, Pest Action Council, St. Regis Paper Co., Libby, Mont 1792–1794
Schoning, Robert W., State fisheries director, Fish Commission of Oregon, Portland, Oreg 898
Schultze, Charles L 890
Scott, Hon. Hugh, U.S. Senator from Pennsylvania 2063
Screen, Joseph F 125
Seegers, Scott, vice president, Virginia Potomac Valley Association 2022–2028
Seifert & Staszko Associates, Inc., Fargo, N. Dak 1922
Shamberger, Hugh A., associate director, University of Nevada, Reno, Nev 1344
Shasta County, Calif., Board of Supervisors 2064
Shear, Daniel H 1676, 1694–1696, 1699, 2023
Shelton, R. K., forester, Townsend Lumber Co., Inc 1220
Shipbuilders Council of America 2075
Shuey, Everett E., Helena, Mont., executive secretary, Montana Wool Growers Association 2094
Sickles, Hon. Carlton R., U.S. Representative from Maryland 2144
Siddoway, R. K., president, Idaho Wool Growers Association 2093
Sigler, William E., chairman, Department of Fish and Wildlife Resources, Utah State University, Logan, Utah 1785
Sihvonen, S. V., manager, Georgia-Pacific Corp 1218
Simanson, Edwin, school board member, Benson County, N. Dak 1915–1918
Simpson, Hon. Milward L., U.S. Senator from Wyoming 1087, 1226, 2090, 2117
Skau, C. M., associate professor, University of Nevada, Reno, Nev 1155
Small, Miss Mary R 1679, 1685–1687
Smathers, Hon. George A., U.S. Senator from Florida 2070
Smith, Art, executive secretary, Arkansas Wood Products Association 1219
Smith, Gordon, school-board president, Benon County, N. Dak 1915–1918, 1929
Smith, Mrs. Nancy E., San Bernardino, Calif 192
Smylie, Hon. Robert E., Governor of Idaho 2141
Snedeker, Thomas C 555

Page
Southern Hardwood Forest Research Group, Delta Council 2118–2120
Southern Pine Industry Committee, New Orleans, La 2134
Sparkman, Hon. John J., U.S. Senator from Alabama 2108
Spoden, F. George 1034
Sport Fishing Institute, Washington, D.C 1957–1960
Springer, Hon. William L., U.S. Representative from Illinois 2073
Stanfield, D. R., executive vice president, Ohio Farm Bureau Federation 1230
Stennis, Hon. John, U.S. Senator from Mississippi 1077–1078, 1211, 1830, 1833
Stevens, Lawrence N 471, 474
Stevens, Roger L 1559–1561, 1567, 1588–1590, 1593–1602, 1986, 2208, 2211
Stevens, William J 1688–1691, 1699
Stewart, Gerry O., president, California Wool Growers Association 2102
Stoddard, Charles H 204–207, 224–230, 234, 251
Streshley, Leroy A., chairman, Lander County Board of County Commissioners, Austin, Nev 308, 310
Stroud, Richard H., executive vice president, Sport Fishing Institute, Washington, D.C 1960
Symington, Hon. Stuart, U.S. Senator from Missouri 2126

T

Tanner, Paul, chairman, Board of Supervisors, Saline County, Ill 1260
Tanner, Vasco M., professor, Brigham Young University, Provo, Utah 1738
Teague, Hon. Charles M., U.S. Representative from California 1854
Texas Sheep & Goat Raisers' Association 2099
Thatchen, T. Thomas, clerk, House of Representatives of Michigan 2116
Thompson, James, American Institute of Timber Construction 1931–1933
Togstad, Ruben, school board member, Benson County, N. Dak 1915–1918
Tomey, J. Neal 1750–1751
Townsend Lumber Co., Inc 1220
Trevorrow, George C 1356–1359
Tudor, William J., special assistant to the vice president, Southern Illinois University, Carbondale, Ill 1838–1842
Tufts, Mrs., Prince Georges County, Md 2011
Tunison, A. V 523–1002, 1044, 1051–1053, 1066–1068, 1089, 1786, 2089, 2108
Turner, Harold E., Iron County, Mo 2127
Turtle Mountain Band of Chippewa Indians, resolution 2077
Turtle Mountain Band of Chippewa Indians, tribal office 2076
Tydings, Hon. Joseph D., U.S. Senator from Maryland 2144

U

Udall, Hon. Stewart L 22–33, 36–44, 179, 1677, 2062, 2144
Underhill, A. Heaton 538
Union Bag-Camp Paper Corp., Jacksonville, Fla 1228
U.S. Senate, Committee on Interior and Insular Affairs, resolution 2061
U.S. Trout Farmers Association 1783
Upton, Mrs. Graydon, Bull's Neck Hundred Corp., Fairfax County, Va 2031
Utah Cooperative Fishery Unit, Logan, Utah 1786
Utah Department of Fish and Game 1781
Utah State University, Department of Wildlife Resources, Logan, Utah 1785

V

Van Cleave, Mrs. Ruth 85, 107–110, 176
Van Vleck, Stanley L., president, Nevada Wool Growers Association 2091
Vehofer, Dr., Prince Georges County, Md 2018
Verhoeven, Leon A., executive director, Pacific Marine Fisheries Commission, Portland, Oreg 900
VioBin Corp., Monticello, Ill 873
Virginia Potomac Valley Association 2024

W

Wagner, Dr. Carruth J 1435, 1442, 1451
Walford, L.A., director, Sandy Hook Marine Laboratory, Highlands, N.J 2082, 2084
Walker, John 1455–1458, 1465–1470, 2221
Walker, Laurence C., dean, School of Forestry, Stephen F. Austin State College, Nacogdoches, Tex 1948–1950

Page
Walton, William 1549
Washington Commission of Public Lands 1212
Washington Forest Protection Association 1214
Washington (D.C.) Post, The 1997, 2007
Washington Wool Growers Association 2101
Watershed Fire Council of Southern California 1857
Watkins, Arthur V 759–764
Weinberg, Edward 772–775
Weisl, Edwin L., Jr 192
Weissman, Norman, president, UWH Audubon Society 2106
Welder Wildlife Foundation 1232
Westfield, James 714, 750, 752
West Virginia, University of, Morgantown, W. Va 1348–1350
Wheeler, Henry P., Jr 733–735
Whipple, Dr. Fred L 1479, 1531–1533
White, Hon. Compton I., Jr., U.S. Representative from Idaho 192
White, James B., game and fish commissioner of Wyoming 1226
White Mountain Apache Tribe, Whiteriver, Ariz 276, 1091, 2053
White, Hon. Richard C., U.S. Representative from Texas 2110
Whitmore, Frank C., Jr 626, 652–655
Wible, Ralph C., chairman, legislative committee, National Association of State Foresters 1887–1890
Wick, Leonard, superintendent, Benson County Agricultural and Training School, Maddock, N. Dak 1914–1930
Wildlife Management Institute 2150
Williams, Hon. Arnold, secretary of state of Idaho 2140
Williams, Hon. Broward, treasurer of Florida 2072
Williams, Hon. Harrison A., U.S. Senator from New Jersey 2063
Wilson, Arthur, secretary, Senate of Idaho 2140
Wisby, Warren J 1003
Wisconsin State Senate, laws of 1965, bill 6, chapter 502 2066
Wisconsin, University of, geological and natural history survey, Madison, Wis 2065
Wolff, Richard C., vice president, Garcia Corp., Teaneck, N.J 1963–1970
Woodbridge, John M 1673–1678
Wool Growers Association (see individual States for listing)
Wright, Thomas J., chief, Division of Conservation, Department of Natural Resources, State of Rhode Island and Providence Plantations 918
Wyoming Game and Fish Commission 1226
Wyoming Wool Growers Association 2096

Y

Young, Hon. Milton R., U.S. Senator from North Dakota ..... 22, 27, 32, 83, 116, 120, 122, 194, 198, 227, 301, 324, 327, 335, 800, 819–823, 956–959, 1008, 1010, 1111, 1907, 1912–1914, 1925–1929, 2053, 2076, 2107.

Z

Zinner, Paul 702, 721–723, 742–744
Zumwalt, Eugene V 226, 227, 234, 240, 288

SUBJECT INDEX

Page

Department of the Interior and related agencies (beginning of hearings) -- 1
Statement of the chairman, Hon. Carl Hayden ---------- 1
Statement of Hon. Stewart L. Udall, Secretary of the Department of the Interior ---------- 22
Analysis of permanent positions ---------- 34
Appropriations compared with receipts (exlcusive of trust funds), Department of the Interior, exclusive of the Bureau of Reclamation and power marketing agencies ---------- 10
Comparative statement of the appropriations for fiscal year 1966, and the estimate for fiscal year 1967 ---------- 3
Title I—Department of the Interior ---------- 3
Title II—Related agencies ---------- 6
Justifications for permanent appropriations, fiscal year 1966 ---------- 11
Bureau of Commercial Fisheries ---------- 15
Bureau of Indian Affairs ---------- 13
Bureau of Land Management ---------- 11
Bureau of Sport Fisheries and Wildlife ---------- 16
Geological Survey ---------- 15
National Park Service ---------- 20
Office of the Territories ---------- 15
The Alaska Railroad (beginning of hearings) ---------- 71
Statement of the General Manager ---------- 79
Alaska Railroad revolving fund ---------- 73
Exhibit A—Estimates of operating revenues and agencies ---------- 73
Exhibit B—Estimates for additions, bet erments, and replacements, annual program ---------- 77
Exhibit C—Estimates of Restoration costs, disaster recovery program ---------- 78
Exhibit D—Nonexpendable property acquired from excess sources without reimbursement ---------- 79
Financing program ---------- 71
Capital improvements and replacement program ---------- 80
Loss of revenues ---------- 81
Narrative justification for 1967 financing program ---------- 71
Coal Research, Office of (beginning of hearings) ---------- 777
Director's statement ---------- 781
Budget estimate and justification ---------- 777
Budget for 1967 compared to 1966 ---------- 783
Contract program and projects ---------- 785
Projects elevated to pilot plants ---------- 793
Food machinery corporation project ---------- 793, 801
Spencer chemical low-ash coal project ---------- 793, 800
Westinghouse fuel cell ---------- 793
Sewage treatment pilot plant ---------- 797, 804
Slurry pipeline ---------- 801
Questions submitted by Senator Mundt—gasifying lignite ---------- 806
Commercial Fisheries, Bureau of (beginning of hearings) ---------- 807
Director's statement ---------- 812
Administration of Pribilof Islands ---------- 924
Budget estimate and justification ---------- 924
Conservation and harvest of fur seals ---------- 926
Welfare of Aleut natives ---------- 927
Construction ---------- 891
Amendment requested ---------- 2174
Budget estimate and justification ---------- 891
Columbia River fishery facilities ---------- 895, 897
Fishery facilities ---------- 892
Itemization of estimate ---------- 897

	Page
Commercial Fisheries, Bureau of—Continued	
Construction of fishing vessels	902
Amendment requested	2175
Budget estimate and justification	902
Fire halting construction of *Delaware*	902
Federal aid for commercial fisheries research and development	905
Aid to States	906
Apportionment of funds under the Commercial Fisheries Research and Development Act of 1964	908
Amendment requested	2176
Budget estimate and justification	905
Original budget request	913
Program administration	911
Resource disaster aid	910
Fisheries loan fund	927
Administrative expense limitation and justification	927
Itemization of estimate	928
Status of fishery loan fund cases as of Dec. 31, 1965	928
Fishery imports and exports	823
Fishery products and fish protein concentrate	820
Fishery research in Great Lakes	828
General administrative expenses	918
Budget estimate and justification	918
Departmental expenses	920
Itemization of estimate	922
Regional office expense	921
Great Lakes commercial fisheries research program	829
Outlook for commercial fisheries	815
Management and investigations of resources	838
Budget estimate and justification	838
Analysis by activities	840
Analysis by activities (total funds)	841
Comparison of 1966 and 1967 obligational program, management and investigations and S–K appropriations	842
Itemization of estimate	870
Columbia River fishery facilities	867
Fishery resources disaster aid	869
Fishing vessel mortgage insurance	866
Management	842
Marketing and technology	843
Research	854
Coastal and offshore research	854
Designing fish protective devices	864
Employees compensation fund payments	864
Inland fisheries	860
Shellfish	861
Research on fish migration over dams	865
Reorganization	870, 929
Special foreign currency program	878
Budget estimate and justification	878
Summary of fiscal year 1967 budget estimates	812
Questions submitted by Senator Robertson—Atlantic and Gulf Menhaden program	946
Questions submitted by Senator Mundt—Oahe Reservoir fisheries	947
Letter from Hon. Carl Hayden to Hon. Charles L. Schultze—Foreign currency use and credit to Commodity Credit Corporation	890
Letter from Robert W. Schoning to Hon. Carl Hayden—Willamette Falls fishways	898
Letter from Leon A. Verhoeven to Hon. Carl Hayden—Willamette Falls fishways	899
Letter from Alaska Department of Fish and Game to Hon. Ralph J. Rivers—Reduced program on Alaska	915
Letter from Don Moore to Hon. Carl Hayden—Reduced program on North Carolina	917
Commission of Fine Arts (beginning of hearings)	1547
Chairman's statement	1549
Budget estimate and justification	1547
Itemization of estimate	1549

	Page
Corregidor-Bataan Memorial Commission (beginning of hearings)	1701
Statement of Chairman	1703
Amendment requested	2221
Budget request and justification	1701
Historical studies	1704
Statement of prior appropriations and expenditures	1704
Federal Coal Mine Safety Board of Review (beginning of hearings)	1353
Statement of Federal Coal Mine Safety Board of Review	1356
Accomplishments and plans	1358
Budget requests and justification	1353
Creation of the Board	1353
Organization of the Board	1354
Federal Development Planning Committee for Alaska (beginning of hearings)	1613
Accomplishments to date	1622
Authority for establishment of Federal Development Planning Committee for Alaska	1613
Budget estimate	1613, 1619
Field committee	1614
Functions	1614
Role	1615
Review committee	1620
Forest Service (beginning of hearings)	1101
Purpose statement (Assistant Secretary of Agriculture)	1103
Administrative provisions	1195
Assistance to States for tree planting	1189
Budget estimate and justification	1106
Forest protection and utilization	1120
Forest land management	1121
Amendment requested	2192
Project statement	1122
Forest research	1138
Amendment requested	2195
State and private forestry cooperation	1145
Forest roads and trails	1182
Job Corps	1102, 1117, 1261
Land acquisition, special acts	1186
Miscellaneous acquisitions, improvements, provisions, and funds	1193
Statement of Commissioner of Public Lands, State of Washington	1213
Timber Development Organization loans and technical assistance	1191
Amendment requested	2198
Questions submitted by Senator McGee	1207
Questions submitted by Senator Mundt	1209
Questions submitted by Senator Stennis	1211
Letter from Dr. C. M. Skau to Hon. Alan Bible—McIntire-Stennis research program (Public Law 87–788)	1155
Letter from Senators McCarthy and Mondale—wood products marketing and applied utilization laboratory	1225
Franklin Delano Roosevelt Memorial Commission (beginning of hearings)	1543
Budget estimate	1543
Public Law 86–214 (86th Cong., H.J. Res. 115)	1545
Geological Survey (beginning of hearings)	559
Director's statement	621
Amendment requested	2153, 2168
Budget estimate and justifications	559
Analysis by activities	575
Financing of geological survey program	570
Itemization of estimate	620
Conservation of lands and minerals	567, 609
Analysis by subactivities	609
Administration of the Connally Act	618
Mineral and water resource classification of Federal lands	614
Supervision of operations on Federal mineral leases	610
Budget estimate and justification	609
General Administration	569, 618
Budget estimate and justification	618
Consolidated accounts and central services financed by benefiting activities	619

Page

Geological Survey—Continued
Geologic and Mineral Resources Surveys and Mapping 562, 583
Analysis by subactivities 584
Analysis of program components 585
Budget estimate and justifications 583
Lead and zinc stabilization program 641
Marine Geology and Hydrology 564, 592
Minerals exploration 564, 591
Analysis of program 591
Budget estimate and justification 591
Soil and Moisture Conservation 567, 608
Budget estimate and justification 608
Topographic surveys and mapping 560, 576
Analysis by activites 576
Map revision and maintenance 581
Small scale and special mapping 582
Standard quadrangle mapping 579
Analysis of program components 577
Budget estimate and justification 576
Water Resources Investigations 564, 593
Amendment requested 2170
Analysis by subactivities 593
Analysis of program components 594
Budget estimate and justifications 593
Water resources investigations 607
Indian Affairs, Bureau of (beginning of hearings) 253
Commissioner's statement 255
Administrative provisions 343
Budget estimate and justifications 253
Construction 315
Amendment requested 2159
Analysis by activities 315
Buildings and utilities 315
Irrigation systems 318
Itemization of estimate 319
Education and Welfare Services 259
Amendment requested 2157
Analysis by activity 262
Educational assistance, facilities, and services 269
Maintaining law and order 269
Itemization of estimate 270
Relocation and adult vocational training 268
Welfare and guidance services 267
General administrative expenses 336
Amendment requested 2161
Budget estimate and justification 336
Comparative statement of annual authorization by tribes 342
Itemization of estimate 338
Joint report by the Division of Indian Health and the Bureau of Indian Affairs on Indians in off-reservation communities 295
Job Corps 258, 344
Resources management 278
Amendment requested 2158
Analysis by activities 280
Agriculutral and industrial assistance 284
Development of Indian arts and crafts 289
Fire suppression 283
Forest and range lands 281
Maintenance of roads 287
Management of Indian trust property 290
Operation, repair, and maintenance of Indian irrigation system 293
Repair and maintenance of buildings and utilities 291
Soil and moisture conservation 286
Budget estimate and justification 278
Itemization of estimate 295
Road construction 329

Indian Affairs—Continued
Resources management—Continued
Page
Question submitted by Senator Mundt 350
Question submitted by Senator Bartlett 355
Letter to Hon. Carl Hayden from Colorado River Indian Tribes—Lateral A90 327
Indian Claims Commission (beginning of hearings) 757
Amendment requested 2205
Budget estimate and justifications 757
Analysis by activities 758
Object classification 759
Summary of budget request 759
Final judgments 765
Indian health activities and construction of Indian health activities (beginning of hearings) 1361
Departmental statement 1452
Statement of Chief of Division, Dr. Rabeau 1384
Construction of Indian health facilities 1392
Amendment requested 2202
Analysis by activities 1392
Alterations 1414
Construction of Indian sanitation facilities 1428
Sanitation facilities projects 1432
Hospitals and clinics 1394
Personnel quarters 1413
Quarters by location 1414
Analysis of continuing projects 1393
Budget estimate and justification 1392
Itemization of estimate 1434
Indian health activities 1361
Amendment requested 2200
Analysis by activities 1361
Administration 1381
Itemization of estimate 1383
Contract medical care 1374
Plan of work 1374
Field Health Service 1375
Itemization of estimate 1381
Status of program 1378
Hospital Health Services 1368
Itemization of estimate 1374
Workload data 1373
Funds for additional hospital staff 1389
Land Management, Bureau of (beginning of hearings) 201
Director's statement 204
Construction and maintenance 230
Budget estimate and justification 230
Analysis by activities 230
Itemization of estimate 234
Sanitation and protection facilities program, 1965–67 236
Management of lands and resources 207
Budget estimate and justification 207
Analysis by activities 209
Itemization of estimate 224
Cadastral survey 221
Realty and mineral leasing services 210
Resource management, conservation, and protection 211
Oregon and California grant lands 240
Budget estimate and justification 240
Analysis by activity 240
Details of road construction program, BLM, lands 242
Itemization of estimate 245
Public lands development roads and trails 248
Budget estimate and justification 238
Itemization of estimate 239

	Page
Land Management—Continued	
Range improvements	246
Budget estimate and justification	245
Itemization of estimate	246
Receipts by source	201
Questions submitted by Senator Bible	248
Questions submitted by Senator Mundt	248
Questions submitted by Senator McGee	249
Questions submitted by Senator Metcalf	249
Questions submitted by Senator Mondale	250
Lewis and Clark Trail Commission (beginning of hearings)	447
Statement of Executive Officer	448
Budget estimate and justification	447
Itemization of estimate	448
Mines, Bureau of (beginning of hearings)	663
Director's statement	665
Biographical sketch	663
Appalachian region mining area restoration	719
Analysis by activities	720
Budget estimate and justification	719
Itemization of estimate	721
Strip and surface mine area restoration	721
Subsidence, caving, and mine fire control	720
Conservation and development of mineral resources	670
Amendment requested	2154, 2171
Analysis by activities	670
Budget estimate and justifications	670
Itemization of estimate	702
Research	673
Coal	673
Explosives	693
Marine mineral mining	692
Metallurgy	685
Mining	688
Oil shale	683
Petroleum	681
Resource development	695
Anthracite	697
Bituminous coal	696
Economic analyses	696
Internal activities	701
Minerals	700
Petroleum	699
Statistics	695
General administrative expenses	716
Analyses by activities	717
Budget estimate and justification	716
Itemization of estimate	718
Health and safety	707
Analysis by activities	708
Budget estimate and justification	707
Control of fires in coal deposits	710
Health and safety research	711
Inspections, investigations, and rescue work	708
Itemization of estimate	713
Mine explosion disaster at Cane Creek Mine, Moab, Utah	715
Helium fund	729
Budget estimate and justifications	729
Financial summary	729
Objectives	730
Program of work	730
Statement of Director	731
Solid Waste Disposal Act	723
Amendment requested	2173
Analysis by activities	724
Budget estimate and justification	723
Itemization of estimate	727

Mines, Bureau of—Continued
Helium fund—Continued
Page
Statement of obligations by activity and source of funds 736
Questions submitted by Senator McGee (Helium reserve) 754
Questions submitted by Senator Bartlett (Bureau facilities in Alaska) 755
Questions submitted by Senator Mundt (Bureau activities in South Dakota) 755
National Capital Planning Commission (beginning of hearings) 1629
Chairman's statement 1668
Amendment requested 2205
Budget request and justification 1629
National Capital Planning Commission 1629
National Capital Region Planning Council 1660
Capper-Cramton Act 1696
Professional program activities 1635
Community relations and staff library 1654
Legal and administrative services 1636
Office of the director 1635
Planning divisions 1637
Publications 1656
Special programs and use of experts 1655
Technical service group 1651
Program and organization of the planning commission 1633
Objectives 1633
Organization and role 1635
Professional staff 1635
Temporary Commission on Pennsylvania Avenue 1665, 1673
National Capital Transportation Agency (beginning of hearings) 1707
Administrator's statement 1721
Biographical sketch of Mr. McCarter 1720
Administrative funds 1725, 1740
Budget request and justifications 1740
Summary estimates by budget activities 1741
Summary of estimates by object of expenses 1748
Special contracts 1747, 1755
Budget estimate and justification 1707
Summary of estimates 1710
Construction 1718
Amendment requested 2206
Engineering and design 1710
Public utilities relocation 1717
Rights-of-way and land 1717
National Endowment for the Arts (beginning of hearings) 1559
Chairman's statement 1559
Administration of program 1592
Amendment requested 2207
Budget estimate and justification 1567
Detail of personnel compensation 1587
Object classification 1586
Donations 1588
Members of the National Council on the Arts 1589
National Endowment for the Humanities (beginning of hearings) 1603
Chairman's statement 1603
Amendment requested 2207, 2213
Budget estimate and justification 1603
Grant determinations 1609
Members of the National Council on the Humanities 1610
National Gallery of Art (beginning of hearings) 1455
Director's statement 1455
Amendment requested 2221
Budget estimate and justification 1458
Obligations by object classification 1465
Status of program 1463

	Page
National Park Service (beginning of hearings)	357
Administrative provisions	432
Director's statement	359
Comparative summary of the amount available in 1966 with the 1967 estimates	359
General fund receipts deposited to the credit of the U.S. Treasury during the fiscal years 1966 and 1967	359
Summary of appropriations, revenues and visitors, 1933–67	358
Construction	412
Budget request and justification	412
Acquisition of lands and water rights	415
1967 construction program	416
Everglades water study project	420
Buildings, utilities, and other facilities	412
Parkway and road construction (liquidation of contract authorization)	422
Authorization increase requirement	435
Budget request and justification	423
Parkways	424, 428, 434
Roads and trails	426
General administrative expenses	429
Budget request and justification	429
Departmental expenses	430
Regional office expenses	431
Resource planning assistant	432
Maintenance and rehabilitation of physical facilities	404
Amendment requested	2184
Budget request and justification	404
Roads and trails	404
Buildings, utilities, and other facilities	404
Road and trail maintenance problems	411
Management and protection	369
Amendment requested	2181
Budget justification	369
Concessions management	391
Audit	391
Management	391
Forestry and fire control	381
Fire protection service	381
Forest fire suppression	382
Forest management	381
Tree preservation	382
Management of park and other areas	374
Employees compensation fund payments	380
Informational publications	379
National Capital Parks	378
National parks, monuments, etc	374
Roosevelt Campobello International Park	380
Park and recreation programs	383
Archeological investigations and salvage	387, 400
Cooperative activities	383
Historic American Buildings Survey	388
Historic sites survey	389
Land and water resource studies	386
Registry of national landmarks	390, 402
Visitor services	385
Soil and moisture conservation	383, 396
Glen Canyon Dam aerial tramway concession	403
Greer's Ferry National Garden Park (proposed) Ark	397
Harpers Ferry National Historical Park	436
National park system planning and new area studies	398
Piscataway Park lands	399
Proposed Allegheny Parkway	434
Questions submitted by Hon. Alan Bible	440
Questions submitted by Hon. Karl E. Mundt	442

	Page
Office of Education (beginning of hearings)	1551
Commissioner's statement	1553
Budget estimate and justification	1551
Office of Oil and Gas (beginning of hearings)	545
Director's statement	553
Budget estimate and justification	545
Analysis by activities	546
Itemization of estimate	553
Oil Import Administration	550
Administrator's statement	555
Oil import appeals	552
Office of Saline Water (beginning of hearings)	1273
Director's statement	1297
Secretary's statement	1273
Amendment requested	2185
Authorized positions	1320
Operation and maintenance	1321
Budget estimate and justification	1321
Itemization of estimate	1323
Salaries and expenses	1279
Analysis by activities	1283
Demonstration plant program	1281
Itemization of estimate	1297
Research and development program	1297
Office of the Secretary (beginning of hearings)	45
Amendment requested	2188
Analysis by activity	49
Administrative management services	55
Commissioner of Fish and Wildlife	58
Departmental direction	50
General services	59
Program direction and coordination	53
Analysis of increases	47
Budget estimate	45, 62
Itemization of estimate	59
Obligations by activities	60
Reorganization of Office of Fish and Wildlife Commissioner	64, 68
Salaries and expenses	45, 48
Office of the Solicitor (beginning of hearings)	769
Solicitor's statement	772
Amendment requested	2187
Budget estimate and justification	769
Itemization of estimate	772
Office of Territories (beginning of hearings)	85
Director's statement	85
Analysis by activities	87
American Samoa	94
Statement of revenue by sources	106
Summary of appropriations and grants	94
Canton Island administration	106
General administration	107
Guam	88
Servicing Alaska public works loans	107
Virgin Islands	87
Budget estimate and justifications	85
Itemization of estimate	107
Statement of Governor Guerrero	129
Statement of Governor Lee	111
Statement of High Commissioner Gooding	133
Trust Territory of the Pacific Islands	133
Budget estimate and justification	133
Analysis by activities	137
Consolidated activities breakdown between nonconstruction and construction	163
Itemization of estimate	169
Statement of estimated revenues by source	163

Office of Territories—Continued
Trust Territory of the Pacific Islands—Continued Page
Statement of reimbursements and other operating income 165
Summary by activity 138
Summary of capital improvements by district 168
Letter from Hon. Stewart L. Udall to Hon. Dean Rusk—report of World Health Organization team 177
Office of Water Resources Research (beginning of hearings) 1328
Director's statement 1333
Budget estimate and justification 1328
Analysis by activities 1329
Itemization of estimate 1333
Estimates of overhead costs paid from non-Federal funds pursuant to participation by State water resources institutes in the program authorized by section 100 of the Water Resources Act of 1964 1343
General administrative expenses 1337
Questions submitted by Senator Byrd 1348
Outdoor Recreation, Bureau of (beginning of hearings) 451
Director's statement 466
Coordination memorandum No. 1—Recreation use measurement and reporting requirements 498
Land and water conservation fund 477
Amendment requested 2161
Administrative expenses 483
Assistance to States 479
State actions 481
Budget estimate and justification 477
Federal programs 481
Itemization of estimates 489
Obligations by object 490
Revenues to the fund 478
Status of program 478
Land acquisitions (Forest Service and National Park Service) 497
Land acquisition program 519
Proposed fiscal year 1967 apportionments to States from land and water conservation fund 501
Relation of Bureau programs to the Appalachia program 475
Salaries and expenses 451
Analysis by activities 454
Budget estimate and justification 451
Federal coordination 461
Itemization of estimate 466
Planning and research 455
Nationwide planning 455
Research and education 460
Water resources and special area studies 457
Technical assistance 464
Status of Federal land acquisitions 503
Fiscal year 1965 503
Fiscal year 1966 509
Priority of Park Service acquisitions 535, 537
Prepared statements:
A. V. Tunison, Deputy Director, Bureau of Sport Fisheries and Wildlife, in support of land and water conservation fund 523
M. M. Nelson, Deputy Chief, Forest Service, U.S. Department of Agriculture 527
Question submitted by Senator McGee 543
Public Land Law Review Commission (beginning of hearings) 183
Advisory Council 192
Budget estimate and justification 183, 196
Governor's representatives 193
Public Land Law Review Commission 192
Smithsonian Institution (beginning of hearing) 1471
Secretary's statement 1477
Archeological research and excavation 1505
Amendment requested 2220
Budget estimate and justification 1505
Ongoing projects 1508

	Page
Smithsonian Institution—Continued	
Budget estimate and justification	1478
Grants to Smithsonian Institution, fiscal year 1965	1474
Report of the number of permanent positions by organization unit	1498
Schedule of building projects	1476
Traveling exhibits	1537
Construction and improvements, National Zoological Park	1515
Amendment requested	2220
Budget estimate and justification	1515
Restoration and renovation of building	1519
Budget estimate and justification	1519
Salaries and expenses	1480
Amendment requested	2217
Budget estimate and justification	1480
Comparative summary of the 1966 appropriation with 1967 estimates	1482
Summary of increases	1481
Report of obligations by objects	1499
Sport Fisheries and Wildlife, Bureau of (beginning of hearings)	951
Director's statement	952
Administrative provisions	1040
Appalachian region fish and wildlife restoration projects	1035
Amendment requested	2179
Budget estimate and justification	1035
Itemization of estimate	1037
Construction	1012
Amendment requested	2178
Budget estimate and justification	1012
Itemization of estimate	1020
General administrative expenses	1022
Amendment requested	2181
Analysis by activities (total funds)	1024
Budget estimate and justification	1022
Financing from permanent indefinite funds, transfer appropriations and advances and reimbursements, 1967	1025
Itemization of estimate	1027
Job Corps program	1056
Management and investigations of resources	961
Amendment requested	2177
Analysis by activities (direct appropriation)	963
Analysis by activities (total funds)	964
Budget estimate and justifications	961
Fish hatcheries	964
Fishery research	980
Fishery services	987
Itemization of estimate	1000
Management and enforcement	976
Pesticides registration	999
River basin studies	995
Soil and moisture conservation	973
Wildlife refuges	970
Wildlife research	981
Wildlife services	989
Migratory bird conservation account	1028
Budget estimate and justification	1028
Itemization of estimate	1034
Status of account	1034
Reorganization	952
Management and investigations of resources	952
Office of the commissioner	960
Questions submitted by Senator Bible	1067
Questions submitted by Senator McGee	1069
Questions submitted by Senator Mundt	1073
Questions submitted by Senator Stennis	1077

LIST OF WITNESSES

A

Page

Adams, Hon. Tom, secretary of state of Florida 2072
Aiken, Hon. George D., U.S. Senator from Vermont 1759–1765
Aiken, William H., vice president, research and development, Union Bag-Camp Paper Corp., Jacksonville, Fla 1228
Albert, Edward, Broad Creek Yacht & Recreation Club, Inc., Prince Georges County, Md 2015–2019
Allott, Hon. Gordon, U.S. Senator from Colorado 1217, 1771–1776
All-Pueblo Council, resolution 2048
American Farm Bureau Federation 2103–2106
Broad Creek Yacht & Recreation Club, Inc., Prince Georges County, Md. 2016
Anderson, Hon. Clinton P., U.S. Senator from New Mexico 2046, 2050, 2079
Aspinall, Hon. Wayne N., U.S. Representative from Colorado 188, 194–199
Atencin, Benny, treasurer, All-Pueblo Council 2048

B

Barnard, Winifred, member, Hardin County commissioners, Illinois 1235
Bearking, Leonard, superintendent of schools, St. John, N. Dak 1908–1914
Bennett, Hon. Wallace F., U.S. Senator from Utah 1803–1808
Bernal, Paul J., vice chairman, All-Pueblo Council 2048
Bible, Hon. Alan, U.S. Senator from Nevada 308, 310, 1343
Bofferding, James J., A.I.A., Seifert & Staszko Associates, Inc., Fargo, N. Dak 1922
Boggs, Hon. J. Caleb, U.S. Senator from Delaware 1765–1767
Bradley, Mrs. Harriett F., supervisor, Dranesville District, Fairfax County, Va 2028
Bremhorst, Robert L., vice president, National Particleboard Association .. 1940
Brewster, Hon. Daniel B., U.S. Senator from Maryland 2144
Brien, Reginald J., tribal chairman, Turtle Mountain Band of Chippewa Indians 2076, 2078
Browning, Dr. Levi M., commissioner, Department of Health and Welfare of Alaska 1451
Burdick, Hon. Quentin N., U.S. Senator from North Dakota 1905–1907
Burkhalter, H. D., T. L. James & Co., Inc., Louisiana 1227
Burns, Hon. Haydon, Governor of Florida 2072

C

Callison, Charles H., National Audubon Society 2090
Carlin, Paul N., assistant director, National Association of Counties .. 2145–2147
Case, Hon. Clifford P., U.S. Senator from New Jersey 2063, 2082
Cenarrusa, Hon. Pete T., speaker of the House of Representatives of Idaho. 2140
Chesley, John W., Jr., Silesia, Md., chairman, South Potomac Citizens Crisis Committee 1999–2001
Christian, Hon. Floyd T., superintendent of public instruction of Florida .. 2072
Church, Hon. Frank, U.S. Senator from Idaho 930, 1083, 2138–2141
Clark, Hon. Joseph S., U.S. Senator from Pennsylvania 2062
Clegg, Luke, commissioner, Provo City Corp., Provo, Utah 1779
Clyde, Don, honorary president, National Wool Growers Association. 1867, 1884
Cole, Bert L., commissioner of public lands of Washington 1212
Connally, Hon. John, Governor of Texas 2110
Conner, Hon. Doyle, commissioner of agriculture of Florida 2072
Conte, Hon. Silvio O., U.S. Representative from Massachusetts 2086
Cooper, Hon. John S., U.S. Senator from Kentucky 1846–1854

Page
Cottam, Clarence, director, Welder Wildlife Federation 1232
Creamer, Howard, member, Hardin County Commissioners, Illinois 1235
Culbertson, J. Steele, National Fish Meal & Oil Association 1884–1887
Curtis, Hon. Carl T., U.S. Senator from Nebraska 1814–1818
Cutler, Rupert, assistant executive director, the Wilderness Society .. 1950–1954

D

Dennis, Robert T., assistant conservation director, Izaak Walton League of America 2144
Dickey, Leon D., farmer, Missouri 2127
Dickinson, Hon. Fred, Jr., comptroller of Florida 2072
Dirksen, Hon. Everett M., U.S. Senator from Illinois 1835–1837
Dixon, Hon. Verl G., mayor of Provo, Utah 1779
Douglas, Hon. Paul H., U.S. Senator from Illinois 1823–1830
Douglas, Philip A., executive secretary, Sport Fishing Institute 1995–1963
Dowe, Thomas W., dean, College of Agriculture, University of Vermont, Burlington, Vt 1761
Doyle, Mortimer B., executive vice president, National Forest Products Association 1934–1937
Drevlow, Hon. W. E., president of the Senate of Idaho 2140

E

Easley, Hon. Mack, president of the Senate of New Mexico 2049
Ervin, Hon. Sam J., U.S. Senator from North Carolina 917, 1223
Eufaula Boarding School, Oklahoma 2055

F

Faircloth, Hon. Earl, attorney general of Florida 2072
Faust, Thomas E., Faust Band Saw Mill, Inc., Helena, Ark 1219
Florida State Board of Conservation 2070–2072
Florida State Board of Conservation, resolution 2072
Fong, Hon. Hiram L., U.S. Senator from Hawaii 1085
Ford, Clair, Ford Fisheries, Richfield, Utah 1784
Fox, W. S., chairman, Southern Pine Industry Committee, New Orleans, La 2134
Franklin, Donald R., unit leader, Utah Cooperative Fishery Unit, Logan, Utah 1786
Frolick, E. F., dean, College of Agriculture and Home Economics, University of Nebraska, Lincoln, Nebr 1815
Fulbright, Hon. J. W., U.S. Senator from Arkansas 1088, 1218

G

Gallagher, James F., Silesia, Md., president, Broad Creek Citizens Association 2008–2012
Gasch, Manning, Georgetown Pike, McLean, Va 2029
Glascock, H. R., Jr., Western Forestry and Conservation Association 1938
Gott, Donald H., executive director and secretary, American Walnut Manufacturers Association, Chicago, Ill 1842–1846
Grady, Mrs. Ruby M., Broadcreek Bay, Prince Georges County, Md 1998
Gray, Orville, president, the Montana Wilderness Association 1796
Groton, Page, director, Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers & Helpers, Kansas City, Kans 886
Gruening, Hon. Ernest, U.S. Senator from Alaska 2058
Gutermuth, C. R., vice president, Wildlife Management Institute 2150–2152

H

Hair, J. D., Jr., director, Louisiana Wildlife & Fisheries Commission .. 1092, 2115
Hamlen, James H., J. H. Hamlen & Son, Inc., Mississippi 1221
Hanrahan, Frank J., executive vice president, American Institute of Timber Construction 1932
Hanson, G. F., State geologist of Wisconsin 2066
Hardesty, Mrs. Lorraine A., deputy clerk, Board of Supervisors, Mono County, Calif 2130

Page
Hardin, Clifford M., chancellor, University of Nebraska, Lincoln, Nebr.. 1816
Harris, Hon. Fred R., U.S. Senator from Oklahoma..... 1819–1822
Hart, Hon. Philip A., U.S. Senator from Michigan..... 1767–1771
Hayden, Hon. Carl, chairman, U.S. Senator from Arizona..... 891, 1978
Herrera, Joe H., secretary, All-Pueblo Council..... 2048
Hetzel, Theodore B., Board of Indian Rights Association, American Friends Service Committee..... 1859–1864
Hickman, Will, legal council, Lafayette County Board of Beat Supervisors, Oxford, Miss..... 2131
Hinkle, Gene H., president, Greater Albuquerque Chamber of Commerce, N. Mex..... 2049
Hodges, Ralph D., National Forest Products Association..... 1933–1939
Holland, Hon. Spessard L., U.S. Senator from Florida..... 2070
Hood, Edwin, president, Shipbuilders Council of America..... 2075
Hruska, Hon. Roman L., U.S. Senator from Nebraska..... 1833
Hudspeth, Verl, Harrison, Ark..... 1089
Hull, W. Roy, manager, Clear View Trout Farm, Heber, Utah..... 1784
Hulsey, Andrew J., chief, Fisheries Division, Arkansas Game and Fish Commission..... 1089
Hutchins, Francis S., Berea College, Berea, Ky..... 1854

I

Idaho State Legislature, resolution..... 2140
Immer, John R., president, Federation of Citizens Associations, Washington, D.C..... 1978–1992
Inouye, Hon. Daniel K., U.S. Senator from Hawaii..... 2079
International Association of Game, Fish, and Conservation Commissioners, resolution..... 1776, 2151
Ishee, Mrs. Tommy, Broadcreek, Md..... 2012–2014

J

Jackson, Hon. Henry M., U.S. Senator from Washington..... 930, 2061
Javits, Hon. Jacob K., U.S. Senator from New York..... 2063
Johnson, Hon. Harold T., U.S. Representative from California..... 2045
Johnson, Leon H., president Montana State University, Missoula, Mont.. 1078
Johnson, Hon. Lyndon B., President of the United States..... 1523
Jordon, Hon. Len B., U.S. Senator from Idaho..... 930, 1822

K

Kastenmeier, Hon. Robert W., U.S. Representative from Wisconsin.. 1808–1814
Kelly, Thomas C., administrative assistant, County Commissioners of Prince Georges County, Upper Marlboro, Md..... 1698
Kennedy, Hon. Robert F., U.S. Senator from New York..... 2063
Kenner, Harold H., school board member, Benson County, N. Dak.. 1915–1918, 1929
Kern, Phil, secretary, Washington Wool Growers Association..... 2102
Keyser, Miss Barbara, headmistress, Madeira School, McLean, Va.... 2019–2022
Kimball, Thomas L., executive director, National Wildlife Association..... 2149
King, Hon. Bruce, speaker of the House of Representatives of New Mexico.. 2049
Kirkness, Walter, commissioner, Department of Fish and Game of Alaska.. 917
Klein, Richard K., chairman, North Dakota State Committee, Department of Public Instruction, Bismarck, N. Dak..... 1919–1922
Koon, John W., executive secretary, Kentucky Farm Bureau Federation.. 2134

L

Laffoon, Herman D., Sr., chairman, Colorado River Indian Tribes, Colorado River Reservation, Parker, Ariz..... 327
LaFountaine, Edward J., secretary-treasurer, Turtle Mountain Band of Chippewa Indians..... 2078
Larson, William H., manager, Washington Forest Protection Association.. 1214
Lausche, Hon. Frank J., U.S. Senator from Ohio..... 2128
Lederer, Robert F., executive vice president, American Association of Nurserymen, Inc..... 1234
Legislation Council for Photogrammetry..... 2067
Lemmon, James H., Lemmon, S. Dak..... 1008

Page
LeRoy, Dan C., director of Indian education, Department of Public Instruction, Bismarck, N. Dak. 1930
Levin, Ezra, president, VioBin Corp., Monticello, Ill. 873
Linville, Donald, executive secretary, American Hardboard Association. 2135
Long, Hon. Edward V., U.S. Senator from Missouri. 2126
Longmire, Richard C., National Association of Soil and Water Conservation Districts. 1973–1977
Louisiana Forestry Association. 2120–2123

M

MacDonald, Charles B., Oxon Hill, Md.; Prince Georges County Civic Federation; Potomac Foundation. 2004–2008
McCarthy, Hon. Eugene J., U.S. Senator from Minnesota. 1225, 2107
McCune, Shannon, president, University of Vermont, Burlington, Vt. 1760
McGovern, Hon. George S., U.S. Senator from South Dakota. 2052, 2061
McGrath, Kyran, Illinois Department of Business and Economic Investment. 1902–1904
McIntyre, Hon. Thomas J., U.S. Senator from New Hampshire. 2127
Machen, Hon. Hervey G., U.S. Representative from Maryland. 2141–2144
Maddock Public School, Maddock, N. Dak. 1906, 2060
Magnuson, Hon., Warren G., U.S. Senator from Washington. 930, 1212, 2069
Magruder, G. C. Jr., president, Texas Sheep & Goat Raisers' Association. 2099
Mansfield, Hon. Mike, U.S. Senator from Montana. 1078–1080, 1788–1803
Massey, Carlton C., county executive, Fairfax County, Va. 1698
Matlick, J. O. 1853
May, Joseph L., president, Jackson Hole Chamber of Commerce, Jackson, Wyo. 1088
Meramec Basin Association. 2126
Metcalf, Hon. Lee, U.S. Senator from Montana. 930, 1788–1803
Metz, Robert R., commissioner of forestry, Toledo, Ohio. 1943–1946
Michigan House of Representatives, resolution. 2116
Miller, Joseph S., Western Forest Industries Association. 1897–1902
Mindahl, E., school board clerk, Benson County, N. Dak. 1915–1918
Mondale, Hon. Walter F., U.S. Senator from Minnesota. 251, 1225, 2107
Monroney, Hon. Mike, U.S. Senator from Oklahoma. 2054
Montague, Harry F., county auditor, Benson County, N. Dak. 1918
Montana Wool Growers Association, resolution. 2095
Montoya, Domingo, chairman, All-Pueblo Council. 2048
Montoya, Hon. Joseph M., U.S. Senator from New Mexico. 2046, 2050, 2079
Moore, Hon. Dan, Governor of North Carolina. 917
Morse, Hon. Wayne, U.S. Senator from Oregon. 930, 2033–2044
Moses, Alfred H., Fairfax County, Va. 2028
Moss, Hon. Frank E., U.S. Senator from Utah. 930, 1222, 1776–1788
Murdock, Ray, commissioner, Provo City Corp., Provo, Utah. 1779
Muschenheim, Dr. Carl, chairman, National Committee on Indian Health, Association on American Indian Affairs, Inc. 1864–1876
Myers, J. Walter, Jr., executive director, Forest Farmers Association. 2123–2126

N

Naftalin, Micah H., counsel, South Potomac Citizens Crisis Committee, Prince Georges County, Md. 1992, 2004, 2018
Nakal, Raymond, chairman, Navajo Tribal Council. 2048
National Audubon Society. 2090–2106
National Lumber & Building Material Dealers Association. 2134
National Recreation & Park Association. 2063
National Wildlife Federation. 2147–2149
Nelson, Hon. Gaylord, U.S. Senator from Wisconsin. 1808–2117
Neuberger, Hon. Maurine B., U.S. Senator from Oregon. 930
New Mexico State Legislature, resolution. 2049

O

Oliver, Lester, chairman, White Mountain Apache Tribe. 277, 1091, 2054
Orcutt, John P., commissioner of agriculture of Colorado. 1773
Orr, Duane, district engineer, port of Corpus Christi, Tex. 2111
Overton, W. E., board of directors, New Mexico Wool Growers Association. 2092

P

Page
Pacific Salmon Interagency Council 2074
Parr, William A., National Association of State Park Directors 1970–1972
Paton, Robert R., executive director, Ohio Forestry Association, Inc 1230, 1941, 1943
Patteson-Knight, Mrs. Douglas, Fairfax County, Va 2030
Paulson, Mrs. Thelma, school board member, Benson County, N. Dak 1915–1918
Peabody, H. B., Jr., president, R. F. Learned & Sons, Inc 1227
Phelps, John E., acting director, Department of Fish and Game of Utah 1781
Pickle, Hon. J. J., U.S. Representative from Texas 2112–2114
Pino, Juanita, chief clerk, Senate of New Mexico 2049
Pomeroy, Kenneth B., chief forester, American Forestry Association 1930
Prendergast, Joseph, exective vice president, National Recreation & Park Association 2063
Preston, R. J., dean, School of Forestry, North Carolina State University, Raleigh, N.C 1224
Provo, Utah, City Commission 1779
Proxmire, Hon. William, U.S. Senator from Wisconsin 2065

R

Radford, Robert T., president, Watershed Fire Council of Southern California; chairman, Watershed Commission, County of Los Angeles, Calif 1855–1859
Rhude, Maurice J., chief engineer, unit structures department, Forest Products Division, Koppers Co., Inc., Peshtigo, Wis 2136–2138
Rigsby, Herschel, chairman, board of supervisors, Gallatin County, Ill 1235
Riordan, Laurence E., assistant director of research, Department of Game, Fish, and Parks of Colorado 1776
Ritchie, John D., regional vice president, American Plywood Association 1893–1897
Robertson, Hon. A. Willis, U.S. Senator from Virginia 1080
Robinson, Clay M., executive manager, U.S. Trout Farmers Association, Sandy, Utah 1783
Robinson, Ruie, member, Hardin County commissioners, Illinois 1235
Romero, Albert, chief clerk, House of Representatives of New Mexico 2049
Roncalio, Hon. Teno, U.S. Representative from Wyoming 2109
Roy, Arda J., St. John, N. Dak 1913
Ruark, H. E., director, Georgia Forest Research Council 1890–1893

S

Sallee, R. E., chairman, Board of Navigation and Canal Commissioners, Nueces County Navigation District, port of Corpus Christi, Tex 2112
Sandy Hook Marine Laboratory, Highlands, N.J 2084
Savilla, Agnes, secretary-treasurer, Tribal Council of the Colorado River Indian Tribes, Colorado River Reservation, Parker, Ariz 328
Sawyer, Hon. Grant, Governor of Nevada 1971
Scanlan, Betty H., secretary, Florida Board of Conservation 2072
Scanlon, Edward H., secretary-treasurer, Society of Municipal Arborists 1946–1948
Schoknecht, Mark, chairman, North Idaho-Montana Forest, Pest Action Council, St. Regis Paper Co., Libby, Mont 1792–1794
Schoning, Robert W., State fisheries director, Fish Commission of Oregon, Portland, Oreg 898
Scott, Hon. Hugh, U.S. Senator from Pennsylvania 2063
Seegers, Scott, vice president, Virginia Potomac Valley Association 2022–2028
Shamberger, Hugh A., associate director, University of Nevada, Reno, Nev 1344
Shasta County, Calif., board of supervisors 2064
Shelton, R. K., forester, Townsend Lumber Co., Inc 1220
Shuey, Everett E., executive secretary, Montana Wool Growers Association, Helena, Mont 2094
Sickles, Hon. Carlton R., U.S. Representative from Maryland 2144
Siddoway, R. K., president, Idaho Wool Growers Association 2093
Sihvonen, S. V., manager, Georgia-Pacific Corp 1218

Page

Simanson, Edwin, school board member, Benson County, N. Dak--- 1915–1918
Simpson, Hon. Milward L., U.S. Senator from Wyoming--- 1087, 1226, 2090, 2117
Skau, C. M., associate professor, University of Nevada, Reno, Nev------ 1155
Smathers, Hon. George A., U.S. Senator from Florida---------- 2070
Smith, Art, executive secretary, Arkansas Wood Products Association----- 1219
Smith, Gordon, school board president, Benson County, N. Dak- 1915, 1918, 1929
Smylie, Hon. Robert E., Governor of Idaho---------- 2141
Southern Hardwood Forest Research Group, Delta Council--------- 2118–2120
Sparkman, Hon. John J., U.S. Senator from Alabama---------- 2108
Springer, Hon. William L., U.S. Representative from Illinois---------- 2073
Stanfield, D. R., executive vice president, Ohio Farm Bureau Federation- 1230
Stennis, Hon. John, U.S. Senator from Mississippi---------- 1830–1833
Stewart, Gerry O., president, California Wool Growers Association------ 2102
Streshley, Leroy A., chairman, Lander County Board of County Commissioners, Austin, Nev---------- 310
Stroud, Richard H., executive vice president, Sport Fishing Institute, Washington, D.C---------- 1960
Symington, Hon. Stuart, U.S. Senator from Missouri---------- 2126

T

Tanner, Paul, chairman, board of supervisors, Saline County, Ill------- 1236
Tanner, Vasco M., professor, Brigham Young University, Provo, Utah--- 1780
Teague, Hon. Charles M., U.S. Representative from California---------- 1854
Thatcher, T. Thomas, clerk, House of Representatives of Michigan------ 2116
Thompson, James, American Institute of Timber Construction------ 1931–1933
Togstad, Ruben, school board member, Benson County, N. Dak---- 1915–1918
Tudor, William J., special assistant to the vice president, Southern Illinois University, Carbondale, Ill---------- 1838–1842
Tufts, Mrs., Prince Georges County, Md---------- 2011
Turner, Harold E., Iron County, Mo---------- 2127
Turtle Mountain Band of Chippewa Indians, resolution---------- 2077
Tydings, Hon. Joseph D., U.S. Senator from Maryland---------- 2144

U

U.S. Senate, Committee on Interior and Insular Affairs, resolution------- 2061
Upton, Mrs. Graydon, Bull's Neck Hundred Corp., Fairfax County, Va-- 2031

V

Van Vleck, Stanley L., president, Nevada Wool Growers Association----- 2091
Vehofer, Dr., Prince Georges County, Md---------- 2018
Verhoeven, Leon A., executive director, Pacific Marine Fisheries Commission, Portland, Oreg---------- 900

W

Walford, L. A., Director, Sandy Hook Marine Laboratory, Highlands, N.J---------- 2082–2084
Walker, Laurence C., dean, School of Forestry, Stephen F. Austin State College, Nacogdoches, Tex---------- 1948–1950
Weissman, Norman, president, UWH Audubon Society---------- 2106
White, James B., game and fish commissioner of Wyoming---------- 1226
White, Hon. Richard C., U.S. Representative from Texas---------- 2110
Wible, Ralph C., chairman, legislative committee, National Association of State Foresters---------- 1887–1890
Wick, Leonard, superintendent, Benson County Agricultural & Training School, Maddock, N. Dak---------- 1914–1930
Williams, Hon Arnold, secretary of state of Idaho---------- 2140
Williams, Hon. Broward, treasurer of Florida---------- 2072
Williams, Hon. Harrison A., U.S. Senator from New Jersey---------- 2063
Wilson, Arthur, secretary, Senate of Idaho---------- 2140
Wisconsin State Senate, laws of 1965, bill 6, chapter 502---------- 2066

Page
Wolff, Richard C., vice president, Garcia Corp., Teaneck, N.J..... 1963–1970
Wright, Thomas J., chief, Division of Conservation, Department of Natural Resources, State of Rhode Island and Providence Plantations.. 918
Wyoming Wool Growers Association..... 2096

Y

Young, Hon. Milton R., U.S. Senator from North Dakota.. 1907, 2053, 2076, 2107

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