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GARRISON DIVERSION UNIT MISSOURI RIVER BASIN PROJECT

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HEARING BEFORE THE SUBCOMMITTEE ON IRRIGATION AND RECLAMATION

OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

EIGHTY-NINTH CONGRESS
FIRST SESSION

ON

S. 34

A BILL TO MAKE CERTAIN PROVISIONS IN CONNECTION WITH
THE CONSTRUCTION OF THE GARRISON DIVERSION UNIT,
MISSOURI RIVER BASIN PROJECT, BY THE SECRETARY OF
THE INTERIOR

MARCH 29, 1965

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CARRISON DIVISION UNIT
MISSOURI RIVER BASIN PROJECT

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CONTENTS

	Page
S. 34.....	1
Departmental reports:	
Bureau of the Budget.....	7
Interior.....	3

STATEMENTS

Holum, Hon. Kenneth, Assistant Secretary for Water and Power Development, Department of the Interior; accompanied by J. Karl Lee, assistant chief, Division of Project Development, Bureau of Reclamation.....	10
Kristoferson, Lt. Col. Ralph S., assistant director for Plains Division, Civil Works Directorate; accompanied by Donald Curtis, Chief of Multiple Use, Coordination Branch, Planning Division, Civil Works Directorate, Corps of Engineers.....	49
McGovern, Hon. George, a U.S. Senator from the State of South Dakota.....	9

CONTENTS

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

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GARRISON DIVERSION UNIT OF THE MISSOURI RIVER BASIN PROJECT

MONDAY, MARCH 29, 1965

U.S. SENATE,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 3110, New Senate Office Building, Senator Clinton P. Anderson, presiding.

Present: Senators Anderson, Moss, Burdick, McGovern, Kuchel, Allott, and Jordan of Idaho.

Also present: Jerry T. Verkler, staff director; Stewart French, chief counsel; and Richard N. Little, minority counsel.

Senator ANDERSON. This is an open, public hearing by the Irrigation and Reclamation Subcommittee of the Senate Interior Committee on S. 34, a bill to reauthorize and make modifications in the Garrison diversion unit of the Missouri Basin project. S. 34 has the bipartisan sponsorship of Senators Burdick, Young of North Dakota, McGovern, and Mundt.

I will direct that the text of the bill and the favorable reports of the Department of the Interior and the Bureau of the Budget be made a part of the record at this point.

(The documents referred to follow:)

[S. 34, 89th Cong., 1st sess.]

A BILL To make certain provisions in connection with the construction of the Garrison diversion unit Missouri River Basin project, by the Secretary of the Interior

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the general plan for the Missouri-Souris unit of the Missouri River Basin project, heretofore authorized in section 9 of the Flood Control Act of December 22, 1944 (58 Stat. 887), as modified by the report of the Secretary of the Interior contained in House Document Numbered 325, Eighty-sixth Congress, second session, is confirmed and approved under the designation "Garrison diversion unit," and the construction of a development providing for the irrigation of two hundred and fifty thousand acres, municipal and industrial water, fish and wildlife conservation and development, recreation, flood control, and other project purposes shall be prosecuted by the Department of the Interior substantially in accordance with the plans set out in the Bureau of Reclamation report dated November 1962 (revised May 1963) supplemental report to said House Document Numbered 325.

SEC. 2. The Secretary is authorized in connection with the Garrison diversion unit to construct, operate, and maintain or otherwise provide for basic public outdoor recreation facilities, to acquire or otherwise to include within the unit area such adjacent lands or interests therein as are necessary for present or future public recreation use, to allocate water and reservoir capacity to recreation, and to provide for the public use and enjoyment of unit lands, facilities, and water areas in a manner coordinated with other unit purposes. The Secretary is authorized to enter into agreements with Federal agencies or State or local public bodies for the operation, maintenance, and additional development of unit lands or facilities

or to dispose of unit lands or facilities to Federal agencies or State or local public bodies by lease, transfer, conveyance, or exchange, upon such terms and conditions as will best promote the development and operation of such lands or facilities in the public interest for recreation purposes. The Secretary shall notify the President of the Senate and the Speaker of the House of Representatives of any such proposed disposition to a State or local public body by transfer, conveyance or exchange, or by lease for twenty-five years or more, and no such transfer, conveyance, or exchange shall be effectuated and no such lease shall be executed prior to sixty calendar days (which sixty days, however, shall not include days on which either the Senate or the House of Representatives is not in session because of an adjournment of more than three days to a day certain or an adjournment sine die) from the date of such notification. In connection with the foregoing developments for the enhancement of fish and wildlife resources on the Garrison diversion unit: (1) Federal costs incurred specifically for land and basic facilities shall be nonreimbursable; (2) joint costs allocated to recreation and fish and wildlife enhancement, other than those hereafter specified, shall in the aggregate be nonreimbursable to the extent they do not exceed the sum of \$13,000,000 plus 4 per centum of the cost of joint-use land and facilities of the unit in excess of \$100,000,000; (3) joint costs allocated to fish and wildlife enhancement which are attributable to migratory waterfowl production habitat benefits shall be nonreimbursable; and (4) other Federal costs, including separable joint costs, allocated to recreation and fish and wildlife enhancement shall in the aggregate be nonreimbursable up to a limit of \$2,500,000. Provision shall be made for the reimbursement, for the contribution by non-Federal interests, or for the reallocation of costs allocated to recreation and fish and wildlife enhancement in excess of the foregoing limit under one or a combination of the following methods as may be determined appropriate by the Secretary: (1) provision by non-Federal interests of land or interests therein or facilities required for the unit; (2) payment or repayment, with interest at a rate comparable to that provided in section 4(a) of this Act, pursuant to agreement with one or more non-Federal public bodies; (3) reallocation to other project functions in the same proportion as joint costs are allocated among such functions. Costs of means and measures to prevent loss of and damage to fish and wildlife shall be treated as unit costs and allocated to the other unit purposes. For the purpose of this Act, "joint-use land and facilities" shall mean land and facilities serving two or more unit purposes, one of which is recreation or fish and wildlife enhancement. Nothing herein shall limit the authority of the Secretary granted by existing provisions of law relating to recreation, development of water resource projects, or disposition of public lands for recreational purposes.

SEC. 3. The Garrison diversion unit shall be integrated physically and financially with the other Federal works constructed or authorized to be constructed under the comprehensive plan approved by section 9 of the Act of December 22, 1944, as amended and supplemented. The Secretary shall give consideration to returning to the Missouri River to the fullest extent practicable such of the return flows as are not required for beneficial purposes.

SEC. 4. (a) The interest rate used for computing interest during construction and interest on the unpaid balance of the capital costs allocated to interest-bearing features of the Garrison diversion unit as authorized in this Act shall be determined by the Secretary of the Treasury as of the beginning of the fiscal year in which construction is initiated, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for fifteen years from date of issue.

(b) From and after July 1, 1965, the interest rate on the unamortized balance of the investment allocated to commercial power in facilities constructed or under construction on June 30, 1965, by the Department of the Army in the Missouri River Basin, the commercial power from which is marketed by the Department of the Interior, and in the transmission and marketing facilities associated therewith, shall be $2\frac{1}{2}$ per centum per annum.

SEC. 5. For a period of ten years from the date of enactment of this Act, no water from the project authorized by this Act shall be delivered to any water user for the production on newly irrigated lands of any basic agricultural commodity, as defined in the Agricultural Act of 1949, or any amendment thereof, if the total supply of such commodity for the marketing year in which the bulk of the crop would normally be marketed is in excess of the normal supply as defined in section 301(b)(10) of the Agricultural Adjustment Act of 1938, as amended, unless the Secretary of Agriculture calls for an increase in production of such commodity in the interest of national security.

Sec. 6. There is hereby authorized to be appropriated for construction of the Garrison diversion unit as authorized in this Act, the sum of \$207,000,000, plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuations in construction costs as indicated by engineering cost indexes applicable to the types of construction involved herein. There are also authorized to be appropriated such additional sums as may be required for operation and maintenance of the unit.

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington D.C., March 19, 1965.

Hon. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR SENATOR JACKSON: This responds to your request for the views of this Department on S. 34, a bill "To make certain provisions in connection with the construction of the Garrison diversion unit, Missouri River Basin project, by the Secretary of the Interior."

The Department recommends enactment of the bill if amended as suggested hereafter.

S. 34 would modify the Missouri River Basin project authorizations to accommodate the special conditions of the Garrison diversion unit. The bill is consistent with the findings and recommendations for a plan of irrigation development set forth in the Department's report on this unit which was transmitted to the Congress on February 3, 1960, and printed as House Document No. 325, 86th Congress. Enclosed, as a part of this report, is the Department's "Supplemental Report on the Garrison Diversion Unit (Initial Stage, 250,000 Acres) November 1962 (revised February 1965)." Incorporated in that report as an appendix is a report of the Bureau of Sport Fisheries and Wildlife, "Fish and Wildlife Resources in Relation to the Garrison Diversion Unit (Initial Stage, 250,000 Acres), November 1962."

The February 1965 revision of the November 1962 supplemental report on the unit supersedes the supplemental report dated January 1961 and the May 1964 revision of the November 1962 supplemental report which were submitted to the Congress with this Department's reports on Garrison diversion unit bills on the 87th and 88th Congresses.

The enclosed revised supplemental report presents the costs, benefits, and economic and financial analyses of the unit on a basis incorporating the concepts of the draft bill "To provide uniform policies with respect to recreation and fish and wildlife benefits and costs of Federal multiple-purpose water resource projects" (S. 1229), transmitted to the Congress by the administration on February 19, 1965. Incorporation of the concepts of the administration's legislative proposal of February 19 required some changes in the treatment of the costs of the unit allocated to recreation and fish and wildlife. These changes are explained in full in the final section of the enclosed supplemental report. Otherwise, the plan of development for the unit and the formulation of the unit for economic and financial analysis and cost allocation are exactly as presented to your committee in the 88th Congress.

We recommend that section 2 of the bill be amended as follows in order to make the terms of the administration's February 19, 1965, legislative proposal applicable to the Garrison diversion unit:

- (1) Insert "(a)" after "2" in line 9, page 2.
- (2) Delete the word "basic" from line 11, page 2.
- (3) Delete the words "additional development" in line 20, page 2, and substitute the word "replacement".
- (4) Strike all after the word "purposes." in line 1, page 3.
- (5) Add new subsections reading as follows:
 - "(b) Costs of means and measures to prevent loss of and damage to fish and wildlife shall be treated as unit costs and allocated among all unit purposes.
 - "(c) Joint costs allocated to recreation and fish and wildlife enhancement shall be nonreimbursable.
 - "(d) Separable capital investment costs allocated to fish and wildlife enhancement and incurred in connection with waterfowl refuges and waterfowl production areas proposed for Federal administration shall be nonreimbursable.
 - "(e)(1) If, before commencement of construction of the unit, non-Federal public bodies agree to administer unit land and water areas for recreation pursuant to a plan of development and to bear not less than one-half the separable

costs of the unit allocated to recreation and all the costs of operation, maintenance, and replacement of recreation lands and facilities, not more than one-half the separable capital costs allocated to recreation shall be nonreimbursable.

"(2) In the absence of such a preconstruction agreement recreation facilities (other than minimum facilities for the public health and safety at reservoir access points) shall not be provided, and the allocation of unit costs shall reflect only the number of visitor days and the value per visitor day estimated to result from such diminished recreation development without reference to lands which may be provided pursuant to subsection (h) of this section.

"(f)(1) If, before commencement of construction of the unit, non-Federal public bodies agree to administer unit land and water areas proposed for non-Federal administration for fish and wildlife enhancement and to bear not less than one-half the separable capital investment costs allocated to fish and wildlife enhancement which are incurred in connection with such areas and all the costs of operation, maintenance and replacement of such fish and wildlife enhancement lands and facilities, not more than one-half of such separable capital costs shall be nonreimbursable.

"(2) In the absence of such a preconstruction agreement facilities and project modifications for the enhancement of fish and wildlife resources shall not be provided in connection with areas proposed for non-Federal administration for fish and wildlife enhancement purposes, and the allocation of unit costs shall reflect only the benefits estimated to result from such diminished fish and wildlife enhancement development, without reference to lands which may be provided pursuant to subsection (h) of this section.

"(g) The non-Federal share of the separable investment costs of the unit allocated to recreation and fish and wildlife enhancement shall be borne by non-Federal interests, under either or both of the following methods as may be determined appropriate by the Secretary: (i) payment, or provision of lands, interests therein, or facilities for the unit; or (ii) repayment, with interest, within 50 years of first use of unit recreation or fish and wildlife enhancement: *Provided*, That the source of repayment may be limited to entrance and user fees or charges collected at the unit by non-Federal interests if the fee schedule and the portion of fees dedicated to repayment are established on a basis calculated to achieve repayment as aforesaid and if the fee schedule and the portion of fees dedicated to repayment are made subject to review and renegotiation at intervals of not more than five years.

"(h) In the absence of preconstruction agreements as specified in subsections 2(e) and 2(f) lands may be acquired in connection with construction of the unit to preserve the recreation and fish and wildlife enhancement potential of the unit.

"(1) If non-Federal public bodies agree within ten years after initial unit operation to administer unit land and water areas for recreation and fish and wildlife enhancement pursuant to a plan of development and to bear not less than one-half the costs of lands acquired pursuant to this subsection and facilities and project modifications provided for those purposes and all costs of operation, maintenance and replacement of recreation and fish and wildlife enhancement facilities, not more than one-half the costs of such lands, facilities, and project modifications may be borne by the United States and such costs shall be non-reimbursable. Such agreement and subsequent development shall not be the basis for any reallocation of joint costs of the unit to recreation or fish and wildlife enhancement.

"(2) If, within ten years after initial operation of the unit, there is not executed an agreement as specified in paragraph (1) of this subsection, the Secretary may convey the possession and control of any lands acquired pursuant to this subsection by deed, lease, or otherwise to any Federal agency or to any person or non-Federal body, for the purpose of recreation, fish and wildlife enhancement, or use as a summer residence, or for the operation on such lands of pleasure resorts for boating, fishing, or any similar purpose, or for any other purpose which would not conflict with the purposes for which the unit was constructed: *Provided*, That no transfer authorized herein, except transfer by conveyance at full market value under the then existing conditions, shall be made without approval of the President of the United States.

"(i) As used in this Act, the term 'nonreimbursable' shall not be construed to prohibit the imposition of entrance, admission, and other recreation user fees or charges."

To bring the modification of the authorization of the Garrison unit into conformity with the current project documents, we also recommend that the words "revised February 1965" be substituted for "revised May 1963" within the parentheses on line 7, page 2.

Allocations of project costs are as presented previously to your committee:

<i>Purpose</i>	<i>Allocation</i>
Irrigation-----	\$198, 578, 000
Municipal and industrial water-----	12, 099, 000
Flood control-----	2, 813, 000
Commercial power-----	37, 000
Fish and wildlife enhancement-----	21, 657, 000
Recreation-----	13, 050, 000
Total-----	248, 234, 000

The recreation and fish and wildlife enhancement costs break down further as follows:

Recreation:	
Joint costs (100 percent nonreimbursable)-----	\$10, 456, 000
Separable costs (50 percent nonreimbursable)-----	2, 594, 000
Fish and wildlife enhancement:	
Joint cost (100 percent nonreimbursable)-----	14, 031, 000
Separable costs incurred in connection with areas for Federal management (100 percent nonreimbursable)-----	5, 535, 000
Separable costs incurred in connection with areas for non-Federal management (50 percent nonreimbursable)-----	2, 091, 000

In addition to one-half of the identified separable construction costs (\$1,297,000, recreation; \$1,045,400, fish and wildlife enhancement) reimbursable interest during construction of \$39,000 and \$52,000 for recreation and fish and wildlife enhancement, respectively, would be borne by non-Federal public entities.

We expect no serious problems to arise in obtaining the requisite agreement on non-Federal cost sharing for separable recreation costs. Whether State fish and wildlife agencies are financially able to assume the reimbursable fish and wildlife enhancement costs associated with the unit, given only their present structure of funding, is more doubtful. The total budget of the North Dakota Game and Fish Department derived entirely from the sale of fishing and hunting licenses and Federal aid in fish and wildlife restoration funds, was less than \$1 million in 1964. The total annual budget for the fish and game functions of the South Dakota Department of Game, Fish and Parks—funded from the same sources—is about \$2.5 million. It is believed, however, that other sources of repayment will be available and that development for fish and wildlife enhancement purposes with reimbursement as proposed need not impose any undue hardship on local interests. Some water areas on the unit are expected to provide opportunities for the collection of user fees from sportsmen by local operating entities. A portion of these fees, for example, might be used to cover the reimbursement requirements proposed.

The Garrison diversion unit service area is unique in the United States in the quality and amount of migratory waterfowl habitat that is found there. An outstanding opportunity is present in connection with the unit to further the objectives of the national migratory waterfowl program. The plan of development is designed to capitalize on this opportunity.

Fish and wildlife measures in the Department plan for the Garrison unit include acquisition of land, construction of dams, levees, dikes, ditches, and related structures on these lands, and provision for supplying and transporting necessary water to the fish and wildlife areas as a project cost. Thirty-six fish and wildlife areas are proposed to be established in connection with the Garrison unit. The acquisition and development of these 36 areas are necessary for the mitigation of extensive project-caused losses to migratory waterfowl habitat. Enhancement benefits to waterfowl production and to other fish and wildlife will also result from development of the areas. The proposed wildlife areas are distributed throughout the Garrison unit in a pattern generally resembling the distribution of waterfowl habitat losses. The costs of the foregoing measures are included in the total costs of the Garrison diversion unit. The additional costs of further improvements to enhance fish and wildlife resources, including necessary roads, building, and planting, and operation and maintenance of these further improvements will be borne by the Fish and Wildlife Service or by the State fish and game agency having responsibility for administration of the area, and not from appropriations for the construction and operation of the Garrison diversion unit.

The administration's proposal that local interests administer project areas and bear a portion of separable costs associated with recreation and fish and wildlife

enhancement has its rationale in the fact that to a large degree water resource project recreation and fish and wildlife benefits, apart from the production of migratory waterfowl, accrue to the persons living in the general vicinity of the project. Conversely, where recreation or fish and wildlife enhancement benefits will be enjoyed by a widely distributed segment of the national population it is appropriate that local interests not be required to bear all operating costs nor to share the capital costs to the same degree as if they were the exclusive beneficiaries of the development.

The latter condition exists at the Garrison diversion unit where a substantial part of the costs allocated to fish and wildlife enhancement is attributable to the furtherance of the national objective of maintaining a healthy and substantial stock of migratory waterfowl. For that reason 26 of the 36 fish and wildlife areas where the benefits are almost entirely associated with migratory waterfowl produced there are planned for Federal administration under the national waterfowl management program.

In our judgment, application of the cost-sharing precepts of the administration's proposal properly reflects the distribution of Federal and non-Federal benefits and concomitant responsibilities on the Garrison unit. Areas where the Federal waterfowl conservation and development program is the principal beneficiary from operations are proposed for Federal administration and funding. Six areas where there are substantial fishery and wildlife benefits, in addition to the waterfowl benefits, are proposed for State administration. On four other areas, the respective State fish and game departments already own portions of the land proposed for inclusion in the area and operate waterfowl management areas there. These have also been assigned to State administration.

Enactment of the bill before your committee would authorize expenditures of \$2,179,000 for Federal refuge lands for the enhancement of migratory waterfowl production habitat, as distinct from measures for mitigation of losses. This amount would be charged against the expenditure limitation of \$28 million for such measures that would be established by section 6(c) of the administration's proposal.

Fundamental repayment questions concerning the overall Missouri River Basin project have been under study for several years within the Department. These studies were completed and transmitted to your committee on December 17, 1963, as a "Report on Financial Position, Missouri River Basin Project, December 1963." That report illustrates that with the enactment of legislation to adopt proposed interest rate criteria and a contemplated 0.25 mill per kilowatt-hour rate increase in the sale price of firm commercial power marketed in the eastern division of the project, that adequate revenues are in prospect with which to return all costs allocable to commercial power with interest, to meet the irrigation assistance requirements of existing irrigation units, and also to return the irrigation assistance requirements of the Garrison diversion unit within 50 years plus a development period after completion of construction of works to serve each identifiable block of unit lands.

Our letter to you of February 6, 1964, set forth legislative language required to make the proposed interest rate criteria applicable to the financial administration of the Missouri River Basin project. This language appears as section 4(b) of the bill, and we endorse it.

"Policies and Procedures in the Formulation, Evaluation, and Review of Plans for the Use and Development of Water and Related Land Resources," a policy statement approved by the President on May 15, 1962, and printed as Senate Document 97, 87th Congress, provides, among other things, for computation of the interest rate to be used in economic analyses in accordance with a prescribed formula. This precept was incorporated into the economic analyses which appear in the enclosed supplemental report. The benefit-cost ratio of 2.51 to 1 in the enclosed supplemental report was developed on the basis of the then applicable benefit discount rate of 2 $\frac{1}{8}$ percent. The benefit discount rate derived from application of the prescribed formula for use in fiscal year 1965 is 3 $\frac{1}{8}$ percent. Revision of the enclosed report to employ this benefit discount rate for economic analysis would result in a minor reduction in the benefit-cost ratio. This would not alter the basic finding of the study that the Garrison diversion unit is economically justified.

A statement of personnel and other requirements that enactment of this legislation would entail is enclosed in accordance with provisions of Public Law 801, 84th Congress.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the administration's program.

Sincerely yours,

STEWART L. UDALL,
Secretary of the Interior.

Garrison diversion unit, Missouri River Basin project—Estimated additional man-years of civilian employment and expenditures for the 1st 5 years of proposed new or expended programs

	1st year	2d year	3d year	4th year	5th year
Estimated additional man-years of civilian employment:					
Executive direction:					
Executive.....			1	1	2
Clerical.....			1	2	3
Total, executive direction.....	0	0	2	3	5
Administrative services and support:					
Accountant.....	1	2	6	9	14
Clerical.....	2	5	22	30	51
Property management.....	3	6	15	20	34
Records maintenance.....	2	6	16	26	38
Total, administrative services and support.....	8	19	59	85	137
Substantive (program):					
Engineering aids.....	19	20	40	54	70
Engineers.....	34	40	80	100	140
Geologists.....	5	6	14	20	25
Others.....	9	10	20	30	32
Total, substantive.....	67	76	154	204	267
Total, estimated additional man-years of civilian employment.....	75	95	215	292	409
Estimated additional expenditures:					
Personal services.....	\$550,000	\$644,000	\$1,440,000	\$1,950,000	\$2,725,000
All other.....	1,450,000	9,356,000	18,560,000	23,050,000	33,275,000
Total estimated additional expenditures.....	2,000,000	10,000,000	20,000,000	25,000,000	36,000,000

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., March 17, 1965.

HON. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U. S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your letter of January 21, 1965, requesting the views of the Bureau of the Budget on S. 34, a bill to make certain provisions in connection with the construction of the Garrison diversion unit, Missouri River Basin project, by the Secretary of the Interior.

The purpose of this bill is to authorize construction of the Garrison diversion unit as part of the Missouri River Basin development of the Bureau of Reclamation.

The Department of the Interior, in a report being submitted to your committee, recommended a number of amendments designed mainly to bring the bill into conformity with pending legislation supported by the administration regarding cost sharing for fish and wildlife and recreation at water resources projects.

The amendments recommended by the Department would delete provisions in the bill that would restrict the authority of the Secretary of the Interior to dispose of Federal lands. The Bureau of the Budget concurs in the Department's recommendation and recommends that these provisions be deleted as undesirable restrictions on the executive branch's responsibility for the administration of a Federal program.

Accordingly, the Bureau of the Budget would have no objection to the enactment of S. 34 if amended as recommended by the Department of the Interior in its report on the bill.

Sincerely yours,

PHILLIP S. HUGHES,
Assistant Director for Legislative Reference.

Senator ANDERSON. The Garrison diversion unit proposal is not exactly novel or new, having been before successive Congresses for some little time. It was initially authorized, in somewhat different form, in the Flood Control Act of 1944 when the 78th Congress was considering postwar public works to forestall the hitherto inevitable unemployment and economic dislocation that followed in the wake of demobilization of men and industry.

Back in the 85th Congress, after the Appropriations Committee was requiring reauthorization for the 1944 flood control projects that had not been initiated, Senators Young and Langer introduced S. 1932 in April of 1957. At that time the executive agencies were not able to report on the bill, since the review and comments by the States required by the Flood Control Act had not been completed.

Again in the 86th Congress, in 1959, Senators Young and Langer sponsored a Garrison diversion unit bill, S. 147, but no action was taken on it.

In the 87th Congress our colleague, Quentin Burdick, who is a most able member of this committee, sponsored S. 230 for himself and Senator Young. Hearings were held and the committee favorably reported the measure, with amendments, to the Senate. However, the Senate did not act on S. 230 prior to adjournment of the 87th Congress.

Then in the last Congress, the 88th, Garrison diversion unit legislation reached a new high point. Senator Burdick introduced S. 178 for himself and Senators Young and McGovern; hearings were held; the bill was reported; it passed the Senate on February 18, 1964, and was favorably reported by the House Interior committee on July 28. Unfortunately, S. 178 met the same fate in the House Rules Committee that so many worthy bills have met, and the House was not permitted to vote on it.

In view of the long and careful consideration that the Garrison diversion unit has had, it is my hope that we can limit these hearings to a review by the executive agencies concerned and a statement of their position. Accordingly, without objection I will incorporate, by reference, the record of the previous hearings and reports into this hearing record. Incorporation by reference means, of course, that the material is officially before the committee for its information and guidance, although these hearings and records will not be reprinted.

Before calling our first witness, Assistant Secretary Holum, I will ask if any Senators or Members of the House wish to submit any comments.

Senator Young?

Senator YOUNG. No. As long as things are proceeding well, I will keep still.

Senator ANDERSON. Senator Burdick?

Senator BURDICK. No statement at this time.

Senator ANDERSON. Senator McGovern?

Senator MCGOVERN. Mr. Chairman, I have a prepared statement that I won't read, but I would like to ask unanimous consent that it be included as a part of the hearings on this very important matter.

I appeared last year in support of the Garrison project, and I want to do so again this year.

We are especially interested in this project, because it does affect our part of the basin, and, of course, we are watching very closely

developments on the Oahe irrigation project, which we expect to be before the Congress this year.

(The prepared statement referred to follows:)

STATEMENT OF HON. GEORGE MCGOVERN, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

KEEPING FAITH IN THE MISSOURI BASIN

I have asked to appear again in support of the authorization of the Garrison irrigation project in the Senate and to discuss briefly the Missouri Basin authorizations in the Flood Control Act of 1944.

North and South Dakota have undergone large economic losses for several years as a result of the construction of the Missouri River main stem dams. A half million acres of land, much of it cultivable river bottom land, has been flooded in South Dakota and a similar inundation has occurred in North Dakota. Farm income in the two States has thereby been reduced, as have tax revenues, bank deposits, and volume of business generally.

We have had some benefits from power generation and recreational activity on the reservoirs. But at this stage in the development of the river, as Governor Guy's testimony showed in previous hearings, the Dakotas have sustained very substantial economic losses. The major benefits to this point in time—flood control and navigation—have accrued to the Lower Missouri Basin.

This progression of economic consequences was anticipated. Some of the members of this committee will recall, although Senator Hayden is the only member of the committee then in the Senate, that in the years prior to 1944, citizens of the Upper and Lower Missouri Basin were alined behind the Sloan plan for irrigation and reclamation, or the Pick plan for a navigation channel in the lower river.

There was sharp controversy between the proponents of the two plans. The upper basin feared that it might be drained of its water to support a flowing navigation channel for the lower river. The Corps of Army Engineers and the Bureau of Reclamation were sometimes very critical of each other's development plans.

The controversy in the basin was resolved by agreement on the O'Mahoney-Millikin amendment, embodied in the Flood Control Act of 1944, providing that beneficial consumptive uses of water in States lying wholly or partly west of the 100th meridian should take priority over navigation.

The act of 1944, authorizing both the Pick and Sloan plans after some adjustments to eliminate overlaps, and containing the O'Mahoney-Millikin amendment, thus became the embodiment of an agreement or compact between the upper and lower basins and the passage of the act was its ratification by Congress. The act delineated the projects which were to be undertaken in both ends of the basin. In some instances, projects were included on which there had been little more than reconnaissance studies. They were sometimes incorporated by a one-line reference in the supporting documents—the Army 308 Report or the Bureau's Sloan plan.

The blanket authorization of a multi-billion-dollar, total basin plan was unprecedented, but it was regarded as necessary at the time to spell out the agreement in detail. This committee has been disturbed on more than one occasion by the dissimilarity between the projects authorized in the act of 1944 and those finally undertaken after thorough engineering. Funds authorized for construction in the basin are now limited by Congress to projects underway or new starts only if they have been authorized or reauthorized by current Congresses.

In view of the great modification of some of the project proposals, it is difficult to quarrel with this requirement. The Missouri Basin Survey Commission in 1953 described the Flood Control Act as a "framework rather than a blueprint." At the same time, however, the fundamental commitment of the Flood Control Act of 1944 should be recognized. It amounted to a compact, ratified by Congress, assuring the upper basin States that their sacrifice of productive lands to provide benefits for the lower basin would be compensated for by full development of other potentialities in the upper basin States.

The Garrison project now before the committee and the Oahe project in South Dakota which should come to us during the present Congress, are major features of the agreement ratified in 1944 which "make whole" and provide a measure of benefits from the Missouri Basin program to the two States which have contributed a lion's share of assets to the development program.

Hearings in the last Congress, which will be reviewed today, show the merit of the Garrison project. The merits of the Oahe project will be demonstrated in the project report which is now before the States for comment.

In addition to the consideration their merit entitles them, citizens of the Upper Missouri Basin feel that their approval is also a matter of carrying out the agreement, or compact, entered into 21 years ago in the act of 1944.

Senator McGOVERN. Mr. Chairman, there are four members of the Oahe Subconservancy District here this morning who have provided leadership for our reclamation program in the Oahe area. With your permission, I would just like to introduce these four men who are members of the committee, and also those who are here in the hearing room.

Mr. Fred Holscher, who is the chairman of the group.

Mr. Lloyd A. Miller, of Huron, the vice chairman.

Mr. Nelson Hunstad, of Bath, who is the secretary.

Mr. James Lewis, of Huron, who is the treasurer and manager of the project.

Senator ANDERSON. Gentlemen, we are happy to have you here today. Thank you, Senator McGovern.

At this time, the committee will call upon the Assistant Secretary of the Interior, the Honorable Kenneth Holum.

**STATEMENT OF HON. KENNETH HOLUM, ASSISTANT SECRETARY,
WATER AND POWER DEVELOPMENT, DEPARTMENT OF THE
INTERIOR; ACCOMPANIED BY J. KARL LEE, ASSISTANT CHIEF,
DIVISION OF PROJECT DEVELOPMENT, BUREAU OF RECLAMA-
TION**

Mr. HOLUM. Thank you, Mr. Chairman, members of the committee. It is a real pleasure to be here this morning, supporting Senate bill 34 on behalf of the Department of the Interior and the administration.

It is always a pleasure to appear before this committee supporting good reclamation projects anywhere, and the Garrison diversion unit certainly meets that criterion.

This, Mr. Chairman, as you will recall, is the third time that I have appeared before this committee to discuss the Garrison diversion unit in the last 3 years. Although it is always a pleasure to appear before this committee, I am here this morning to express the hope that this is the last time it is necessary for the Department of the Interior to appear before the legislative committees for the Garrison diversion unit.

We look forward to being back before this committee again on other units in the Missouri Basin project. I hope that I personally have an opportunity to appear. There are many units in the seven States of the Upper Missouri Basin that will be affected by the legislation you are considering this morning. Certainly one piece of legislation we hope to be discussing with you soon is the Oahe unit in South Dakota, as well as other highly meritorious projects in other States.

As Senator McGovern has noted, the gentlemen here this morning, and their associates, have done an excellent job of providing local leadership in the State of South Dakota. They have organized on the same fine basis as are the people in North Dakota to support the Garrison diversion unit and to meet the financial requirements of a

Bureau of Reclamation project. As far as we are concerned in the Department of the Interior, we are highly pleased by their decision to press forward with the smaller 190,000-acre unit, rather than the larger unit that they were thinking about some time ago.

As Senator McGovern has noted, we are expediting our report on this smaller unit, and hope to have it ready for congressional consideration next year.

The committee has considered the Garrison diversion unit at least twice, and the committee and the Senate passed legislation in the 88th Congress which would have authorized it if House action had been completed in the 88th Congress. Accordingly it was my feeling as I prepared for this hearing, that it would probably be unnecessary—although we leave that, of course, to the committee's judgment—to spend a great deal of time talking about the physical details of the project. If you are interested in a review of these physical details, we do have a map on display.

Harold Aldrich, our regional director from Billings, is in the hearing room and Mr. Gisli Freeman, the project manager, is here if you desire that kind of information or presentation.

It seemed to me that it would be more appropriate to give most of our attention this morning to the features of S. 34 and the legislative report of the Department of the Interior that differ from the legislation that you considered last year, and which was enacted by the Senate.

The first difference that I call to your attention is a series of amendments in Secretary Udall's legislative report that we propose for your consideration. They deal with cost sharing and allocations to recreation and fish and wildlife as functions of multipurpose water resources projects.

The Secretary's legislative report and the recommended amendments will bring the Garrison diversion unit into complete conformity with the proposed general legislation that we presented to and discussed with the committee a week ago.

We presented at that time the basic features of this legislation and what it would do.

What I am principally happy to be able to tell you this morning is that the Garrison diversion unit is recommended on a basis that is completely harmonious with the general legislation as we presented it to you, and as you are now considering it.

I would just like to mention in passing, also that this is particularly important with respect to the Garrison diversion unit. This is a multiple-purpose water resources project in every sense of the word. It is, of course, first of all, an irrigation project, but it has tremendously important and exciting opportunities for recreation and fish and wildlife enhancement. This is because the Garrison diversion unit, located as it is in central North Dakota in the prairie potholes country of the high plains area, is the principal breeding ground for migratory waterfowl in this country.

In formulating the Garrison diversion unit, our water resource planners in the Department of the Interior have developed a project that will have substantial benefits for migratory waterfowl that will not be limited, in any sense of the word, to the immediate project areas of North Dakota. The benefits will be felt all through the central flyway, and all over the country, as these facilities provide better nesting grounds and better habitat for migratory waterfowl are realized.

Of equal importance—and I am sure that the committee will want to give it careful consideration this morning—is the selection of the legislation having to do with the financial management of the Missouri Basin project. We consider this to be critical and highly important legislation. I would like to review it with you in detail and I hope that we can supply all of the information the committee requires with respect to our proposal for future financial management.

The entire financial position of the Missouri River Basin project—
Senator ANDERSON. Are you now discussing the proposed new section?

Mr. HOLUM. Mr. Chairman, permit me to read from my testimony, starting with the middle of the second paragraph on page 6. I thought I would read this portion of it, because I want to make this part of my presentation precise.

The entire financial position of the Missouri River Basin project has been the source of increasing concern in the Congress, the executive branch, and the entire water resource community. Because of this concern, the Department began an intensive review of the Missouri River Basin project finances in 1961. This study was completed late in 1963 and submitted to Chairman Jackson of the full committee on December 17 of that year. The Department believes the study is valid and represents a sound program of financial management for the future.

Our review of these matters disclosed a steadily worsening financial condition beginning in approximately 1954, and continuing to the present time. We found that there were a number of things which contributed to this condition, one of the most significant being the loss of revenue in the early years of mainstem operation as a result of adverse streamflow conditions. We have prepared a generalized hydrograph of the Missouri River which will illustrate to the subcommittee that during the critical years of 1954–61, when the reservoirs were being filled, there was not a single year in which streamflow attained the 60-year average. This factor and delays in the installation of power generating equipment reduced power production and system revenues by more than \$100 million below the amount that would have been available if the system had enjoyed normal water conditions and progressed as initially scheduled.

The powerplants we are talking about, of course, are the great powerplants on the Missouri River itself, which were all constructed by the Corps of Engineers as a part of the Missouri Basin project. These projects were constructed on an accelerated basis to provide flood control benefits to communities, from Sioux City, Iowa, to the Gulf of Mexico, that have been devastated by terrible floods as a result of the uncontrolled Missouri River.

The great dams on the Missouri River, in addition to providing these flood control benefits, also store water that is used for the navigation channel that has been developed on the Missouri River, and, of course, the benefits from this, likewise, extend to St. Louis, New Orleans, and the Gulf of Mexico. But during the years since these projects were constructed, the streamflow, as I have mentioned, has been substantially below the conditions. These are the hydrographs I referred to.

During the 20 years since the original authorization of the Missouri River Basin project, new policies have been developed with respect to financial management of multiple-purpose water resource developments. I am sure all agree that the policies with respect to financial management should be applied uniformly across the country and among the various Federal agencies with water resource development responsibilities.

Although the Missouri River Basin project was formulated, authorized, and, in large measure, constructed under financial criteria substantially different from those applied today, the Department's December 17 report represents a program of future financial management that will be consistent with current practice.

Before undertaking the analyses that culminated in our report on financial position, December 1963, we tried, in several ways, to increase system revenue and thereby improve project feasibility through administrative action. Our most significant achievement in this regard was in connection with our contract with the Basin Electric Cooperative through which excess transmission capacity will be utilized by the cooperative to the profit of the Bureau's system. This transaction alone will net \$980,000 annually. We are confident that there will be additional negotiations of this character, with cooperative groups and investor-owned groups alike, that will further enhance system operation and increase revenues. However, these opportunities which have not yet matured into firm contracts were not considered in our financial analysis.

The Department's recommendations are based on the following fundamental criteria:

(a) Commercial power investments will be repaid with interest in not to exceed 50 years from the date of each block of investment.

(b) Irrigation investments associated with units of the plan is being or under construction on July 1, 1965, will be repaid as soon as possible after completion of commercial power repayment.

(c) Irrigation investments associated with future units will be repaid within 50 years, plus permissible development period, after each unit, division, or block of irrigable land would be available for irrigation service.

(d) Municipal and industrial water supply investment will be repaid, with interest, with revenues from sale of water for this purpose.

The subcommittee will note that the second principle deviates from today's standards in that somewhat more than 50 years will be allowed for return of irrigation costs stemming from facilities constructed in the period before the 50-year criterion was established and rigidly observed. However these costs, which must be repaid from power revenues, will be the first recovered when power revenues are available. Our studies show that less than 4 years would be required to completely repay the financial assistance associated with the units of the plan which were completed or under construction at the time the study was completed. Less than 5 percent of the ultimate irrigation financial assistance needs of the project are associated with these units and much of this will be repaid within 50 years plus permissible development period. Actually, only about \$32 million in financial assistance will be delayed beyond the normally prescribed period and less than

\$5 million will be more than 5 years delinquent. These amounts are as follows:

Exceeds permissible period by:

1 year.....	\$2, 014, 000
2 years.....	11, 113, 000
3 years.....	13, 319, 000
4 years.....	1, 780, 000
6 years.....	300, 000
7 years.....	3, 604, 000
10 years.....	491, 000
Total exceeding 60 years.....	32, 621, 000

The Department's financial report represents a joint effort on the part of the Congress and the executive branch to standardize financial practices for water resource projects across the Nation. The Corps of Engineers projects on the Missouri River are the corps only projects in the country built during this particular period of time that bear interest at 3 percent. All of the rest bear interest at 2½ percent or less.

If we are to standardize and equalize financial management practices across the country, we believe the Department should be granted authority to charge the same interest rates on Corps of Engineers power investments in the Missouri River Basin, and associated marketing investment, as have been established and which are now required to be charged for similar corps investments made at the same time in the rest of the Nation. The measures being considered today would authorize a 2½-percent interest rate after July 1, 1965, on unpaid balances of investments in Corps of Engineers units started prior to that date.

Senator ANDERSON. Do I understand the Bureau of the Budget approves this provision?

Mr. HOLUM. Yes, it does. These recommendations have been very carefully considered in the executive branch and approved by the Bureau of the Budget.

Senator ANDERSON. Do you recall what happened last year when the same proposal was presented?

Mr. HOLUM. We considered this project, I believe, Senator Anderson, before the financial report had been submitted. We discussed our financial report on the Missouri Basin project last year in connection with the Mid-State unit in Nebraska.

Senator ANDERSON. In the bill before us, there is a new provision. This is section 5.

What happened to that provision last year?

Mr. HOLUM. It was not approved by the Senate.

Senator BURDICK. At that time, there was no record of the financial arrangements for the basin such as we are proposing to make today. As a matter of fact, the bill had been reported from the subcommittee prior to the explanation and the program that has been announced here today. In view of the fact that the record was silent, I, as one member of the committee, didn't pursue the amendment any further.

Senator ANDERSON. Well, do you think, Mr. Holum, that the same change you are suggesting for corps projects should be made effective for Bureau of Reclamation projects?

Mr. HOLUM. No; I don't think so, Senator Anderson.

Senator ANDERSON. Why not?

Mr. HOLUM. I would not be opposed to it. Let me make that clear. But I think what we are talking about here today is an effort to standardize financial management across the country.

Senator ANDERSON. Wouldn't there be better standardization if you did the same thing for the Bureau of Reclamation projects that you propose for corps projects?

Mr. HOLUM. Senator Anderson, your point is very well taken. This has been very carefully considered in the executive branch, and as a part of the discussions having to do with Missouri Basin financial management it has been established in the executive branch that, starting last year, all future projects, whether constructed by the Corps of Engineers or the Bureau of Reclamation, will bear interest at the formula rate.

Senator ANDERSON. What do you mean by the formula rate?

Mr. HOLUM. Rates computed by the formula first established in the Water Supply Act of 1958 and now applied to the Colorado River Project Storage Act. This formula is also contained in section 4(a) of this legislation.

Senator ANDERSON. That is above 2½ percent. Why don't you bring it down to 2½ percent? If it is good for one, why isn't it good for the other?

Mr. HOLUM. Well, Senator Anderson, at the time that these projects were constructed—

Senator ANDERSON. Which projects?

Mr. HOLUM. Both the Bureau of Reclamation and the Corps of Engineers projects we are discussing here this morning. At the time the mainstream projects were being constructed, the 2½-percent interest rate then widely applied in other areas was higher than the rate under the Water Supply Act formula would have been for those years.

I was not a part of the executive branch at the time these decisions were made. But I think that the decision to charge 2½ percent interest on Corps of Engineers projects being constructed in other areas at that time was a sound decision. During that period there were times when the total public debt was bearing interest at less than 2 percent and Treasury bonds—

Senator ANDERSON. The Government was borrowing short-term money for as low as 1 percent. But last week what were you borrowing it for? It was 3.6 percent. Do you think these conditions are the same?

Mr. HOLUM. No. And the formula, of course, now produces a different interest rate.

Senator ANDERSON. About 2½.

Mr. HOLUM. No, 3½.

Senator ANDERSON. Do you think it is proper to charge 3½ percent against the Colorado River Basin storage projects, and only 2½ in the Missouri River Basin?

Mr. HOLUM. Senator Anderson—

Senator ANDERSON. Well, that is what you said, is it not?

Mr. HOLUM. No. The major power facilities in the Colorado River Storage project are not bearing interest at 3½ percent. They are bearing interest at 2½.

Senator ANDERSON. Yes. But if we authorize a new project in Senator Allott's State, for example, it will bear 3½.

Mr. HOLUM. All projects will, in the future.

Senator ANDERSON. Now, why would you charge his State 3%, and this project 2½? You explain that.

Mr. HOLUM. We are not asking that this project go through at 3%.

Senator ANDERSON. This project is to go through at 2½?

Mr. HOLUM. No. On the Garrison diversion unit we are proposing to pay 3% percent interest. We are saying, however, that at the time when all of the rest of the country was getting projects built at 2½ percent interest, and the Missouri Basin for some reason or other was paying 3 percent, that this ought to be corrected.

Senator ANDERSON. You said just a minute ago, "The measures being considered today"—I assume you are referring to Senate bill 34, are you not?

Mr. HOLUM. Yes.

Senator ANDERSON. "Would authorize a 2½ percent interest rate after July 1, 1965."

You say that is 3½ percent?

Mr. HOLUM. No. Unpaid balances of investments in Corps of Engineers units started prior to July 1965.

Senator ANDERSON. The whole series of dams was started prior to that, wasn't it?

Mr. HOLUM. That is correct.

Senator ANDERSON. We understand the question of building the ditches. What about the dams? What rate will apply to those?

Mr. HOLUM. Under our proposal, the Bureau of Reclamation projects, Yellowtail Dam, and there are many others, bear interest at 3 percent. The Corps of Engineers projects would bear interest at 2½ percent.

Senator ANDERSON. Does that help the competitive situation? People say, "I would like to have one from the Corps of Engineers, because that costs less." Do you think that is sound policy?

Mr. HOLUM. That is why I think it is sound policy that this administration has decided that both Corps of Engineers and Bureau of Reclamation projects will bear interest at the same rate. I don't think it is so much a matter of establishing uniformity between the organizations. It is rather a matter of preserving equity between different regions of the country. I don't think that any area with a Bureau of Reclamation project should have a higher rate of interest than any other area.

Senator ANDERSON. You just said that 3½ percent would be all right for something built in Senator Allott's State under the Bureau of Reclamation, but the early projects built along the Missouri River should bear 2½ percent.

Mr. HOLUM. Actually, Senator Anderson, we have computed it—I am not sure that I remember the figures—but by combining the 3-percent interest rate charged on Reclamation units, and that we propose to continue charging with the proposed 2½-percent interest rate on the Corps of Engineers projects, a composite interest rate results for all facilities that are within 0.03 or 0.04 of a percent of the same rate as the storage project.

Senator ANDERSON. Well, the Small Projects Act, which is useful in a great many States, authorizes as high as 4½ percent.

Mr. HOLUM. I think an important thing to bear in mind with respect to these projects—and I know that Senator Anderson is very

much aware of this—is that these projects we are discussing are not projects built on a loan basis, and they will not ever belong to the power users or the water users. While we talk a great deal about repayment, and the obligation of the power users to repay this investment, I think that you and I both know that the United States makes the investment. The power users pay off that investment, they maintain replacements, keep the facilities in operating condition, and they pay the U.S. interest on its investment. But when it is all done, and the project has been paid for, it still belongs to the United States.

Senator ANDERSON. Well, that brings up a very pleasant subject. Who do you think Hoover Dam will belong to when that is paid off?

Mr. HOLUM. Hoover Dam is going to be the first decision of its kind that the Federal Government will have to make. I think it is going to belong to the United States.

Senator ANDERSON. So do I.

Mr. HOLUM. And in the Department of the Interior we are already making plans to use the power revenues from Hoover Dam to finance more water resource development.

Senator ANDERSON. You said the reason 2½ percent was justified is that the facilities would finally belong to the Federal Government. But the others also belong to the Federal Government. So is that an argument for the lower rate? I don't follow you at all. If you advocate a 2½-percent rate because the Missouri River projects will finally belong to the Government, why don't you also advocate it for Hoover Dam, since Hoover also will finally belong to the Government?

Mr. HOLUM. Well, as I said a long time ago in this colloquy, I certainly would not object to it.

Senator ANDERSON. Of course, this proposal was one of the big difficulties with the bill last time. The proponents would have done more than authorize the Garrison project.

Here we have it again, this time endorsed by you. It may hold back the whole project. This opens up a very fertile field for argument.

Mr. HOLUM. Yes. However, I think there are convincing arguments on the side of the recommendations that the Department of the Interior is making. In the Southwest, for instance, where facilities are built by the Corps of Engineers and the power is marketed by the Bureau of Reclamation, all of the facilities constructed prior to 1960 bear interest at 2½ percent. The same thing is true in the southern area of our country, they pay interest at 2½ percent.

Out in the Pacific Northwest we have the great Bonneville Power Administration. Here the great Columbia Basin project is a part of the fine system that has been built there. The system also includes Hungry Horse Dam that was built by the Bureau of Reclamation.

Under reclamation law we pay 3-percent interest on Hungry Horse Dam.

Grand Coulee Dam was built by the Bureau, and we pay 3-percent interest on Grand Coulee.

All of the rest of the dams on the Columbia River system were built by the Corps of Army Engineers, and they pay interest at 2½ percent.

Senator ANDERSON. And you think that provides a national policy?

Mr. HOLUM. No. That is why I say that I am very proud to be working for an administration that has changed that, and starting

in 1960 all of such projects would, in the future, bear interest at the same rate, whether they are to be built by the Corps of Engineers or the Bureau of Reclamation.

But we are trying to correct a little history that was made here during the 1940's and the 1950's that we think ought to be corrected as a matter of equity between regions of the country.

Senator BURDICK. Mr. Chairman, may I ask a question?

Senator ANDERSON. Surely.

Senator BURDICK. At the time after the Second World War, when the Garrison Dam was constructed, these Corps of Engineers projects in other river basins were also constructed—many of them.

Mr. HOLUM. That is correct.

Senator BURDICK. And those constructed on the Columbia River carried 2½ percent.

Mr. HOLUM. That is correct.

Senator BURDICK. Those constructed on the rivers involved in the Southwest Power Administration carried 2½ percent. Those in the Southeast Power Administration and the corps projects in the Central Valley of California carried 2½ percent.

Were there any of the corps projects at that time that carried more than 2½ percent?

Mr. HOLUM. No. There were two built just a couple of years prior to this time on the Cumberland River that had interest at 2 percent.

Senator BURDICK. How did it come to be that we were saddled with 3 percent—I am not talking about now, but during the period they were constructed.

Mr. HOLUM. This is a rather complicated question. The Flood Control Act of 1944 is not an act modeled after the careful and precise planning on the part of the executive branches and the Congress that we had in the 1960's.

The Flood Control Act was put together, I have been told, overnight, after a long—

Senator ANDERSON. The so-called O'Mahoney-Millikin provisions.

Mr. HOLUM. They were a very important part of it. In the course of putting the project reports and legislation together, no specific provision was made for fixed interest rates. This matter was handled by—and I better have our lawyers supply a precise answer for you, if you want it—authorizing the development in accordance with Federal reclamation law which, in turn, established 3 percent for power payout.

Personally, I think it is a matter of legislative oversight. But I was not a party to the history that was made at that time. I don't know, for certain, how it happened that one project was put together on a basis that required 3 percent interest for Corps of Engineers projects and all the rest of the country is paying 2½ percent. But I do think it is fine we have an opportunity to correct it.

Senator BURDICK. Isn't it a fact that this is a result of some legal opinion on the Department, not a result of any legislation?

Mr. HOLUM. No.

Senator BURDICK. There is nothing in the 1944 Flood Control Act to indicate 3 percent.

Mr. HOLUM. There is nothing in the 1944 Flood Control Act to indicate that Congress wanted the interest rate to be 3 percent. There

is also nothing in it that makes it possible for the Department of the Interior to use the same rate of interest that is being used in the other parts of the country.

Senator BURDICK. Your recommendation is that with respect to dams built in this period of time during which other main-stem dams and power facilities were installed in this country you should have equity and the same interest rate as the other areas and river systems?

Mr. HOLUM. Yes; Senator Burdick.

Senator BURDICK. You are not asking for any retroactivity? This is from this point on, investment made heretofore carry the 2½ percent?

Mr. HOLUM. Yes. I imagine if we were talking about total equity, we would be talking about applying this 2½ percent interest rate retroactively, from the time these projects were originally authorized. We do not think that that would be wise. That would raise a great many problems that ought to be avoided.

We think starting July 1, 1965, or when the Congress has acted on this legislation, or similar legislation in connection with some other unit, that certainly, as minimum equity, it should have that interest rate in the future.

Senator BURDICK. What was the Government cost of money during this period in which the Missouri project, power project, was built?

Mr. HOLUM. We have some charts here plotting the cost of money to the United States during that period of time. There are three different charts. The solid line charts the interest rate from 1939 through 1964 under the Water Supply Act. The middle line on the left-hand side of the page, the small dashes, charts Treasury bonds. The one that starts out on the bottom is the total public debt. In each instance, during the period of time that we were talking about, under any one of the three formulas, money was costing the Treasury substantially less than 3 percent, and under two of them the total cost of Treasury bonds was substantially below the 2½ percent interest rate.

We are not quarreling at all with the decision to charge 2½ percent interest on corps projects in this period. I think it is a justifiable decision.

Senator BURDICK. During the development of the power potential of the Missouri River, during the construction period, is it fair to say that the approximate cost of money was around 2½ percent?

Mr. HOLUM. The total cost of the public debt was quite a little less than that.

Senator BURDICK. In other words, if this is not changed, the Missouri Basin will be paying 3 percent for money advanced in a period of time when the cost of money was 2½ percent.

Mr. HOLUM. Or less, that is correct.

Senator BURDICK. Or less. And this is the only river system in America that is beset with that problem?

Mr. HOLUM. That is correct.

Senator KUCHEL. Can you translate it into dollars, just roughly, Mr. Secretary? Assuming that the Congress were to approve the legislation as you have explained it here, and this would affect the interest on Corps of Engineers units in the Missouri Basin constructed prior to July 1, 1965, how much would that mean in dollars, and what are we talking about, roughly?

Mr. HOLUM. We have not studied that precisely, Senator Kuchel. A little later on in my statement I call your attention to the fact that we have to raise power rates by enough to yield an additional \$1.5 million for the Missouri Basin.

It will cost, if this interest rate is not approved, the power users and the people of the basin roughly \$4 million a year. That is not a precise figure, because in—

Senator ANDERSON. You answered Senator Burdick that no other river system has this rate at all. How much of the power of the Columbia River is generated at Grand Coulee Dam?

Mr. LEE. It must be about a fourth.

Senator ANDERSON. What rate does it bear?

Mr. HOLUM. Three percent. Hungry Horse pays 3 percent.

Senator ANDERSON. Do you want to change your answer a little bit to Senator Burdick?

Mr. HOLUM. No. I hope I said no Corps of Engineers project. If I didn't, I want to correct it.

Senator ANDERSON. It was fairly competitive between the Army and the Bureau of Reclamation. It is just like Harry Hopkins of the WPA and Harold Ickes of PWA. They would fight each other all the time, competing for projects. But you got rid of that after a while. You have the same thing going on in water—give it to the corps and they will build it for less, 2½ percent; don't give it to the Bureau of Reclamation, because it will cost you 3 percent. That is why we tried to put in the Norman project a standard figure that might be used everywhere.

Now, I understand the Department is against that.

Mr. HOLUM. No; absolutely not. We are not only for it, but the administration is determined to assure by executive action that the report of the Corps of Engineers will recommend the same rate of interest on its projects as the Bureau of Reclamation pays under the Norman formula. That decision was made in 1960. I am a spokesman for the Department of the Interior, and I am very proud of our Bureau of Reclamation. But I do not think the matter of overriding concern here is a matter of equity between two Government agencies. I think what is really a matter of great concern is equity between areas of the country. The West is Bureau of Reclamation country, that is true.

Senator ANDERSON. And the Grand Coulee Dam was started in the thirties.

Mr. HOLUM. Yes.

Senator ANDERSON. As a WPA project.

Mr. HOLUM. Yes.

Senator ANDERSON. It got transferred later on. Are you recommending that its rate of interest be reduced?

Mr. HOLUM. No, sir.

Senator ANDERSON. Why not? If you are going to reduce this why—

Mr. HOLUM. There are many complicating reasons, but principally because all Bureau of Reclamation projects authorized since 1939 pay 3 percent interest. So there is no disparity between the charges to beneficiaries of the Bureau of Reclamation construction activities during that period. The only place the disparity exists is in the Missouri Basin. Of course, on these Bureau of Reclamation projects,

water users have signed up for long-term repayment contracts. There are thousands of outstanding contractual obligations based on the formula that we use for the Bureau of Reclamation projects. We just think it unwise and unnecessary to interfere with that. However, equity does require that we make this change in Corps of Engineers projects interest rates.

Senator BURDICK. This is for structures already built.

Mr. HOLUM. For structures already built.

Senator ALLOTT. This is a very difficult thing, Mr. Holum, that you propose, and I had an opportunity to discuss this with the senior Senator from North Dakota the other day, Mr. Young, and also Mr. Lee. Upon the basis that you presented, the project does in some respects appear to be equitable.

But, now, Grand Coulee was constructed by the Army Engineers.

Mr. HOLUM. No; constructed by the Bureau of Reclamation.

Senator ALLOTT. Which one up there was constructed by the Engineers?

Mr. HOLUM. All of the projects in the Columbia River Basin, except Grand Coulee and Hungry Horse, have been built by the corps—Albeni Falls, Bonneville, Chief Joseph, Hills Creek, Lookout Point, The Dalles, and projects under construction now.

Senator ALLOTT. Well, how could you justify reducing this past construction cost from three to two and a half percent on the Missouri River without doing it on all of these other projects? Now, it is true that some of these are probably much more feasible.

Mr. HOLUM. Senator, all of these projects that I just listed do bear interest at two and a half percent. Every Corps of Engineers project in the country constructed prior to 1960 pays interest at two and a half percent, with the exception of two projects on the Cumberland River, where 2 percent is charged.

Senator ALLOTT. All right. Grand Coulee is paying roughly 3 percent, is that correct?

Mr. HOLUM. Grand Coulee is paying 3 percent.

Senator ALLOTT. Now, I don't think you answered Senator Anderson's questions as to the percentage of power that Grand Coulee produces up there.

Mr. HOLUM. Karl Lee estimated, and we will be happy to verify that, about 30 percent of the power in the Bonneville system comes from Grand Coulee. Grand Coulee power represents about one-seventh of total Columbia River hydroelectric capability.

Senator ALLOTT. Well, if you have those at two and a half percent, and reduce the Missouri Valley projects to two and a half percent, then how are you going to get away from reducing the Grand Coulee from three to two and a half, and how are you going to get away from reducing the upper Colorado River, for example, from three to two and a half percent?

May I give just a little bit of background here?

I had a note from you, Mr. Lee, this morning in response to a question of mine. The average rate on the upper Colorado River project is now 6 mills—is that right?

Mr. LEE. Yes, sir; it is 6 mills. The Missouri River Basin is 5.5.

Senator ALLOTT. Yes. It was my understanding, when we had that bill before here, that it was going to be 6 mills.

Mr. HOLUM. Senator Allott, we get into a great deal of difficulty here. There was been no change in the rate structure up to this time in the storage project. But you have a charge for kilowatts, and a charge for kilowatt-hours. There are some people who look at the storage project rate structure and say that it is yielding 6 mills; there are other people who look at it and say that it is yielding five and a half mills.

Senator ALLOTT. Well, let's get into a little background. I am trying to be reasonable. I am trying to understand.

Mr. HOLUM. I understand that completely.

Senator ALLOTT. I am not nitpicking, or henpecking, either one. But now you are actually under a great deal of pressure from the users in the upper Colorado River storage with respect to Glen Canyon and others to reduce the rate at the present time.

Mr. HOLUM. That is correct.

Senator ALLOTT. If you reduce the rate, then you are immediately tampering with the whole economic structure of the payout period. You might say that you are not, but I believe that you are. If you tamper with the structure of the payout period, then you immediately generate pressure on those of us from the upper Colorado Basin. Our constituents will come to us and say: "Now, look, if you can reduce the cost of these things in the Missouri Basin which Congress in its wisdom set at 3 percent when they were built, why can't you reduce our projects from three to two and a half percent"——

Senator ANDERSON. 2%.

Senator ALLOTT. Well, 2%, yes—to 2½ percent. Our constituents will say: "If you do that, you will accelerate the payout period, and then we can get a lower power rate." And of course lower power rates are of primary interest.

I cannot see how you can avoid opening up a Pandora's box on this— for example, with respect to the upper Colorado River, with Grand Coulee, and the other one up there, which is a reclamation project, Hungry Horse—I just do not see how you can avoid the ramifications of this. Then we will be, all of us from the upper basin States, under tremendous pressure to get exactly the same thing done. It is not the sort of thing you can explain why you did it for one valley and cannot do it for another.

Mr. HOLUM. Well, Senator Allott, that is exactly the reason for this whole problem of finding a way to treat the Missouri Basin equitably. I do not think that Congress made a conscious decision at all that they should pay 3 percent interest on Corps of Engineer projects. I am just sure they did not.

Senator ANDERSON. You think Congress was unconscious?

Mr. HOLUM. Well, Senator Anderson, I was not here when the Flood Control Act was put together, but it was put together, we all know, in a very short period of time. I just cannot believe that the Congress wanted one basin to pay 3 percent while all the rest were paying 2½ percent.

In large measure these were not congressional decisions. I am sure the 2½ percent interest rate was established by the executive branch as far as the other projects were concerned.

Senator ALLOTT. May I say this. I believe Senator O'Mahoney and Senator Millikin were the ranking members on the Interior Committee at the time of the Flood Control Act.

Senator ANDERSON. Yes, and Gene Millikin was as sound a man financially as ever served in the Congress.

Senator ALLOTT. Without casting any reflection on any of our own brethren here now, the collective knowledge and judgment of these two men in this area would be extremely hard to surpass at any time in the history of the United States, I think. One is a Democrat, one is a Republican. So it is not a matter of partisanship or anything else. These two men were just extremely capable men. I cannot believe that there was not a good reason for this figure coming up at 3 percent.

Mr. HOLUM. I suspect that the problem was that because time was short, there was not enough opportunity for consultation between the Congress and the executive branch with respect to this.

Let me say, as far as Senator O'Mahoney and Senator Millikin are concerned, I recognize completely that both of these gentlemen were great leaders in the resources fields, and I think the O'Mahoney-Millikin amendment to the Flood Control Act, as it has been identified through the years, certainly demonstrates their great wisdom and foresight in water resource planning.

But to go back to our original question—I recognize that it requires careful thought and careful consideration, to achieve equity and not open up Pandora's box. This has been a matter of great concern in the executive branch. Many participated in the final recommendation. The recommendations were made on this basis for that reason.

In our judgment, you are not opening up a Pandora's box, you are not tampering with Bureau of Reclamation interest rates, you are leaving them exactly the same. You are not tampering with anything on a retroactive basis. You are just picking out five or six dams, of all the dams built at that time by the Corps of Engineers. Whether it is by executive action or congressional action, these few are paying 3 percent, while all the rest are paying 2½ percent. Our program would equalize that situation.

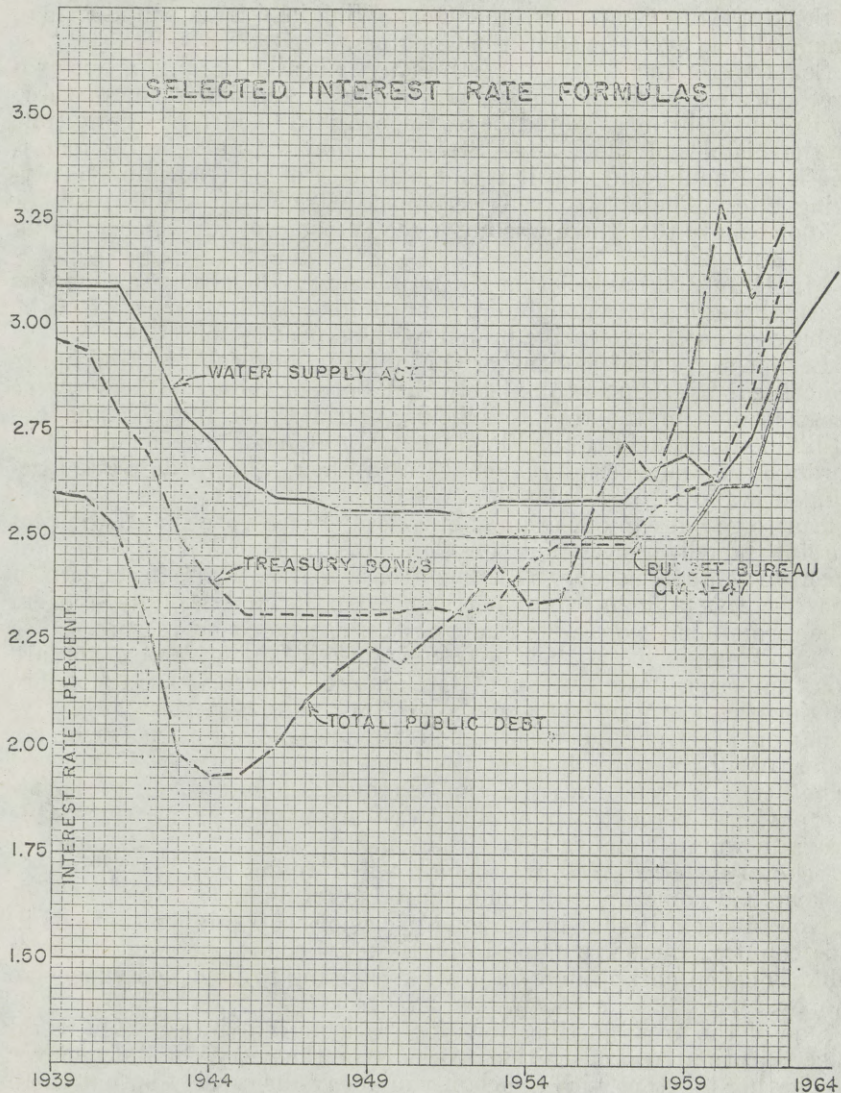
Senator ALLOTT. Well, we thought when we had the Water Supply Act we had come up with some equitable formula.

Now, I deem it that in the long cycles of economic fluctuations in this country, there are going to be times when we are going to have what is called cheap money and what is going to be called expensive money.

One of the great justifications for the 2 percent interest for Rural Electrification Administration works over the years—and whenever you gather together with the clan, you always hear this—is that there was a time when 2 percent was in excess of the amount that the Government was paying for money.

Your tabulation, which is called Selected Interest Rate Formulas—I presume this will be in the record, will it not, Mr. Chairman?

Senator ANDERSON. We will put it at this point in the record. (The tabulation referred to follows:)



Senator ALLOTT. The tabulation does not go back to the beginning of REA. Treasury bonds, back in 1939, started at almost 3 percent, a little under 3 percent.

Senator ANDERSON. Excuse me, Senator Allott—if I may. Involved in this is the question of the use of short-term financing, notes as well as bonds. At that time you could go on the open market and borrow the money you needed at 1 percent or less. You could borrow at 0.75 percent. Because of that fact, the Treasury carried about \$80 million in short-term paper. The Treasury went into the market every Monday and bought what money it needed. At that time of which you are speaking, the Treasury could buy what it needed at a very low rate of interest. That is why the total public debt interest

is down below 2 percent. It is from these facts that the REA gets its argument. REA's interest rate is 2 percent because of the use of notes instead of bonds.

One cannot do that now, because there has to be some permanence in our financial structure. The Federal Government is in the market every day now, and the rates are over 3½ percent.

Senator ALLOTT. Well, I have never quarreled with the fact that this was true, and that they did pay in excess at times. But for a long period now, especially on the criteria we are now using, we are way over the 2 percent.

However, to return to the Garrison bill, I just do not think there is going to be any end to the Pandora's box that will be opened by the reduction in interest rates it provides for the Missouri Basin.

Mr. HOLUM. Well, Senator Allott, a minute ago you mentioned your satisfaction with the Water Supply Act interest rate formula. I agree with you. I think this is an excellent formula. Congress showed great foresight in developing it. We like it so well, as I said earlier, that we apply it not just to the Bureau of Reclamation, but to the Corps of Engineers as well.

It might be an interesting piece of information for the committee to know that if you were to apply the Water Supply Act interest rate formula retroactively, you would accomplish about the same result financially accomplished by the modification that we are recommending.

However, it does open in this case, we think, a Pandora's box, when you start doing things retroactively. You are not taking positive action effective in the future. You are talking about changing things that have occurred in the past.

If it were not for that problem, it would achieve about the same financial results.

Senator ALLOTT. Well, I am not even convinced that the Water Supply Act formula is necessarily reliable for this matter. But it is the best we have been able to come up with so far.

Mr. HOLUM. We consider it the Bible, because the Congress has approved it.

Senator ALLOTT. Congress can always, in its wisdom, change that, too. But at least it is the best we have been able to come up with. And I have no great quarrel with it at the present time.

I think that is all I have for the time being, Mr. Chairman.

Senator BURDICK. Mr. Chairman.

Senator ANDERSON. Senator Burdick.

Senator BURDICK. Apropos of what Senator Allott has said, the statement was made that this would open a Pandora's box.

Isn't it a fact that what we are trying to do here is just achieve essential equity between Corps of Engineers projects that were built in this same period of time?

Mr. HOLUM. That is absolutely correct.

Senator BURDICK. And isn't it also true that the Colorado River Storage Project Act carried a high rate of interest, and when we adopted the Norman Act, we corrected an essential injustice in equity to that area?

Mr. HOLUM. That is correct.

Senator BURDICK. In 1958 the small projects interest was 3¾ percent. In 1959, it was 3¾; in 1960, 4¾; in 1961, 4¾; in 1962, 3¾; in 1963, 3¾; in 1964, 4; in 1965, 4¾.

Is that substantially correct?

Mr. HOLUM. I believe so.

Senator BURDICK. And isn't that the interest rate that applied to this Colorado project at that time?

Mr. HOLUM. Senator Burdick, I am sure there are members of this committee who are more expert on the legislative history of the Water Supply Act, the Storage Project Act, and the Norman Act than I am. But it is in these three acts that the formula was evolved that is now used by the executive branch, and at least for the time being approved by the Congress in establishing interest rates for these projects.

Senator BURDICK. With the passage of the Norman Project Act we adopted a new rate of interest that applied to this Colorado storage project. Isn't that correct?

Mr. HOLUM. I believe so.

Senator BURDICK. Absolutely. We did not open up any Pandora's box and do an essential injustice to that area; did we?

Mr. HOLUM. Congress arrived at a formula that has been universally applied since that time for all the water resources projects across the country, and from 1960 on, not just by the Bureau of Reclamation, but by the Corps of Engineers as well.

Senator BURDICK. And the former rate had been unreasonably high and unjust, and it was corrected by another act, known as the Norman Projects Act.

Mr. HOLUM. Well, I am sure that the Congress at the time that the Water Supply Act, the Storage Supply Act, and the Norman Act were evolving, did consider the 3-percent interest rate in reclamation law something that ought to be modernized and modified, because the Congress did it.

Senator BURDICK. The point I am trying to make is that, prior to the enactment of the Norman Projects Act, this Colorado Storage Act in the area was carrying a higher rate of interest than it did after the passage of the Norman Act.

Mr. HOLUM. Yes.

Senator BURDICK. All we are trying to do here is adjust the interest the same way in the various river basins in this country for projects built by the Corps of Engineers to make for uniformity.

Mr. HOLUM. That's the way I view it; yes.

Senator ANDERSON. We will get some testimony on that after a while. You will find the Colorado River Storage Act bears my name on it. The Norman Project Act raised the interest on the Colorado River area a little bit.

Senator JORDAN. Mr. Chairman. What was the reason, Mr. Holum, that the Bureau of Reclamation projects, such as Hungry Horse and Grand Coulee, called for a higher rate of interest than the corps projects in the same basin in the same period of time?

Mr. HOLUM. The Reclamation Act of 1939 required a 3-percent interest rate on Bureau of Reclamation investments. It was general law, until it was modified by these later acts.

Senator JORDAN. Wouldn't you think if we make an adjustment in this case, that we should look to some adjustment in the 3-percent rate in some of these earlier projects—the reclamation rate? If we are going to establish equity by changing the rate that has been

set up over a period of years, shouldn't we explore the possibility of changing or reducing rates elsewhere?

Mr. HOLUM. Well, this, in my judgment, does open up a Pandora's box, because reclamation projects are covered by long repayment contracts. These contracts—Hoover Dam, for instance—go back to the early days of the Boulder Canyon Act. These contracts are in existence, and, of course, the people have had the benefit of having these projects in existence. I think that we come close to opening up a Pandora's box when we start talking about modifying interest rates on reclamation projects going back to the early days of the act.

Senator JORDAN. Yes. I would not be in favor of it, don't get me wrong. But by the same token, I am having a hard time bringing my thinking around to any proposal of a change in interest rates on contracts for projects where the rate was arrived at by whatever means, and was the basis for contracts and business exchanges and so on, back through the years. I see a very dangerous precedent here because, as Senator Allott has said, it is going to put all of us on the spot whose constituents pay a higher rate than the one proposed for relief in this instance.

Mr. HOLUM. Well, Senator Jordan, we recognize these dangers. I think there are two things that have to be recognized. One is that the people in this 10-States project area have been treated on a basis that is a little less than equitable in relation to the other areas of the country. The other problem that has to be fed into your calculation is the problem of adjusting this equity on a basis that does the least damage and is less likely to open up a Pandora's box and raise other problems.

In the executive branch, we considered this very carefully—the problem of meeting one problem and avoiding another. Our recommendation is to you today—these are our best judgments of how you can achieve this equitable relationship without causing new problems in other areas of the country. I don't think that it should.

Senator JORDAN. Thank you, Mr. Chairman.

Senator ALLOTT. Mr. Chairman, may I ask a question at this point?

Senator ANDERSON. Yes, indeed. I want to try to get this Colorado River storage thing straightened out in my own mind.

As I remember it, when the issue came down to whether you would choose the yield of the bond or the rate of the bond—the Government pays on the basis of the interest coupon. But if the price of the bond is reduced sharply in the market, people start buying them—they can get as high a yield as 4 percent. I believe what they did was not reduce the rate of interest at all, but instead of charging the rate of interest on the yield, charged it as a rate of interest on the bond.

Mr. HOLUM. I think that is correct.

Senator ANDERSON. I do, too.

Senator ALLOTT. Not on the yield.

Senator ANDERSON. Not on the yield. We had a period in which Government bonds got way down, and the yield on a two-and-a-half-percent bond got as high as 4 percent. It seems sort of silly to charge a 4-percent interest rate when the Government could borrow the money at two and a half percent. So on that basis the charge we suggested to get down to what the actual amount was on the face of the bond. Senator Kerr and I spent some time on it. And I think that is what we did.

Mr. HOLUM. Can Mr. Lee make a comment?

Mr. LEE. I think this observation is correct regarding the yield and market rate. When you use the yield rate, you, in effect, base the interest rate on the cost of new financing. When you use the market rate that is inherent in the Water Supply Act formula, you base the interest rate on the average of the long-term Government bonds that are outstanding, that have lives of 15 years or more. So this in effect reflects previous as well as new financing. This I think is the essential difference. The one weighs in all long-term Government obligations which are outstanding, reflecting previous market conditions, as well as current, and the yield simply reflects current market conditions for new financing.

Senator ANDERSON. I'm sorry, Senator Allott.

Senator ALLOTT. Before I forget it, I want to ask you this. As I understand it, the cost to the Federal Government, or to the project, rather, in this instance would be \$4 million a year?

Mr. HOLUM. You can put it that way, Senator Allott, or you can put it the other way, and I prefer to.

Senator ALLOTT. Well, let's say the cost—

Mr. HOLUM. The cost to the region, not to the fund—it does not affect the fund, because the interest goes into the Treasury. It does not go into the basin fund.

Senator ALLOTT. Well, all right. Then it decreases the interest by \$4 million a year.

Mr. HOLUM. That is correct.

Senator ALLOTT. Now, you have proposed a raise here in the power rates for this area.

What is the estimated increase that that raise in power rates would bring in?

Mr. HOLUM. \$1.5 million.

Senator ALLOTT. So that we are talking about a net loss of \$2.5 million.

Mr. HOLUM. No, Senator Allott. If the interest rate formula is not changed, if the modification that is in the bill and which we are discussing this morning is not approved, then we are talking about the necessity of increasing power revenues by \$1.5 million annually, plus \$4 million annually, or \$5.5 million annually.

Senator ALLOTT. Now, let's get at this again.

The difference in interest is \$4 million. You are talking in terms of adding in power rates another \$1.5 million, which would make \$5.5 million more in power rates.

Mr. HOLUM. That is correct.

Senator ALLOTT. Which would go into the fund.

Mr. HOLUM. Yes.

Senator ALLOTT. Am I correct in that?

Mr. HOLUM. Yes.

Senator ALLOTT. On the other hand, the difference of the other, the \$4 million, is a difference to the Federal Government.

Mr. HOLUM. That is correct.

Senator ALLOTT. So you increase the stature of the fund by \$5.5 million a year on your power rates, but you decrease the income to the Federal Government from interest by \$4 million.

Mr. HOLUM. Yes, that is correct.

Senator BURDICK. Putting it another way, while there would be a loss of \$4 million to the Federal Government, isn't there now an overcharge to the farmers and citizens of the area, as compared with other areas where there are corps projects?

Mr. HOLUM. I certainly think so.

Senator BURDICK. It is an overcharge to the citizens.

Mr. HOLUM. As compared to the basis on which other citizens in other areas of the country are being treated by their Government.

Senator ALLOTT. I do not think there can be any quarrel about that one.

This is what poses the problem.

Senator BURDICK. You see, Senator Allott, what we are faced with here is sterilization, as far as development is concerned on the Missouri River, if we do not get equity. If this formula is not corrected, there won't be any development in the seven States on the Missouri River. If we do not get decent, fair treatment, we are through as an area for development. It is not possible to pay out this investment unless they have a change.

Mr. HOLUM. I think what Senator Burdick is saying is absolutely correct. The people out there are developing our lignite coal. We think that the power is marketable with the rate that we are talking about this year—\$1.5 million increase can be achieved. But I think that to sell the power and get the other \$4 million is probably impossible. And if it is impossible, then we have no water resource development in these seven States.

Senator ALLOTT. Well, let's analyze that a little bit and look at it.

You have a certain number of installations there now which are bearing interest at 3 percent. What you are saying is, then, that the figures that the Army came up with on the basis of 3 percent were not realistic figures, and that there actually was not a feasibility of 1 to 1 there.

Mr. HOLUM. Well, Senator Allott, there are many facets to the question that you just asked.

In the first place, of course, traditionally it is the responsibility of the Department of the Interior and not the responsibility of the Corps of Army Engineers to achieve the repayment required from these power facilities. That is, while they are corps projects, this is, in essence, a Department of the Interior responsibility.

Senator ALLOTT. It becomes so after the dam or facility is built.

Mr. HOLUM. And there is no question about it that in 1944 the Government was taking a different view of water resource development than we are taking now. Our thinking is more mature, standards have been developed.

In 1944 there was no question—the 50-year payout had not been developed as a rigid concept, in Federal water resource management at that time. This is really the problem we are addressing ourself to, to take projects that were authorized in 1944—and Garrison was authorized in 1944—and make them fit the criteria applied today.

Another criterion that was not considered at that time was interest during construction. I served on the Missouri Basin Survey Commission in 1952. One of the first things that we learned was that there was this great question hanging in the air as to whether or not interest during construction ought to be calculated as a cost of the project. I think there was a hundred million dollars involved.

The decision was made, and I think the right one, that interest ought to be paid during this construction period. But this is new thinking that emerged after 1944 much more rigid and stringent thinking than was being done any place in the Government at the time the project was authorized.

Another idea that was being considered and actually applied in a couple of instances was that the interest component, the interest that was paid, should go to finance irrigation development. Well, that idea had been abandoned, and I concur in its abandonment. I do not think it is the right kind of financial management.

Karl reminds me that another big change that occurred is in the process for cost allocation.

In 1944 an entirely different method was being used—the separable cost remaining benefit method was adopted in 1954. This resulted in a substantial increase in the cost allocated to power and irrigation, and a corresponding decrease in the cost allocated to flood control and navigation. They are nonreimbursable features.

Senator ALLOTT. I note in your statement you say that the municipal water is to be sold at \$19.50, if my memory is correct, per acre-foot—we were discussing this with respect to the Tualatin project. I think I asked you some questions, or perhaps it was Mr. Stamm, about that the other day.

Just to put this whole matter in focus, the distinction was made that in the Tualatin project municipalities were to buy water at the reservoir and install all of their own municipal distribution and transmission. Could you tell me offhand whether or not, considering that distribution, that project would come up to the \$19.50 figure we have in this bill?

Mr. LEE. Yes, Senator Allott. We just provided material requested for the Tualatin record this morning. It shows \$28 per acre-foot for transmission, in addition to the \$5.50—so that would make \$33.50 to deliver water to the edge of the city.

Senator ALLOTT. Roughly 53½ percent more than the amount in this project.

Mr. LEE. That is correct.

Mr. ALDRICH. You still have to get the water from the canal side to the city.

Mr. LEE. The cities here will have the responsibility of coming to the canal and taking the water from that point.

Senator ALLOTT. That clears that up a little bit, then.

Now, on page 11 I would like to ask for an interpretation of your language at the bottom of the page, Mr. Holum. You say—

Permit me to emphasize at this point that our recommendations with respect to interest rate modifications apply only to corps projects and facilities associated with them. Powerplants built by the Bureau of Reclamation pay and will continue to pay 3 percent interest.

Now, that not only applies to powerplants in the past, but now.

Mr. HOLUM. That's correct.

Senator ALLOTT. And to be built.

Mr. HOLUM. Anything that is built in the future will bear interest under the formula. If construction was started this year, it would be 3½ percent. In the future, all facilities built either by the corps or the Bureau—

Senator ALLOTT. Will have the formula rate, until Congress changes it, if they ever do.

Mr. HOLUM. Yes, sir.

Senator ALLOTT. I think that is all I have for the time being, Mr. Chairman.

Senator ANDERSON. Going back to this upper Colorado storage project, there was a provision in there about yield. At the time it was originally put in, there was a suggestion made by the Treasury, based, as we understood it, upon the average rate on the bonds. Mr. Dodge—I remember he was the one who was a very successful banker—said, “Oh, no; yield means what the market produces.” That effectively stopped the construction work on the upper Colorado storage project.

At that time I introduced a bill to change the rates to what is now the provision in the bill. And Senator Kerr said, “Why don’t you incorporate it in the Norman project?” We did put it in at that time, and made it upon the yield. The table shows 4.8 percent interest at one time.

There never was a project started in which the applicable rate was $4\frac{1}{8}$ percent, or even close to it.

There has never been, so far as I know, any suggestion that we go back and revise the rate in the participating projects now authorized. Isn’t that correct?

Mr. HOLUM. Participating projects are all being planned on the basis of the interest rate in the formula. All the future participating projects.

Senator ANDERSON. Yes. I say no project has ever had recalculation of the interest rate applicable to it.

Mr. HOLUM. No. There was no retroactivity.

Senator ANDERSON. My only interest in this is, I think you are loading down this project, which is a good project, with a controversy. While Missouri wants this thing so badly, it will tie up the Garrison project forever, if need be. I don’t see why. We have authorized it a couple of times and will authorize it again.

Mr. HOLUM. That’s correct, Senator. But I think the facts are that the Congress requires us to get our financial house in order before these projects are authorized. And we cannot show that we can repay the investment in the Garrison diversion project in 50 years without these modifications.

Senator ANDERSON. Then why don’t you ask for a waiver for the Garrison project? Why do you go back and waive everything else that has ever been built?

Mr. HOLUM. Well, because this retroactive feature is something that we are trying hard to avoid in every way that we possibly can.

Senator ANDERSON. In other words, you are trying to accomplish something else for other dams by tacking it onto the Garrison project. Why don’t you let the Garrison project stand on its own feet?

Mr. HOLUM. We have no way to present the Garrison project on the basis where it stands on its own feet. It requires \$190 million of power revenue assistance. We have no way to demonstrate to the Congress that this \$190 million is available without this modification in interest rates.

Senator ANDERSON. For all the dams built, for all the projects. You have to reduce the revenues on all the dams in order to take care of the Garrison project. Is that your testimony?

Mr. HOLUM. Yes; I think so.

Senator ANDERSON. Supposing you had an irrigation project in the Columbia River Basin and they came in and said that you have to reduce the Grand Coulee Dam interest in order to make the project feasible—would you do that?

Mr. HOLUM. I don't think that we would do that.

Senator ANDERSON. If they did do that?

Mr. HOLUM. No; we would not.

Senator ANDERSON. But you would do it here. It is hard to understand.

Mr. HOLUM. No; we are not doing it here on Bureau of Reclamation projects. The only reason that Grand Coulee is paying 3 percent interest is because it is a reclamation project. Grand Coulee corresponds to Yellowtail. We are not asking that the interest rate be modified on Yellowtail. Yellowtail is being built by the Bureau of Reclamation. It will pay Bureau of Reclamation interest rates.

Senator ANDERSON. You are now talking about putting water on farms. You can put the figure of value for that water at any figure you want. You can make a feasibility study and decide what it should be. It might be \$10 an acre in California and it might be \$2 an acre up here. Why do you drag in this other issue?

Mr. HOLUM. To be able to demonstrate to the Congress that we can get the \$190 million of financial assistance that is required to repay the Garrison diversion unit.

Senator ANDERSON. But you do not have to get \$190 million to pay for the dam. The dam is built, isn't it?

Mr. HOLUM. Yes; but we have to have \$190 million of assistance from this dam and the other five. We have to have \$190 million of excess power revenues after the powerplants are paid for in order to provide the financial assistance that the water users in the Garrison Conservancy District cannot provide.

Senator ANDERSON. All right.

I remarked the other day about what the old Indian said when they had the project—he said, "Drain the land, but not the Indian." Let's try draining the land out there, but not the farmers.

Mr. HOLUM. Senator, this project has a unique history. I do not fault the history at all.

Senator ANDERSON. Go ahead.

Mr. HOLUM. I think that the history of the Missouri River Basin project should be taken into account. Of course, the Missouri Basin project was authorized in 1944. It is a substantial project, and it has a unique history. The devastating floods came along in 1952 particularly. 1951 was also a major flood year, if I recall correctly. The Congress decided, on the basis of the executive agencies recommendations, that these structures on the river be built and built then to save Kansas City, Sioux City, St. Joe, St. Louis, New Orleans, and other areas from floods. And they were built. They are all part of one unit to meet the immediate needs for flood protection downstream and to provide the navigation channel.

If we had been talking and thinking then in the same terms and conditions we use today, I am sure that the Garrison Dam and the

Garrison diversion unit would have been built at the same time. We would then be in a position where you could talk about the interest rates on Garrison Dam and the Garrison diversion unit as one development, and the Oahe Dam and Oahe unit as another development. But the project was not built that way—because of these devastating floods and the urgent need to prevent them.

Senator ANDERSON. I think I can give you my slant on it very quickly.

The Senate, in 1964, passed a Garrison bill without this interest in it, because we knew what you were trying to accomplish. We said we would do the project for the farmers, not for the benefit of the Department of the Interior and its bookkeeping. Now you say you want to win the battle of the bookkeeping. Why don't you try to win the battle for the dam and the project? That's all my question is.

We passed it the other way. It went to the House. You did not object over there. You testified for the bill as it stood without this provision.

Mr. HOLUM. We certainly want to win the battle for the project, because this is an excellent project. I know that all the members of the committee agree that equity requires that North and South Dakota, which gave up their lands to provide flood protection downstream, should have some economic benefit from the Missouri Basin project. However, we would hope we could win the battle of financial management at the same time, so that we are not limited to talking about the Garrison diversion project only, for frankly, I want to start planning the Oahe unit. We have units in Montana and Wyoming and Colorado and Kansas and Nebraska that are all good projects. We need a financial base that is understood and approved by the Congress so we can go ahead and present these units to the Congress. I hope we can win the battle on all of them as they come before you one at a time in the years ahead.

Senator ANDERSON. All right.

Senator ALLOTT. Well, you have \$198.5 million, in round figures, allocated to irrigation. You have repaid from irrigation, local repayment of only \$19,296,000, or in round figures 10 percent.

Mr. HOLUM. That is correct.

Senator ALLOTT. 10 percent of the total.

Is there any other project in which the irrigation repayment is only 10 percent of the amount allocated to irrigation?

Mr. HOLUM. Yes. I am rather certain that there are, and we can prepare and supply some examples for the committee.

In these high plain countries, just as in the high foothills country and in the mountains, the ability of the local irrigators to repay a substantial portion of the irrigation investment just is not there. That is why the power revenue assistance is so important. The situation changes, of course, for lower elevations and longer growing seasons.

Mr. LEE. When you consider the changes in the construction cost estimates that have occurred over the years, on the Columbia Basin project, I don't think it is much more than 15 percent—\$137 an acre.

Senator ALLOTT. Of course, I have objected repeatedly to loading down that Columbia River Basin fund with these things. I think the question is properly asked that if you provide for an irrigation repayment of only \$19 million and the irrigation facilities actually

cost \$198 million, or 10 times that much, you are really putting a loan on power revenues. This is what is causing the problem rather than the interest rate.

Now, let's look at your figures on page 3. As an example, you have talked about flood control and the necessity for it. But out of a quarter of a billion dollars—\$248 million plus—there are only \$2,813,000 allocated to flood control. This is less than 1 percent.

Mr. HOLUM. That is a good question, Senator Allott. I think I can answer it.

The Garrison Dam itself is already in existence, it is a completed facility. The Garrison Dam is providing substantial flood control to all of the cities downstream, from Bismarck to the mouth of the Mississippi River, but these flood control benefits have already been attributed to Garrison Dam.

The flood control benefits that we are talking about here are the local flood control benefits that come from the construction of the Garrison diversion unit—not the Garrison Dam.

Senator ALLOTT. And they would only come to \$2,813,000.

Mr. HOLUM. That is correct.

Senator ALLOTT. Now we get back to the other problem that we discussed for 2 days here with Mr. Lee, and he did a very able and capable job of trying to educate us on the methods of allocating this.

You have \$21,657,000 for fish and wildlife enhancement and \$13,050,000 for recreation. In other words \$35 million. You have 18 times as much devoted to recreation and fish and wildlife enhancement as you have devoted to flood control.

Mr. HOLUM. Those ratios would change, of course, Senator, if the Garrison Dam itself were included in these cost allocations. There is no question, however, but that fish and wildlife benefits from this project are substantial. Also, they are national in character, because this prairie pothole country of North Dakota, and to a lesser degree western Minnesota and parts of South Dakota, is really the only substantial breeding ground that we have in the United States for migratory waterfowl. Thus Garrison diversion unit provides a unique opportunity to benefit this important national asset. There are 36 different areas in the project that have been set out largely for the particular and specific benefits of migratory waterfowl. These are costs that would not be incurred if the only thing we were interested in were irrigation.

I am sure that Senator Burdick can be very eloquent in talking about Devils Lake, and the benefits of providing it with a water supply and rehabilitating it as a recreation area. This will add to the entire Middle West.

So there are very real recreation benefits as well as these national benefits to fish and wildlife.

Senator ALLOTT. Now, I would like to ask Mr. Lee a question. I think this is right down his alley.

You have municipal and industrial water at a total of \$12 million, and you have said that they take this water out of the ditches—the municipal water. Now, do you allocate the part of the canal used for municipal purposes on a water-carried basis, Mr. Lee? Is that the way it is done, or how is it done?

Mr. LEE. Well, I think that would be approximately correct to say that. Actually it is somewhat more complicated than that—but when

you get through, this is what you have done. You have allocated on the basis of water carried.

Senator ALLOTT. The proportion of the ditch that is used or canals that are used for municipal purposes, is that it?

Mr. LEE. Well, we have benefits at the point of use, and we have alternative costs. We have used our standard method of cost allocation. When we get through, that gives us an approximation, I think in this case, of the proportional use. Although I could not say definitely. It is not specifically a proportional use allocation.

Senator ALLOTT. But it works out roughly in that way, does it not?

Mr. LEE. Yes, sir.

Senator ALLOTT. That is all I have, Mr. Chairman.

Senator JORDAN. Mr. Chairman, could we look for a moment at page 7? Mr. Holum, I want to talk with you about the same matter I discussed with you last year, the fact you are now \$100 million below the amount that would have been available if the system had enjoyed normal water conditions and progressed as initially scheduled.

Last year I raised the point that perhaps you were not prudent in using the water supply records for the full period 1898-1964, because it appeared that in the first half of that period the water supply was substantially greater than it was in the last half of that period. It would seem to me—and I have done a little rough calculating on it—that an adjustment should be made in your rate structure to take into account the fact that you are simply not getting the water supply that you expected to get over the long-term average.

Turn to your water supply chart that you gave us here.

It is obvious from this water supply chart that either we are in a dry cycle and have been for the last 30 years, or something has happened to some of the waters on the—

Mr. HOLUM. I guess we do not have a copy, but I think I can follow you.

Senator JORDAN. It seems to me that you are in distress now on the financial payout of this project. Yet you persist in using average figures for a streamflow of records going clear back to 1898. My figures show—I have done it roughly here—that in the first half of this period, roughly the average annual water supply was around 27 million acre-feet a year, whereas in the last half of the period, up to 1964, the water supplies are of the order of 21 million acre-feet a year. Yet your payout schedule is based on an average of 24 million acre-feet a year, or thereabouts, for the entire period.

I submit that your basic premise is wrong when you base a rate schedule on a water supply that is not in being and has not been for 30 years.

Mr. HOLUM. I think your question is well taken, Senator Jordan.

There is one thing that I should have emphasized in my prepared statement, both today and last year, which was particularly significant about this period of dry years. We all know, of course, in the Prairie States and in all of the country that the thirties were desperately dry years, and we hope that they are not average conditions, and I am sure we accept that they are not. The thing that was particularly critical about these adverse water conditions was that they came during the filling period. These dams had been built, and they should have had water under ideal conditions immediately to fill them, so we could start the generators and start running them at full capacity.

It just did not happen that way. We had these bad water years. If we had built these dams in the early forties and had the benefit of this 10-year period, they would have filled quickly.

Unfortunately, they were completed during the period when we had low water years, so this capacity stood there empty, and was the cause of a great deal of concern to everybody.

Now, we have had an excellent water year in 1962. Fortunately, we are having an excellent water year in 1964 and 1965 both in the Missouri Basin and in the Colorado River Basin. At the end of this year, the Bureau of Reclamation is quite confident that we will have attained cyclical operation, that the reservoirs will all be full, or so close to it that all that we need is a reasonable amount of water in the years ahead to keep these powerplants turning.

The thing that really hurt us was the fact that these drought conditions, these adverse water years, occurred when these reservoirs were filling, and we could not achieve normal power operation.

Senator JORDAN. But the thing that pays the banker is the amount of water that goes into your turbine, is it not?

Mr. HOLUM. And the amount of head that you have.

Senator JORDAN. The amount of head, and the volume of water. If you get your full head, that's all right. But if you only have three-fourths of a normal supply of water, you are still short on your power revenue, are you not?

Mr. HOLUM. That is correct.

Senator JORDAN. You still would be short. So I get back to my basic question, why do you predicate your power return on a water supply that is not factual and has not been factual for the past 30 years?

Mr. HOLUM. Well, Senator Jordan, we have a million and a half annual increase in revenues that we propose, if the Congress approves to initiate, which will meet our financial requirements and give us some spare. Actually, we will pay off a year ahead of time.

So there is some flexibility on that side to meet adverse water conditions, or different problems that might arise.

At the same time, we think that there are some real opportunities that have not been realized yet to increase power project revenues.

We have worked out a very fine arrangement with Basin Electric Cooperative. We are hopeful, and I think it will happen in the near future, that we can do the thing with other utilities, and that this will increase revenue.

We are soon going to have a project that is interconnected with the storage project, and that will increase the financial capabilities of the project.

We are studying connection with the Columbia Basin, that I think is going to be beneficial to both the Columbia and Missouri Basin.

But we have not taken anything of these things into account, good things that can happen in the future, because they have not happened yet, we do not have contracts. We do have this year-and-a-half cushion protection in here.

We have tried to be realistic and practical about this.

Senator JORDAN. What percentage of power is presently contracted for at Garrison?

Mr. HOLUM. A substantial portion of it is not under contract at this moment. However, I think that we will be able to sell the power.

Senator JORDAN. What is your basic wholesale rate for power on that project?

Mr. HOLUM. Well, recalling what I said earlier—because there are so many things that need to be considered—the rate was established in 1950 to yield $5\frac{1}{2}$ mills per kilowatt-hour at 48 percent load factor. Now, the load factors have gone above that, so the yield is actually less than $5\frac{1}{2}$ mills. Our increase will be a quarter of a mill. Recognizing that these variables are there, and that each customer pays actually a different price for his power, it is the most accurate answer I can give you.

Senator JORDAN. Now, what is the cost of power from an alternate source in that area?

Mr. HOLUM. We are having some very exciting things happen in the Missouri Basin. Senator Burdick has found that his State of North Dakota has probably some of the cheapest fuel of the whole country. We have the Basin Electric powerplant being built there, on a lignite field in North Dakota. Another group of cooperatives, the United Power Cooperative, is building a 150-megawatt plant, and there is another group talking about developing this lignite coal.

Recognizing the difficulty that you get into in trying to compare power rates, we have a comparison of these rates.

Senator JORDAN. Just so that it is in the record, Mr. Secretary.

Mr. HOLUM. We will supply it.

(The information referred to follows:)

COMPARATIVE POWER RATES

Basin Electric Cooperative:

Firm, \$1.10 per kilowatt-hour, 3 mills per kilowatt-hour; minimum annual capacity charge, \$10.56 per kilowatt-hour of highest monthly billing demand within calendar year.

Short-term firm, \$1.25 per kilowatt-hour, 2.2 mills per kilowatt-hour, may be minimum charge.

United Power Association:

Firm, \$12.50 per kilowatt-hour for capacity (at bus bar); 3.50 per kilowatt-hour for transmission; 2 mills per kilowatt-hour.

Bureau of Reclamation (after contemplated rate increase):

Class I, \$1 per kilowatt-hour, 3 mills per kilowatt-hour.

Class II, \$12 per kilowatt per year based on contract rate of delivery; 3 mills per kilowatt-hour; no discounts allowed; customer pays wheeling costs.

Senator JORDAN. I am wondering how close you are getting to the point where the power sales that you anticipate for this hydropower are going to have to give way or be reduced to meet the competition from an alternate source.

Mr. HOLUM. Frankly, Senator Jordan, the rates from Basin Electric Cooperative and United Power and this other group that is talking about developing North Dakota lignite coal, are at the point where they are becoming competitive with our Bureau of Reclamation rates. That is why, I am sure, there are limits to how far we can increase these rates and sell the power. But we are confident that we can attain the \$1.5 million increase that we are discussing here this morning.

Senator JORDAN. Would that have any bearing on why you want to reduce this rate to $2\frac{1}{2}$ percent, the interest rate?

Mr. HOLUM. Only indirectly. Our overriding reason for wanting to reduce the interest rate is to see to it that this area of the country has equity with the rest of the country. And I think there is every

reason why it should. I think that the High Plains States, the Missouri Basin, all of the seven States that I have talked about are less favored, economically, than the rest of the country. While we are not suggesting that they should be given a power rate that is a subsidy, or used as a poverty assistance program, we certainly think that this is not the area of the country that ought to be penalized.

Senator JORDAN. Well, I supported this project last year. I want to support it again. But I just want to try to adjust my thinking to what you are proposing to do here that is different than you did before.

I know this country somewhat. I have been there. I agree that we need a good reclamation project up there. But I should not like to destroy its chances by making it too burdensome in other particularities.

That's all I have, Mr. Chairman.

Mr. HOLUM. I appreciate your comment, Senator.

Senator BURDICK. Mr. Holum, there have been several questions asked here today about why the difference between the rate charged on reclamation projects and those built by the corps. Of course one of your answers was to keep a consistent pattern.

Isn't there another factor? Who owns the Army Corps of Engineers projects in this country?

Mr. HOLUM. The United States.

Senator BURDICK. Then the money spent on Corps of Engineer projects is an investment in U.S. property.

Mr. HOLUM. Yes, sir.

Senator BURDICK. It does not take the character of a loan.

Mr. HOLUM. Oh, no; not at all.

Senator BURDICK. When the debt is repaid, who owns the reclamation projects?

Mr. HOLUM. They are divided into several classes, of course. Under repayment contracts, the water users, after they have paid for the project will end up being the owners of the distribution facility. The main carriage facilities will always be the property of the United States. The dams and powerplants that are built by the Bureau of Reclamation will always be Federal property, I am sure.

Senator BURDICK. But the irrigation works will belong to the users?

Mr. HOLUM. Under the repayment contract concept, yes.

Senator BURDICK. In regard to projects built by the Corps of Engineers, who will own them when the debt is liquidated?

Mr. HOLUM. The Congress, of course, will make the decision when these projects are liquidated, and of course they can make that decision at any time. I doubt that the Congress will make any other decision than that they continue to be the property of the United States.

Senator BURDICK. At what year do you expect the power investment to be paid out on this project, if your recommendations are followed?

Mr. HOLUM. Under our recommendations, the existing power facilities will be paid out in 2014.

Senator BURDICK. How many years of power revenues will be required to pay out the Garrison diversion unit?

Mr. HOLUM. When the power facilities are paid out, Senator Burdick, the powerplants will yield about \$40 million a year annually. So it will take a little less than 5 years to provide the power revenue assistance for the Garrison project.

Senator BURDICK. At that time there will be \$40 million a year which can be either used for payment of additional projects or can be returned to the U.S. Treasury.

Mr. HOLUM. We certainly hope there will be some additional projects built. But at some point in time, when the projects are built, the revenues will go to the United States, that is correct.

Senator BURDICK. When this investment is paid, this property would then be owned by the United States, earning \$40 million a year?

Mr. HOLUM. If power rates are maintained at the current level.

Senator BURDICK. And that is under your projection and suggestions of today?

Mr. HOLUM. That is our suggestion; yes, sir.

Senator BURDICK. Another question asked by one of the Senators was why is the percentage repayment by the landowners so much lower than some of the other projects. I believe you recited one where it was not lower. But isn't it also a fact that there are very few, if any, localities or States that have made other major contributions besides repayment of costs to the extent that North Dakota has. The State has dedicated areas for one reservoir extending 200 miles north and west of the Garrison Dam, land and area for another reservoir extending approximately 80 miles from the South Dakota-North Dakota border to the Bismarck area, and has donated approximately 568,000 acres of land for reservoir? Do you know of any States that have made a comparable contribution?

Mr. HOLUM. I hope the Senator will forgive me if I suggest that South Dakota has.

Senator BURDICK. Well, they have made a similar contribution, but not quite as great.

Do you know of any other State?

Mr. HOLUM. No; there is no other similar situation.

Senator BURDICK. Isn't the fact that we have made this contribution of rich, black, and otherwise good land another factor to be considered along with repayment by the water users?

Mr. HOLUM. Oh, I think so, Senator Burdick; yes.

Senator BURDICK. It is a kind of indefinite fact, but it is a fact.

Mr. HOLUM. I think that all of us in the Federal Government, whether we are in the executive branch or the Congress, should take this into account. However, Senator, in spite of this contribution by the State of North Dakota, I would call your attention to the fact that the Garrison diversion unit does not get any benefits from that fact. The repayment of the irrigators is based on their ability to pay on exactly the same basis used in every other project.

Senator BURDICK. But it is a factor that does not exist in other projects.

Mr. HOLUM. That is correct.

Senator BURDICK. But for the dedication of these 560,000 acres of land, there would be no flood control on the Missouri River.

Mr. HOLUM. That is correct.

Senator BURDICK. Because there would not be a reservoir space for impoundment of the water.

Mr. HOLUM. That is correct.

Senator BURDICK. And but for the dedication of this land in North and South Dakota and other places, there could be no power development as we see it today.

Mr. HOLUM. That is correct.

Senator BURDICK. Were these not the factors considered when the Congress authorized the Garrison diversion unit back in 1944 as a part of the package?

Mr. HOLUM. Oh, I certainly think so, Senator. The Flood Control Act of 1944 planned to bring over a million acres of agricultural land under irrigation in North Dakota and South Dakota. This was a recognition on the part of all the Members of the Congress in 1944 that there ought to be compensation to these two States that were making this economic contribution.

Senator BURDICK. And you think that this increase in power rates which you have proposed and recommended of a quarter of a mill would keep you in a competitive position and permit you to dispose of the power developed in the Missouri River Basin project?

Mr. HOLUM. It is going to be more difficult to market the power, and I am sure that we are going to lose some customers. But I am also confident that we can sell it; yes, sir.

Senator BURDICK. Under present economic conditions, do you think we could increase the power rate still further, and would your answer be the same?

Mr. HOLUM. No—I would be very nervous if we had to think in terms of a power rate increase much more substantial than the one we are talking about.

Senator BURDICK. In other words, the correction of the act by way of interest change, as you have outlined here today, is necessary with the power rate increase that you have testified to to pay out these projects in 50 years.

Mr. HOLUM. I think so, Senator Burdick. You very accurately and appropriately noted some time ago that unless we find a way, the executive branch and the Congress together, to set up a formula for financial management of the Missouri Basin project that is equitable as compared to the rest of the country. We have not only adversely affected the power users, but we will have failed to find a way to make future reclamation development possible in all seven of these States. It is not just the Garrison diversion, but all seven of the States, whose economic future depends upon these decisions.

We have concentrated this morning, Senator, on the relationship between power and irrigation. Perhaps I have been not as diligent as I should have been to make absolutely clear the relationship between power and irrigation, not only in the Missouri Basin, but all of the country.

Our first problem in any project, where power revenues are used to assist irrigation, is to pay out the power facilities. We cannot provide financial assistance to irrigation until that is accomplished.

What we are talking about today is the problem of establishing criteria. I think we have recommended reasonable and proper ones to make power payout possible, so that thereafter the assistance to irrigation becomes realistic.

Senator BURDICK. What you are saying is that the recommendations you have made today, if not followed and approved, would result in no power payout within the 50-year period.

Mr. HOLUM. That is correct.

Senator BURDICK. If that were true, there would be no project any place on the Missouri River system.

Mr. HOLUM. Under the rules that the Congress and the executive branch both are following at the present time, the answer is absolutely "Yes."

(Subsequent to the hearing, the following clarifying information was supplied:)

NEED FOR SECTION 4(b) OF S. 34

GARRISON DIVERSION UNIT, MISSOURI RIVER BASIN PROJECT

The question has been posed as to why the Department proposes language in S. 34 to make adjustments in interest rates for commercial power investments stemming from Corps of Engineers units on the mainstem of the Missouri River.

Understanding of this position requires that consideration be given to the financial position of the overall project in the absence of such legislation.

Although a raise in the wholesale rates for firm commercial power to realize an additional 0.25 mill per kilowatt-hour (approximately \$1,500,000 annually) is contemplated, this action standing alone would not provide sufficient revenue to cover the repayment requirements of the existing project, much less badly needed additional elements.

The revenues must repay (1) operation, maintenance, and replacement of the power system, (2) amortization of the commercial power investment with interest, (3) financial assistance to return allocated irrigation costs stemming from existing facilities, and (4) financial assistance to additional worthy projects planned for orderly authorization and development.

The first of the above-enumerated demands is a fixed obligation of the project and must be met if the system is to be maintained in a revenue-producing condition.

The second item, that being amortization, is also fixed as to term of years. There is no basis in law, policy precedents, or public opinion to support the assumption that any period in excess of 50 years for power repayment would be accepted by the Congress or the executive branch.

Even with prospective system revenues, as they would be augmented by the proposed rate increase, power repayment cannot be accomplished in the Missouri River Basin project if all investments (Corps of Engineers and Bureau of Reclamation alike) are required to return interest at the rate of 3 percent on the unpaid balance. We have made innumerable studies in which we have sought to establish that this could, in fact, be accomplished. This work has been quite unsuccessful and unrewarding unless the cost allocations were to be adjusted along inappropriate lines, such as the adoption of the incremental method or allocations of large sums for writeoff to nonreimbursable purposes, in a manner contrary to the letter and spirit of our mutually acceptable methods of cost allocation.

The Department reasons that, absent an ability to show power payout within 50 years for each block of power investment costs, the prospects for accumulation of power revenues for financial assistance to irrigation features are so remote in time as to have the practical effect of precluding their authorization and development now or in the foreseeable future. This is based in part on the Department's belief that sound water resources policy requires the return of reimbursable costs in a reasonable period of years, and that 50 years represents such a period. There is the added, and perhaps more relevant, factor that prevailing congressional sentiment is such that no irrigation development in the Missouri River Basin or elsewhere could be authorized unless the certification could be made that the revenues with which to achieve 50-year repayment were in prospect.

If, indeed, such authorizations could not be secured, and the Department is virtually certain that they could not, note must then be taken of what there is left to work with. It is not a happy situation.

The main stem was formulated, sized, and constructed on the premise that irrigation development would occur on an orderly basis somewhat as contemplated by the general comprehensive plan authorized by the Flood Control Act of 1944. Accordingly, substantial portions of the cost of the existing storage and power system have been allocated to future irrigation use. This is on the general order of magnitude of \$240 million. (These are known as assigned costs and \$35,851,000 has been related to the Garrison Diversion unit, 250,000-acre development.) The remainder of the \$240 million is related to other specific identifiable existing and future units of the general comprehensive plan.

In the event future irrigation development would be precluded, the Federal Government would be confronted with a choice of two equally untenable alterna-

tives for handling this \$240 million allocation. The first would be simply to write it off as a national mistake. If this course were supportable administratively, action by the Congress would still be required. Assuming such legislation could be enacted, and the Department does not recommend it in any sense, it would constitute abandonment of future economic development in the seven-State region of the Missouri River Basin. It might also be noted that even action as drastic as this would not assure power payout in 50 years, although it might be accomplished in possibly 70 or 80 years.

The other alternative would be to reallocate the costs of the mainstem system to reflect the reduced role of irrigation. This would have the effect of increasing the present commercial power investment such that it would be difficult to meet operation and maintenance costs and interest charges. One study prepared on this basis indicated that power would never pay out on this basis, although the revenues were then based on the existing rate schedule and did not reflect the proposed rate increase.

Consideration has also been given to increasing system revenues sufficient to accomplish the same result as the proposed decrease in interest rates. This would require an additional 0.65 mill per kilowatt-hour to be returned from firm commercial power over and above the return from the contemplated increase of 0.25 mill. The Department feels that power at these rates would not be salable in the competitive market, particularly within a few years, when the technology of large-scale thermal plants, and perhaps nuclear installation, will have clearly developed to the point that costs from this source of service are reduced. This is an unmistakable trend in the electric power business in this country and must be recognized.

Reduction in interest rates charged in this system by administrative action is not legally permissible. We are obliged by the terms of the original authorizing legislation to charge 3 percent interest for the entire system. The point to be remembered, in this matter, is that authority to market power from the Corps of Engineers projects and to use the proceeds for assistance to irrigation stems from the project planning documents (S. Doc. 191, 78th Cong., and the Reclamation Project Act of 1939), all of which are cited as controlling by section 9 of the Flood Control Act of 1944 authorizing the overall project. There is no latitude under reclamation law to administratively fix interest charges on commercial power investments.

Senator BURDICK. Now I want to return just briefly to the question that came up during the discussion on the Colorado River Storage Project Act. You can answer this, or Mr. Lee can answer it.

Isn't it a fact that the Norman Project Act did result in a lower interest charge than had previously been attached to the project, and when I say project, I refer to the Colorado River storage project?

Mr. LEE. Mr. Chairman, originally the Upper Colorado storage project was based upon the same formula as we now have in our Small Projects Act. This year the interest rate applicable in the Small Projects Act is 4½ percent. This is in contrast to the Water Supply Act rate of 3½ percent.

In other words, an amendment to the Norman Act which affected the Colorado River storage project, resulted in a reduction of ¼ to 1½ percent per year depending on the particular year. This year it is 1 percent.

Senator BURDICK. Could you tell us in dollars what the difference in those two rates would be in the Colorado River storage project?

Mr. LEE. I could not tell you that. I can provide it.

Senator BURDICK. Could you supply it?

Mr. LEE. Yes, sir.

(The information referred to follows:)

Under the original terms of the Colorado River Storage Act, the applicable interest rate for amortization of commercial power investments in the Curecanti Units and Seedskadee projects would have been 4.0 percent and the estimated rate for the Bonneville Unit, central Utah project would have been 4.125 percent. As amended by the Act of June 27, 1960, these rates would be 2.632 percent and

3.137 percent, respectively. Thus the act of June 27, 1960, reduced the Curecanti and Seedskadee rates by 1.368 percent and the Bonneville Unit rate by 0.988 percent. The annual dollar savings due to this reduction, determined on the basis of total commercial power investment would be \$1,846,000.

The interest rates in the original Colorado storage project formula in contrast to the Water Supply Act are as follows:

Year	Original Colorado storage project formula	Water Supply Act formula	Year	Original Colorado storage project formula	Water Supply Act formula
	<i>Percent (rounded)</i>	<i>Percent</i>		<i>Percent (rounded)</i>	<i>Percent</i>
1956.....	27 $\frac{7}{8}$	2.591	1961.....	37 $\frac{7}{8}$	2.742
1957.....	35 $\frac{7}{8}$	2.587	1962.....	37 $\frac{7}{8}$	2.936
1958.....	31 $\frac{3}{4}$	2.670	1963.....	4	3.046
1959.....	43 $\frac{7}{8}$	2.699	1964.....	4 $\frac{1}{8}$	3.137
1960.....	4	2.632	1965.....		

NOTE.—These should be used for the following year.

Senator BURDICK. When was the first power construction commenced in the Missouri River?

Mr. HOLUM. The Fort Peck project was started in construction in 1933, Garrison was started in 1946, Oahe in 1948, Big Bend in 1959, Fort Randall in 1946, and Gavins Point in 1952.

Senator BURDICK. Do you have the completion dates on these?

Mr. HOLUM. No, these are the dates the Corps of Engineers calls the dates of starting construction. The completion dates are probably much more important. The completion date for Fort Peck—and this must be the last powerplant—was 1961. Oahe, 1960; Garrison, 1960; Randall, 1956; Gavins Point, 1957; and Big Bend is estimated for completion in 1966.

Senator BURDICK. Could you supply us with a record on the cost associated with the long-term bonds for the years in which the construction of these dams were started?

Mr. HOLUM. Yes. We have supplied it in one way on this chart, and we will supply it.

Senator BURDICK. Can you supply it by figures also?

Mr. HOLUM. Yes, sir.

(The information referred to follows:)

Project	Year of first construction advance	Cost of long-term bonds (percent)
Garrison.....	1946	2.307
Fort Randall.....	1946	2.307
Oahe.....	1948	2.309
Gavins Point.....	1952	2.317
Big Bend.....	1959	2.619
Fort Peck.....	1933	(1)

¹ Not available.

Senator BURDICK. I believe your testimony was that that figure was 2 $\frac{1}{2}$ percent or lower during that period.

Mr. HOLUM. Depending upon the formula that you use, it fluctuated above and below 2 $\frac{1}{2}$ percent.

Senator BURDICK. Approximately 2 $\frac{1}{2}$ percent.

Mr. HOLUM. Yes.

Senator BURDICK. And unless the interest rate formula is changed, this period will carry a 3-percent charge to the project.

Mr. HOLUM. That is right.

Senator BURDICK. When I say project, the Missouri River Basin project.

Mr. HOLUM. That is correct.

Senator BURDICK. In other words, there will be a profit to the U.S. Government in that period.

Mr. HOLUM. On the interest rate; that is correct.

Senator BURDICK. Do you feel, then, that if these modifications are not made as you have testified to, that the citizens, the ranchers, the farmers, the potential irrigators in the areas along the Missouri River, will be penalized as compared to what has been received in other river areas where the Corps of Engineers has built structures?

Mr. HOLUM. I think they will be penalized in two very important ways. I think they will be penalized in the rate structures that they have as far as hydroelectric power is concerned. But I think an even more important penalty—because competition in the marketplace is going to put a limit on how far you can go in raising power rates—is that all seven States of the Upper Missouri Basin are going to be denied an opportunity for water resource development, unless our proposal is approved, or the Congress adopts some other formula for handling these projects.

Senator BURDICK. Could you tell me if the customers are aware of the proposed one-quarter mill power rate increase?

Mr. HOLUM. Yes, they are, Senator Burdick. About a year ago, maybe 9 or 10 months ago, I contacted all of the power users by letter and told them that we had this under consideration and told them what the rates for firm power would be if these proposals were approved by the Congress.

Senator BURDICK. What has been the reaction?

Mr. HOLUM. I think it would be wrong to suggest that they are enthusiastic about it. Nobody likes to have the cost of doing business increase. Many of them are particularly conscious of this in the region, because it does have a substantial degree of economic distress. Nonetheless, I think that all of them recognize that continuing development is of overriding importance to the region, and they are prepared to accept it.

Senator BURDICK. How would these rates, then, compare to such other places as the Colorado River storage project area?

Mr. HOLUM. After the rate increase is put into effect, and assuming that storage project rates stay the same, I would suspect that rates for a typical customer would be a little bit cheaper in the eastern division of the Missouri Basin than they are in the storage project. On the other hand, they would be substantially higher than the rates enjoyed by the customers of Hoover Dam, the Parker-Davis system, the Central Valley project, or the Bonneville area.

Senator BURDICK. What would be the area rate for wholesale power?

Mr. HOLUM. Well, let me supply the exact rate structure for the record of the committee. As Senator Allott said, there are those who say that the existing rate structure is yielding 6 mills and others who say it is yielding 5½. It depends upon the load factor.

Senator BURDICK. But the rate out in the Missouri River area would be 5.75.

Mr. HOLUM. At a certain load factor. The exact rate that we are suggesting is \$1 per kilowatt per month, and 3 mills per kilowatt-hour.

Senator BURDICK. Will the power all be salable at these rates?

Mr. HOLUM. We think so.

Senator BURDICK. You could sell more if you had it at these rates?

Mr. HOLUM. Probably.

Senator BURDICK. Well, in the final analysis the Federal Government will continue to receive income from this power system for many years after it has been fully paid back with interest. It occurs to me that the Missouri River power program should not be viewed as a loan to the power users that must be paid back under a rigid set of rules, but it is more nearly an investment made by the people of the United States, in that the proceeds and profits from this venture will be either used to aid more irrigation development in the region or conveyed into the Treasury, as may be hereinafter determined by the Congress.

Would you say this is a fair analysis of the situation in which we find ourselves?

Mr. HOLUM. Yes, sir.

(The prepared statement referred to follows:)

STATEMENT OF KENNETH HOLUM, ASSISTANT SECRETARY, WATER AND POWER DEVELOPMENT, DEPARTMENT OF THE INTERIOR

Mr. Chairman and members of the subcommittee, on behalf of Secretary Udall, I would like to express the Department's appreciation for the opportunity to present our views on the development that would be authorized by enactment of S. 34. The Garrison diversion unit is a worthy and urgently needed addition to the Nation's water resource facilities. We urge the adoption of legislation that will permit its construction.

On two previous occasions, we have appeared and presented measures to authorize the Garrison diversion unit, S. 230 in the 87th Congress and S. 178 in the 88th Congress. We are prepared to discuss the project facilities in whatever detail the committee considers appropriate. In addition, there are some specific features in the bill which, I am sure, merit a detailed presentation.

The physical engineering plan of the unit is unchanged from that previously described to the subcommittee. You will recall that it contemplates diversion of water from the Snake Creek arm of the Garrison Reservoir on the Missouri River and conveyance by means of canals, laterals, pumping plants, and regulating reservoirs to 250,000 acres of land in a 26-county area of eastern North Dakota. The Department's legislative report on S. 34, which was signed by Secretary Udall on March 19, 1965, includes, by reference, a revised supplemental report on this development. This report contains descriptive material and maps quite similar to the large map displayed here before you.

If a review of the physical plan would be helpful to the subcommittee and if the Chair desires, I will ask Bureau of Reclamation representatives to conduct such a review by reference to the display map.

The estimated construction cost of these works is \$212,383,000. This is the same estimate discussed with the subcommittee in the 88th Congress. It is recognized that this estimate is based on price levels prevailing in 1962, and that indexing to current levels would result in a minor percentagewise increase. The increase would not, however, have any significant effect on the validity of the economic conclusions reached in our analysis. In addition to the construction cost, there is appropriately assignable for allocation and economic evaluation a share of the existing reservoir and power system in recognition of the role of these facilities in furnishing storage regulation and pumping power service. These assigned costs aggregate \$35,851,000 and result in a total project cost of \$248,234,000.

This total amount is tentatively allocated to the several purposes to be served by the unit plan in the same manner and in the same amounts as were presented

in 1963, and are as discussed in considerable detail in our legislative report. These allocations are:

Purpose	Construction cost	Assigned cost	Total project cost
Irrigation.....	\$172,816,000	\$25,762,000	\$198,578,000
Municipal and industrial water.....	9,302,000	2,797,000	12,099,000
Fish and wildlife enhancement.....	17,555,000	4,102,000	21,657,000
Recreation.....	9,860,000	3,190,000	13,050,000
Flood control.....	2,813,000	-----	2,813,000
Power (deferred).....	37,000	-----	37,000
Total.....	212,383,000	35,851,000	248,234,000

On the basis of this cost estimate, the benefit-cost ratio of the unit is 2.51. This ratio clearly establishes the contribution Garrison will make to the Nation's economic well-being.

The Department's legislative report recommends a series of amendments designed to make the authorizing act conform to S. 1229, the proposed Federal Water Project Recreation Act. Under these and existing policies irrigation investments would be reimbursable without interest. Flood-control costs would be nonreimbursable. Power and municipal and industrial water investments would be reimbursable with interest at rates prescribed by the language of S. 34.

Recreation and fish and wildlife enhancement would be, in part, nonreimbursable and partly reimbursable, with interest, if our recommended amendment to the bill is accepted.

Under these provisions, reimbursability of costs allocated to these purposes would be as follows:

	Project cost	Interest during construction	Total capital cost
Reimbursable:			
Recreation.....	\$1,297,000	\$39,000	\$1,336,000
Fish and wildlife enhancement.....	1,045,000	52,000	1,097,000
Nonreimbursable:			
Recreation.....	-----	-----	11,753,000
Fish and wildlife enhancement.....	-----	-----	20,612,000

Although all details have not been completed, we are confident that return of the reimbursable portion of recreation and fish and wildlife costs can be assured by agreements with appropriate non-Federal entities executed prior to the start construction. We propose to observe all provisions of the cost-sharing legislation.

Revenues from the sale of municipal and industrial water marketed at an average estimated rate of \$19.15 per acre-foot will repay the investments in this purpose within 50 years with interest at prescribed rates. This amounts to approximately 6 cents per thousand gallons and is sufficiently inexpensive to make it attractive for the towns and villages to install necessary interconnecting pipelines, terminal storage, and treatment facilities.

Irrigation costs would be returned by charges imposed on water users, ad valorem tax collections, and by surplus power revenues of the overall Missouri River Basin project. Of the \$198,578,000 allocated to irrigation, local districts would repay \$19,296,000 pursuant to 50-year repayment and water service contracts. This would leave \$179,282,000 to be repaid with financial assistance from power revenues.

The prospects of revenues in this amount being available on a schedule that would enable full reimbursability within 50 years, plus permissible development period, has been the subject of much discussion and concern in recent years. The entire financial position of the Missouri River Basin project has been the source of increasing concern in the Congress, the executive branch, and the entire water resource community. Because of this concern, the Department began an intensive review of the Missouri River Basin project finances in 1961. This study was completed late in 1963 and submitted to Chairman Jackson of the full committee on December 17 of that year. The Department believes the study is valid and represents a sound program of financial management for the future.

Our review of these matters disclosed a steadily worsening financial condition beginning in approximately 1954, and continuing to the present time. We found

that there were a number of things which contributed to this condition, one of the most significant being the loss of revenue in the early years of mainstem operation as a result of adverse streamflow conditions. We have prepared a generalized hydrograph of the Missouri River which will illustrate to the subcommittee that during the critical years of 1954-61, when the reservoirs were being filled, there was not a single year in which streamflow attained the 60-year average. This factor and delays in the installation of power-generating equipment reduced power production and system revenues by more than \$100 million below the amount that would have been available if the system had enjoyed normal water conditions and progressed as initially scheduled.

During the 20 years since the original authorization of the Missouri River Basin project, new policies have been developed with respect to financial management of multiple-purpose water resource developments. I am sure all agree that the policies with respect to financial management should be applied uniformly across the country and among the various Federal agencies with water resource development responsibilities.

Although the Missouri River Basin project was formulated, authorized, and, in large measure, constructed under financial criteria substantially different from those applied today, the Department's December 17 report represents a program of future financial management that will be consistent with current practices.

Before undertaking the analyses that culminated in our report on financial position, December 1963, we tried in several ways to increase system revenue and thereby improve project feasibility through administrative action. Our most significant achievement in this regard was in connection with our contract with the Basin Electric Cooperative through which excess transmission capacity will be utilized by the cooperative to the profit of the Bureau's system. This transaction alone will net \$980,000 annually. We are confident that there will be additional negotiations of this character, with cooperative groups and investor-owned groups alike, that will further enhance system operation and increase revenues. However, these opportunities which have not yet matured into firm contracts were not considered in our financial analysis.

The Department's recommendations are based on the following fundamental criteria:

(a) Commercial power investments will be repaid with interest in not to exceed 50 years from the date of each block of investment.

(b) Irrigation investments associated with units of the plan in being or under construction on July 1, 1965, will be repaid as soon as possible after completion of commercial power repayment.

(c) Irrigation investments associated with future units will be repaid within 50 years, plus permissible development period, after each unit, division, or block of irrigable land would be available for irrigation service.

(d) Municipal and industrial water supply investment will be repaid, with interest, with revenues from sale of water for this purpose.

The subcommittee will note that the second principle deviates from today's standards in that somewhat more than 50 years will be allowed for return of irrigation costs stemming from facilities constructed in the period before the 50-year criterion was established and rigidly observed. However, these costs which must be repaid from power revenues will be the first recovered when power revenues are available. Our studies show that less than 4 years would be required to completely repay the financial assistance associated with the units of the plan which were completed or under construction at the time the study was completed. Less than 5 percent of the ultimate irrigation financial assistance needs of the project are associated with these units and much of this will be repaid within 50 years plus permissible development period. Actually, only about \$32 million in financial assistance will be delayed beyond the normally prescribed period and less than \$5 million will be more than 5 years delinquent. These amounts are as follows:

Exceeds permissible period by:

1 year.....	\$2, 014, 000
2 years.....	11, 113, 000
3 years.....	13, 319, 000
4 years.....	1, 780, 000
6 years.....	300, 000
7 years.....	3, 604, 000
10 years.....	491, 000
Total exceeding 60 years.....	32, 621, 000

The Department's financial report represents a joint effort on the part of the Congress and the executive branch to standardize financial practices for water resource projects across the Nation. The Corps of Engineers projects on the Missouri River are the corps only projects in the country built during this particular period of time that bear interest at 3 percent. All of the rest bear interest at 2½ percent or less.

If we are to standardize and equalize financial management practices across the country, we believe the Department should be granted authority to charge the same interest rates on Corps of Engineers power investments in the Missouri River Basin—and associated marketing investment—as have been established and which are now required to be charged for similar corps investments made at the same time in the rest of the Nation. The measures being considered today would authorize a 2½-percent interest rate after July 1, 1965, on unpaid balances of investments in Corps of Engineers units started prior to that date.

Permit me to emphasize at this point that our recommendations with respect to interest-rate modifications apply only to corps projects and facilities associated with them. Powerplants built by the Bureau of Reclamation pay and will continue to pay 3 percent interest. In the future, all facilities built, either by the corps or the Bureau, will earn interest at the congressionally approved formula rate.

If those recommendations are approved, the 10 States of the Missouri River Basin will have water resource development on the same basis as the rest of the country. The Columbia Basin is a good example. Hungry Horse and Grand Coulee are Bureau of Reclamation built facilities constructed during this period of time. They earn interest at 3 percent. All of the other power dams on the Columbia River system were built by the corps and earn interest at 2½ percent.

The Department's financial studies have demonstrated that the proposed modification in interest rates is not sufficient, by itself, to bring the project into conformity with the criteria I have discussed. To achieve this goal, revenues must be increased \$1.5 million annually. We propose to secure these additional revenues by increasing firm power rates in the eastern division by approximately 0.25 mill per kilowatt-hour. This represents a 5-percent increase in the cost of this class of service.

With the proposed modification of interest rates in effect and power revenues increased by \$1.5 million annually, we are confident that the Garrison diversion unit and other Missouri River Basin units that are ready for authorization can be authorized and constructed promptly with repayment assured in accordance with current standards. Other units can be authorized and constructed on an orderly schedule. Following power payout in 2014 and the payout of existing irrigation units in 2018, approximately \$40 million of power revenues will be available annually to assist irrigation repayment in the Missouri River Basin.

Mr. Chairman, we believe that S. 34, if enacted along the lines recommended in our report of March 19, would provide landmark legislation of vast significance to our Nation's continuing economic growth and well-being. I am sure that our belief in this regard is shared by the subcommittee members. Not only would it represent a major milestone in the development of national water resources policy through the cost-sharing provisions pertaining to fish and wildlife enhancement and recreation and enable the start of a badly needed irrigation development, but it has a far greater meaning for the Great Plains region.

Authorization of the accounting concept that would be conveyed by section 4(b) will preserve and assure the fundamental financial soundness of the parent Missouri River Basin project. In this sense, it will initiate a new era of economic growth in all of the States of this great river basin. It will permit the orderly scheduling, completion, and congressional consideration of badly needed and economically justified water control and use projects in each of the seven Reclamation States in the basin, for the Bureau of Reclamation has completed, or has in an advanced stage of investigation, proposals of varying magnitude for all of them.

For example, bills are pending on North Loup and Mid-State divisions in Nebraska; field investigations are completed for the Ellis and Kanopolis units in Kansas; work is well along on the Narrows unit in Colorado, and the same is true of the Jefferson and West Branch units in Montana.

In 1944, the Congress planned substantial acreages of irrigated agriculture for North and South Dakota to offset the economic loss sustained by these States when each dedicated over 500,000 acres of valuable agricultural land to provide storage for floodwaters that were devastating downstream communities along the Missouri and the Mississippi. Authorization of the 250,000 acres in the first stage

of the Garrison unit by the 89th Congress will indicate our decision to redeem that commitment to North Dakota. You will be pleased to know that work is proceeding rapidly on a first-phase, 190,000-acre Oahe diversion unit in South Dakota. The patterns you are considering today will apply equally to Oahe and other units in the other Upper Missouri River Basin States.

At the present time, more than 20 years after passage of the Pick-Sloan legislation, the Dakotas have realized less than 18,000 acres of new irrigation out of the almost 2 million acres clearly planned by the Congress in 1944. This is a startling statistic when we consider that North and South Dakota have each contributed one-half million acres of their most prized land resources to main-stem reservoir right-of-way.

Agriculturally speaking, and these are agricultural States, the Missouri River Basin project has thus far been a net economic liability to North and South Dakota despite the demonstrated benefits that have accrued to other areas of the basin from flood control, navigation, dependable hydroelectric power, fish and wildlife and recreation. Enactment of S. 34 will redress this imbalance for North Dakota. The establishment of a firm, supportable financial base for the Missouri River Basin project will make possible urgently needed development in the other States.

Well-conceived, carefully planned projects for multipurpose water resource development can and do stimulate the economy. They represent an opportunity to achieve these goals for the immediate and long-term future on a sound reimbursable basis. Reclamation programs are not poverty grants; they are self-liquidating investments in our Nation's future.

Now, the High Plains States are not participating as they should in the Nations' economic growth. This is farm country. Until substantial acreages have been assured an adequate water supply, farmers will be forced to rely on cereal grain as the principal crops. Assured supplies of pasture and forage on a substantial acreage will permit the region to direct its labor and capital to the production of livestock and meat products.

As I pointed out earlier, the seven States in the region are rightfully expecting that the Missouri River Basin project will provide water for substantial acreages of irrigated agriculture and new supplies of water for municipal and industrial growth. Before this can occur, sound programs for financial management must be established. We hope that the subcommittee finds our studies useful and the recommendations we have presented on this subject and on cost sharing to be sound.

The records of previous subcommittee hearings make it clear that North Dakota people are prepared to accept their financial responsibilities if the project is built. The Department of the Interior is prepared to implement the financial report—and place the rate increase into effect—when the Congress indicates that doing so would be appropriate.

Senator BURDICK. We will now hear from Colonel Kristoferson. You may proceed.

**STATEMENT OF LT. COL. RALPH S. KRISTOFERSON, ASSISTANT
DIRECTOR FOR PLAINS DIVISION, CIVIL WORKS DIRECTORATE;
ACCOMPANIED BY DONALD CURTIS, CHIEF OF MULTIPLE USE,
COORDINATION BRANCH, PLANNING DIVISION, CIVIL WORKS
DIRECTORATE, CORPS OF ENGINEERS**

Colonel KRISTOFERSON. Mr. Chairman, I am Lieutenant Colonel Kristoferson of the Chief of Engineers Office, and I am accompanied today by Mr. Donald Curtis of our staff.

I am here at the committee's request to furnish any information the committee may wish relative to the responsibilities and activities of the Corps of Engineers as they relate to S. 34.

So far as I have been able to ascertain, the Department of Army has not been requested to comment on S. 34. However, at the committee's request the Secretary of the Army did comment on an earlier

bill, S. 178, and his letter of July 26, 1963, was included in Senate Committee Report 870 of the 88th Congress, 2d session.

In that letter, the Secretary summarized the provisions of S. 178, outlined the basic authorization for the Missouri River Basin project, and described the six large main-stem reservoirs constructed and being operated by the Corps of Engineers.

He concluded by stating that since the irrigation project was under the jurisdiction of the Department of the Interior, the Department of the Army offered no comments with respect to the general policy matters involved in the authorization as proposed in S. 178.

Senator Jackson's letter requesting my presence here today also made reference to section 4(b) of the bill, which would establish an interest rate of 2½ percent on the unamortized balance of the investment allocated to commercial power and facilities constructed by the corps.

The Bureau of the Budget requested the Department of the Army's views on this matter and these were furnished in a letter dated February 21, 1964, to the Director from the special assistant to the Secretary of the Army for Civil Functions.

The Bureau of the Budget has informally cleared the Department's position which is one of no objection to this provision.

In the interest of saving time, I will not go into details on this unless the committee so desires.

Senator BURDICK. Does the Corps of Engineers have any objection to this proposal?

Colonel KRISTOFERSON. No, sir.

Senator BURDICK. The letter that was written to the chairman of this committee, Hon. Henry M. Jackson, July 23, 1963, signed by Cyrus R. Vance, Secretary of the Army, is substantially the same position today as it was then.

Colonel KRISTOFERSON. That is correct, sir.

Senator BURDICK. But no objection to the suggested interest changes.

Colonel KRISTOFERSON. That is correct, sir.

Senator BURDICK. That is all.

Colonel KRISTOFERSON. Thank you, sir.

Senator BURDICK. Thank you.

We shall now recess subject to the supplying of the materials that have been referred to.

(Whereupon, at 11:15 a.m., the subcommittee took a recess, subject to the call of the Chair.)

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