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WATER RESOURCES PLANNING ACT

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HEARING

BEFORE THE

SUBCOMMITTEE ON
WATER AND POWER RESOURCES

OF THE

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
UNITED STATES SENATE

NINETY-SECOND CONGRESS

FIRST SESSION

ON

S. 1398

A BILL TO AMEND THE WATER RESOURCES PLANNING
ACT TO AUTHORIZE INCREASED APPROPRIATIONS

APRIL 23, 1971



Printed for the use of the Committee on Interior and Insular Affairs

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WASHINGTON : 1971

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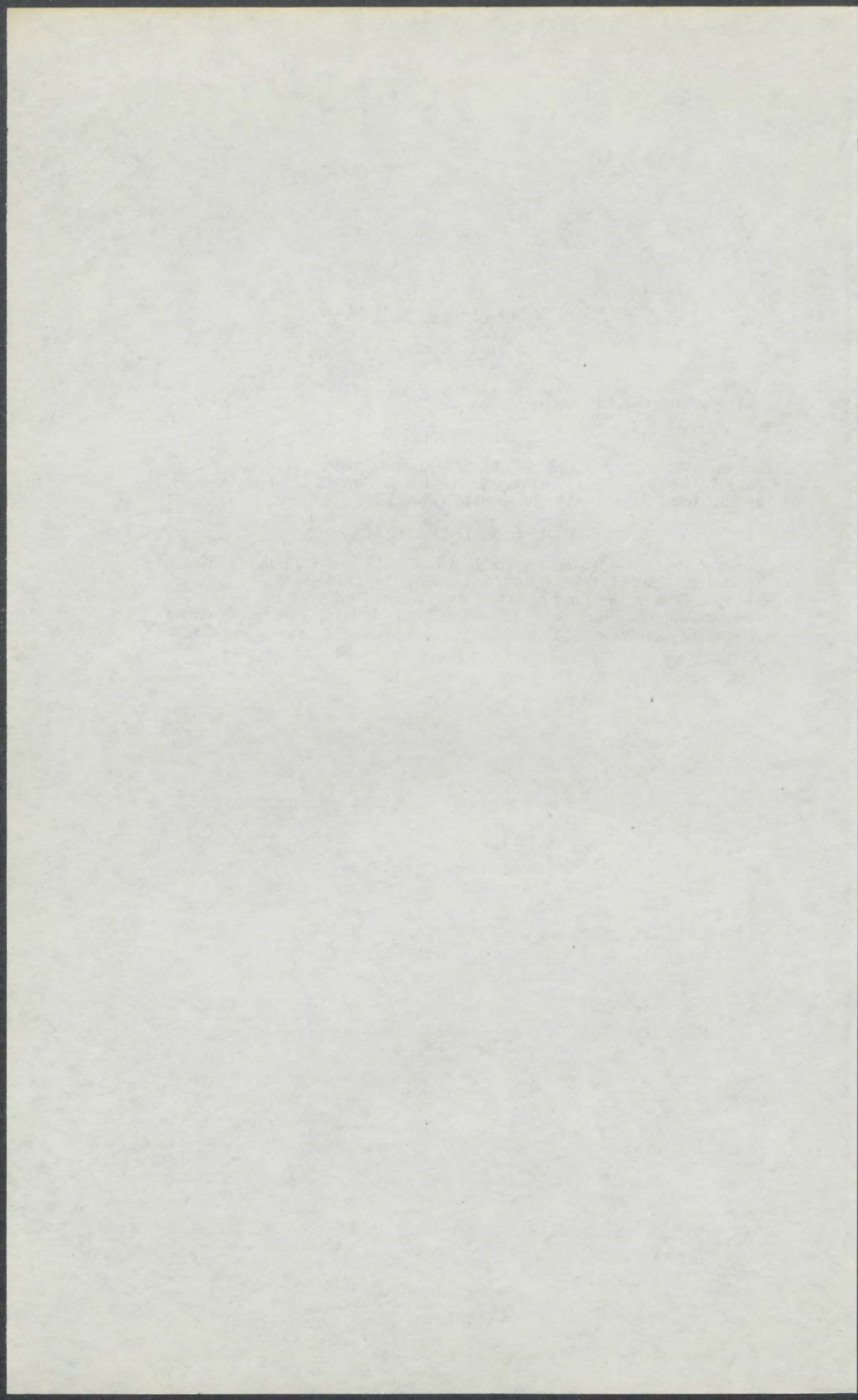
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(II)

CONTENTS

S. 1398.....	Page 1
Department of Interior report.....	2
STATEMENTS	
Maughan, W. Don, Director, Water Resources Council; accompanied by John B. Roose, Assistant Director; Ramon J. Powell, General Counsel; and Richard Vannoy, Administrative Officer.....	2
ADDITIONAL INFORMATION	
A policy statement—Water and Related Land Resources Planning, Water Resources Council, Washington, D.C., July 22, 1970.....	86
Estimated Cost of the First National Assessment Published in 1968.....	85
Materials supplementary to statement of Don Maughan, Director, Water Resources Council.....	4



WATER RESOURCES PLANNING ACT

FRIDAY, APRIL 23, 1971

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER RESOURCES
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 (chairman of the subcommittee) presiding.

Present: Senators Anderson (presiding), and Jordan.

Also present: Dan Dreyfus, professional staff member and Charles Cook, minority counsel.

Senator ANDERSON. The purposes of this hearing before the Water and Power Resources Subcommittee this morning is to take testimony on S. 1398—to amend the Water Resources Planning Act to authorize increased appropriations.

The purpose of this measure, which was recommended by the Administration, is to remove the existing provisions of the Water Resources Planning Act which impose ceilings of \$500,000 annually to carry out the administrative duties of the Water Resources Council and \$400,000 annually to administer the planning grant program established by the act.

The text of S. 1398 and the executive communication recommending the measure will be included in the record at this point.

(The documents referred to follow:)

[S. 1398, 92d Cong., first sess.]

A BILL To amend the Water Resources Planning Act to authorize increased appropriations

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Water Resources Planning Act (79 Stat. 244, 42 U.S.C. 1962 et seq.) is amended by striking out the present section 401 and inserting in lieu thereof the following:

“SEC. 401. There are authorized to be appropriated:

“(a) not to exceed \$6,000,000 annually for the Federal share of the expenses of administration and operation of river basin commissions, including salaries and expenses of the chairman: *Provided*, That not more than \$750,000 annually shall be available under this subsection for any single river basin commission; and

“(b) such sums as may be necessary for the expenses of the Water Resources Council in administering this Act.”

WATER RESOURCES COUNCIL,
Washington, D.C., March 11, 1971.

HON. SPIRO T. AGNEW,
President of the Senate,
Washington, D.C.

DEAR MR. PRESIDENT: Enclosed is a proposed draft bill "to amend the Water Resources Planning Act to authorize increased appropriations." At present, the Act (79 Stat. 244, 42 USC 1962 *et seq.*) contains a combined ceiling of \$900,000 for the Council's administration of the Act, consisting of a ceiling of \$500,000 for Title I and \$400,000 for the administration of Title III. The bill proposes to eliminate these ceilings so as to accommodate the Administration's proposed FY 1972 budget for the Council and to permit any necessary future increase in funds that could be made available.

The separate authorization ceilings for the administration of Titles I and III have proved to be somewhat artificial and impractical in actual operation, and we believe that the authorization for the Council's administration of the Act should be combined as proposed in the bill. This change will result in more efficient administration and more accurately reflect the Council's organizational structure.

Authorization ceilings for river basin commissions established under Title II of the Act would not be changed by this bill. It would, however, clarify the budgetary procedure for such commissions by providing explicitly that the salaries and expenses of commission chairmen are subject to the Title II ceilings.

The ceiling on grant funds to States, set at \$5,000,000 in the Act, would not be affected by this bill.

The Office of Budget and Management advises that this bill would be in accordance with the program of the President.

Sincerely yours,

ROGERS C. B. MORTON,
Chairman.

A BILL To amend the Water Resources Planning Act to authorize increased appropriations

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Water Resources Planning Act (79 Stat. 244, 42 USC 1962 *et seq.*) is amended by striking out the present Section 401 and inserting in lieu thereof the following:

"Sec. 401. There are authorized to be appropriated:

(a) not to exceed \$6,000,000 annually for the Federal share of the expenses of administration and operation of river basin commissions, including salaries and expenses of the chairman: *Provided*, that not more than \$750,000 annually shall be available under this subsection for any single river basin commission; and

(b) such sums as may be necessary for the expenses of the Water Resources Council in administering this Act."

Senator ANDERSON. Mr. Maughan?

STATEMENT OF W. DON MAUGHAN, DIRECTOR, WATER RESOURCES COUNCIL; ACCOMPANIED BY JOHN B. ROOSE, ASSISTANT DIRECTOR; RAMON J. POWELL, GENERAL COUNSEL; AND RICHARD VANNOY, ADMINISTRATIVE OFFICER

MR. MAUGHAN. Mr. Chairman, it is a pleasure to be here and to have this opportunity to appear before your committee. Accompanying me this morning are Mr. John B. Roose, Assistant Director, Ramon J. Powell, General Counsel, and Richard Vannoy, our Administrative Officer.

I am here this morning to testify on behalf of the Water Resources Council in support of S. 1398, a bill "To amend the Water Resources Planning Act to Authorize Increased Appropriations." We are in urgent need of this legislation to accommodate the President's fiscal year 1972 budget request for the Council. We also hope that you will

see fit to provide us with flexibility that will allow some future increases in our budget without the necessity for frequent amendments to the authorization.

At present, section 401 of the Water Resources Planning Act imposes a total appropriation ceiling of \$900,000 for the Council's administration of the act. This ceiling is divided by the act into separate categories of \$500,000 for the Council's administration of title I, which pertains to the operation of the Council itself and \$400,000 for the Council's administration of the title III State grants program. The President's fiscal year 1972 budget request for these purposes is \$1,381,000.

I want to emphasize that it is only this figure requested for the Council's direct administration that exceeds the ceilings presently in the act. We are not recommending any change in the authorization ceilings on river basin commissions or on the State grants. The total budget request for fiscal year 1972 is \$5,460,000, an increase of \$310,000 over the fiscal year 1971 appropriation. This total request includes \$3 million for planning grants to the States and \$1,079,000 for the full year operations of six river basin commissions. Both of these sums are within the present ceilings.

Specifically, S. 1398 would make three changes in the present authorization. First, it would change the authorization for the Council's expenses from its present combined \$900,000 ceiling to a no ceiling authorization. Second, it would change the authorization for the Council's administration of the act into a single authorization from the present two separate categories of Council administration of title I and title III. In actual operation, this categorization of the Council's administrative budget has proven to be artificial and impractical. We believe that a single authorization will result in more efficient administration and will more accurately reflect the Council's organizational structure. Third, and this is really a rather minor matter of clarity, it would clarify the authorization for river basin commissions under title II of the act to provide explicitly that the salaries and expenses of the river basin commission chairmen are subject to the title II ceilings. We have taken the position in the past that this is the case, but it would be clearer if it were made explicit in the act.

This concludes my oral statement, Mr. Chairman. I have some other material I would like to make available to the committee, for the record. The material is substantially the same as that we very recently presented to the appropriations committees, and it contains a fairly detailed summary of the Council's current activities.

That concludes my statement, Mr. Chairman.

Senator ANDERSON. We have this material you spoke about?

Mr. MAUGHAN. Yes, you have that material.

(The material referred to follows:)

MATERIALS SUPPLEMENTARY TO STATEMENT OF
W. DON MAUGHAN, DIRECTOR,
WATER RESOURCES COUNCIL,

ON S. 1398 and H. R. 6359

TABLE OF CONTENTS

	<u>Page</u>
 I. Introduction:	
General Statement on WRC FY 72 Budget.....	1
Legislation to Change Appropriation Ceiling	
Authorization.....	3
River Basin Commission Ceiling	4
Membership Changes.....	4
 II. Comprehensive Planning	
New Planning Policy	5
National Assessment	7
Comprehensive Studies	8
Westwide Study.....	20
 III. Principles and Standards for Water and Land Planning	
Task Force Report	24
 IV. Policy Development	
Policy on Environmental Statements	52
Federal-State-Local Cooperation	53
Flood Plain Management.....	58
Coastal Zone and Related Land Use Planning.....	60
Wild and Scenic Rivers	61
 V. Regional Institutions	
River Basin Commissions	61
Priorities Report.....	68
Susquehanna River Basin Compact Commission ...	69

	<u>Page</u>
VI. State Grant Program	
Planning Grant Program	70
Consolidated Grants	73
VII. Other Activities	
National Water Commission	74
International Activity	75
Staff Reorganization	76
Coordination Handbook	78

MATERIALS SUPPLEMENTARY TO STATEMENT OF
W. DON MAUGHAN, DIRECTOR,
WATER RESOURCES COUNCIL,

ON S.1398 and H.R. 6359

General Statement on WRC FY'72 Budget

Concern, public and private, with our natural resources has never been higher, nor has the public investment in the preservation and use of those resources been greater. Table A reflects the scope of that investment for "Water Resources and Power" and "Water Resources Planning." It is a major part of the Council's responsibilities to bring about coordination of comprehensive water and related land planning.

The President's budget request for the Council for Fiscal Year 1972 is \$5,460,000; an increase of \$310,000 over the Fiscal Year 1971 appropriation. This level of funding provides \$3,000,000 for planning grants to the States; \$1,079,000 for the full year operations of six river basin commissions; and \$1,381,000 for administration and coordination under the Act including the addition of seven positions to the staff.

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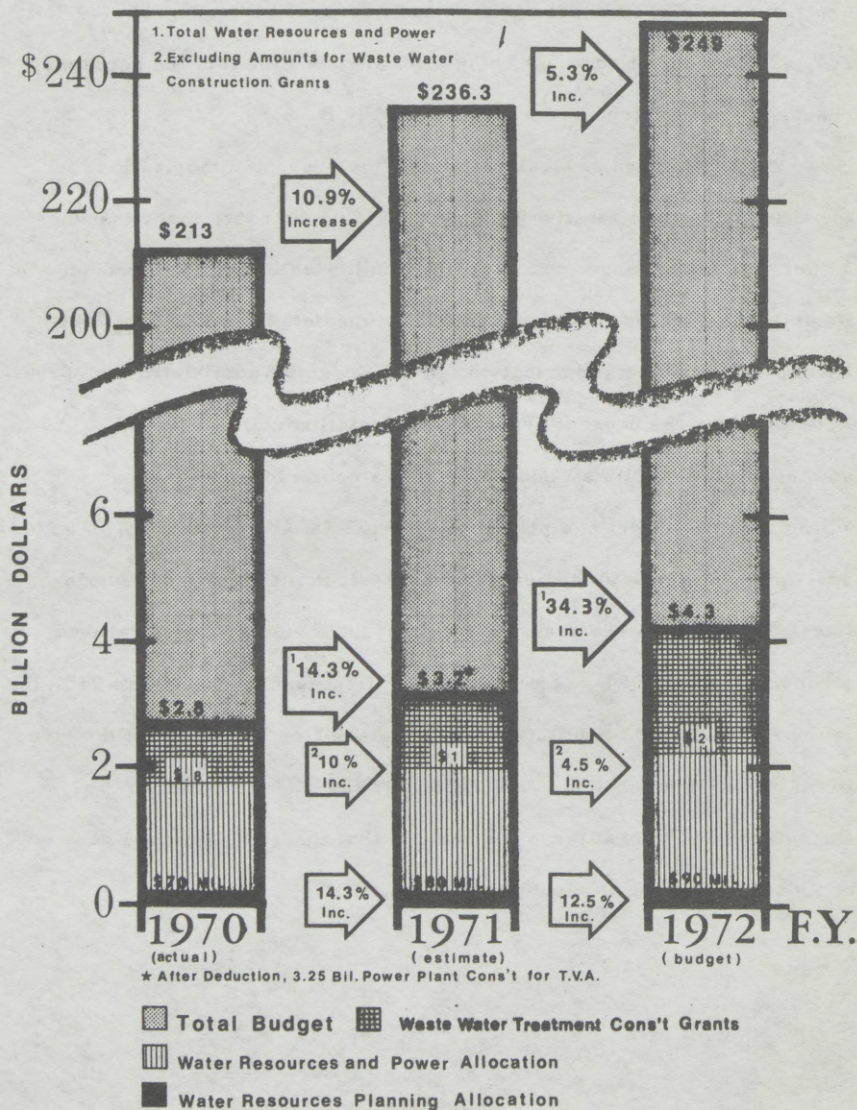
U.S. WATER RESOURCES COUNCIL

Table A



Water Resources Planning Budget Comparisons

(Figures Represented are Federal Budget Authority)



Legislation to Change Appropriation Ceiling Authorization

The Water Resources Council budget for Fiscal Year 1972 will require a change in the present ceiling on the Council's administrative expenses set in Section 401 of the Water Resources Planning Act (79 Stat. 244, 42 USC 1962 et. seq.). Legislation that would effect the necessary change has been introduced as S. 1398 and H.R. 6359.

We recommend several changes in the present authorization for the Council's administrative expenses. First, we recommend that the authorization be changed to a no ceiling authorization so as to provide flexibility beyond just this year and the immediate future. Second, we recommend a single authorization for the Council's administration of the Act to replace the present separate authorization ceilings for the administration of Titles I and III. This categorization of the Council's administrative budget has proven to be artificial and impractical in actual operation. A single authorization will result in more efficient administration and will more accurately reflect the Council's organizational structure. Third, we recommend a clarification with respect to Title II of the Act to provide explicitly that the salaries and expenses of the river basin commission chairmen are subject to the Title II ceilings. The Council has in the past taken the position that the Title II ceiling does so apply but we believe it should be made explicit.

No other changes in the present authorizations are requested; the present ceilings on Title III grant funds and on Title II commissions remain the same.

River Basin Commission Ceiling

The appropriation ceiling for recurring operating expenses of river basin commissions was raised by the FY 1971 Appropriation Act from \$200,000 to \$250,000 per commission. This budget submission is within that ceiling, however, programs and State contributions are expanding and further growth is expected.

Membership Changes

During the year the organization of the Council has changed with the addition of the Environmental Protection Agency as an Associate Member and the Chairman of the Council on Environmental Quality and the Chairmen of the river basin commissions as Observers.

Before the recent creation of the Environmental Protection Agency, the water quality functions now under its jurisdiction were represented in the Council through its member departments. It is evident that water quality aspects of water resources activities must continue to receive full representation in the planning and coordination function of the Council.

With the formation of the National Oceanic and Atmospheric Administration (NOAA) in 1970, and its inclusion in the Department of Commerce, the participation of that Department in Water Resources

Council activities has substantially increased. Since last fall the primary participants from the Department of Commerce in Council of Representatives' meetings have been from the new agency NOAA.

New Planning Policy

A new planning policy which improves the definition of the responsibilities and levels of planning and establishes central management of studies by the Council was approved in July 1970. Under the new planning policy, clearly interrelated levels of planning are defined to replace the "types" of planning previously carried out and commonly referred to as types 1, 2, 3, and 4. The new policy is designed to upgrade Federal, State, and local coordination and communication in the specification of the objectives to be considered in the planning process and in the identification of alternative means of meeting the needs and desires of people that may be appropriate for implementation at the various levels of government and by non-governmental entities or individuals.

Under the new planning policy, the first and broadest level includes framework studies and assessments. This level of planning is directed at the evaluation or appraisal on a broad basis of the needs and desires of people for the conservation, development, and utilization of water and land resources. It will identify regions with complex problems which require more detailed investigations. The second level, regional or river basin plans, is directed toward the preparation of preliminary or reconnaissance level water and land plans for a selected area. These

plans will be prepared to resolve complex long-range problems identified by framework studies and assessments and will focus on middle term (15 to 25 years) needs and desires. Implementation studies, the third level of planning under the new policy, involve program or project studies undertaken by a single Federal, State, or local entity for the purpose of authorization or development of plan implementation.

The new planning policy is designed to strengthen study management by placing authority and responsibility in a single individual, reporting to the Council or a river basin commission in carrying out framework studies and assessments, and multiagency regional or river basin planning activities. In accordance with the new planning policy the Fiscal Year 1972 budget request for the Council provides for central management of the Southeastern New England River Basins Study and the Long Island Sound Regional Study. Additionally, funds are requested to implement the central management concepts by providing for additional staff members for the preparation of plans of study including definitive cost estimates for new comprehensive study proposals on a continuing basis. Where a proposed study falls within a river basin commission's region, funds will be provided by the Council to the commission for study management costs.

We anticipate that under the new planning policy, framework studies and assessments and regional or river basin plans will be more responsive to the level of planning and decision making involved and will be carried out in a shorter time period and at less cost than has been our experience to date. This effort is described further under the heading of Comprehensive Studies.

National Assessment

The long-range program for the National Assessment, adopted by the Council in November of 1966, which resulted in the publication of the First National Assessment in December 1968, is being revised and a plan for the Second National Assessment, which is to be published in 1975, will be submitted in connection with the 1973 Fiscal Year budget.

The Council has been concerned with the need for a better data base and analytical system to support its National Assessment. With the new definitions of planning, which combine the framework studies and regional assessments, it is imperative that the Council develop an information system that will help integrate regional assessments into the national analysis.

With available funds and existing staff, work is proceeding on methodology for the Second National Assessment and the compilation of data for the base year 1970. This work will be accelerated when the \$100,000 requested for Fiscal Year 1972 becomes available.

The Second National Assessment will explore the impact of varying national and regional rates of population and economic growth as well as environmental and social factors on needs and adequacies of supplies of water and land resources.

The Second National Assessment also will draw on the results of the comprehensive regional framework studies that are being completed. The Council published a report "Water Resource Regions and Subregions

for the National Assessment" in July 1970. The report contains maps and codes for regions and subareas in order that all agencies collecting data may compile their data so it will be readily usable in the National Assessment activity.

Comprehensive Studies

Framework Studies

Eleven framework studies covering portions or all of 40 States are being carried out to evaluate water and related land resource potential and to identify problems involving utilization and conservation (see map - Framework Studies). The first framework study to be initiated, the Ohio River Basin Study, was completed in 1971 and is being forwarded to Congress. Eight studies are currently being completed and, after reviews by the States and Federal agencies, these will be forwarded to Congress in Fiscal Years 1971-72.

The framework studies to be completed in the next several months are:

- Columbia-North Pacific Region
- California Region
- Great Basin Region
- Lower Colorado Region
- Upper Colorado Region
- Missouri River Basin
- North Atlantic Region
- Upper Mississippi River Basin

Continuing framework studies for which funds are being requested for Fiscal Year 1972 are:

- Great Lakes Region
- Lower Mississippi River Basin
- Souris-Red-Rainy Region

- Completion date FY 1972
- Completion date FY 1973
- Completion date FY 1972

These reports contain a vast amount of correlated water and related land resource data and evaluations that have not previously been available to resource managers in developing their programs. This information will be of value to Federal agencies in the conduct of their respective programs; to States and regional agencies in developing State water plans; and to local and private planners and decision makers. Requests for copies of these reports and appendices are being received from many sources.

Puerto Rico is conducting a framework study using a combination of funds under various Federal grants and direct appropriation to participating agencies. This is scheduled for completion in Fiscal Year 1973.

The total expenditure on the framework studies through June 1971 will be \$48 million. This has been spent over approximately an eight-year period (see Table B).

River Basin and Regional Studies

The series of 15 river basin and regional comprehensive planning studies (referred to as type 2 studies) initiated in 1963-1964, is also being brought largely to a conclusion during the current year (FY 1971) (see map - River Basin Plans). To date, seven studies have been completed and reviewed and of these three have been forwarded to Congress. These are:

Big Black River Basin
Pascagoula River Basin
Pearl River Basin
Red River below Denison Dam

Awaiting State comments
Forwarded to Congress
WRC report being prepared
Ready for forwarding to
Congress

Sabine River Basin
 Susquehanna River Basin
 White River Basin

Forwarded to Congress
 WRC report being prepared
 Forwarded to Congress

Another group of eight river basin studies are in various stages of completion and review and are scheduled to be forwarded to the Water Resources Council shortly after the end of this fiscal year. These are:

Big Muddy River Basin
 Connecticut River Basin
 Genesee River Basin
 Kanawha River Basin
 Puget Sound Region
 Wabash River Basin
 Willamette River Basin
 Grand River Basin

The total cost of river basin and regional studies over the eight-year period has been approximately \$40 million (see Table C).

The Water Resources Council has been working through its staff and member agency organizations with the lead agencies and coordinating committees to bring these river basin studies to a successful conclusion. Delays have been encountered partly due to conditions not foreseen at the time the studies were authorized. The objective of these studies is to formulate plans for the development, conservation, and utilization of the water and land resources. Guidelines for these studies require full coordination with public and local agencies in arriving at plans that are satisfactory and acceptable to all involved interests. Because of increased public concern for the environment acceptance of basin plans, which represented adequate fulfillment of the needs for flood control, water

supply, recreation, and other purposes as seen by professional planners, has been delayed in many areas for further study of environmental aspects. However, significant improvement in understandings have taken place during the delays with meaningful dialogue and common sense reshaping of concepts and plans by all involved. Admittedly, the process has been expensive and time consuming. However, the effort is resulting in acceptable planning proposals that should minimize further delay when implementation is initiated.

The report on the Sabine River Basin in Texas and Louisiana was transmitted to the Congress on April 15, 1970. This first type 2 report comprised five volumes prepared by a Coordinating Committee consisting of representatives of the U. S. Departments of Agriculture; Army; Commerce; Health, Education, and Welfare; and Interior; the Federal Power Commission; and the States of Louisiana and Texas. The Coordinating Committee was chaired by the District Engineer, Fort Worth District Corps of Engineers. The Water Resources Council included its views, findings, and recommendations with the report of the Coordinating Committee when it was sent to the Congress. The Council suggested several revisions in the plan of the Coordinating Committee which it recommended for inclusion in subsequent authorization reports or other implementing actions. The Corps of Engineers has completed an authorization report for that part of the comprehensive plan for which it is responsible, which has been reviewed by the Water Resources

Council in regard to its conformance to the basin plan. The Corps report has been printed as House Document No. 91-429. The plan proposed for authorization is in general accord with the plan presented in the April 1970 report of the Water Resources Council. Principal changes from the Coordinating Committee plan include the elimination of flood release channels below the reservoir sites, an increase of flood storage in each of the three reservoir projects, and at Greenville, a substitution of a nonstructural flood plain management program for channel improvement. The Water Resources Council endorsed the authorization proposals of the Chief of Engineers as an updating and implementation of elements of the comprehensive plan for the conservation, development, and utilization of water and related land resources of the Sabine River Basin, Louisiana and Texas.

Similar authorization actions will be taken for completed type 2 studies such as the Pascagoula and White River Basin reports when authorization reports have been completed by the Corps of Engineers.

Those of us working with the field agencies completing the studies and basin plans believe that a lot of progress is being made in the "joint" planning process and that many useful and acceptable proposals will be included in these plans as they are forwarded to Congress later this year. Emphasis will be on balancing preservation and improvement of river systems. Where reservoir impoundments are proposed for flood control, water supply, hydroelectric power and flow augmentation, the environmental

effects and tradeoffs will be set forth. Where reservoirs are found to be unacceptable on the basis of environmental and conservation considerations, recommendations will be withheld and in some cases nonstructural substitutes will be proposed. Where future water development needs are foreseen on the basis of projections of population but where there are unresolved questions regarding the environmental aspects of the possible solution, recommendations may be assigned to the long term part of the basin plan. Early-action plans in these river basin studies will open the way to compatible and required resource development in the next 25-year period; a reanalysis of alternatives to meet needs beyond that time can be made to include effects of technological and economic progress in the interim.

River basin study programs continuing in Fiscal Year 1972 include:

Red River of the North	Completion date June 1972
Southeastern New England	Completion date June 1973

The Council's budget request for Fiscal Year 1972 makes provision for the addition of four personnel who will assist in evaluating the needs for additional framework and river basin studies as identified through past proposals and the newly completed studies. Plans of study and budget estimates will be prepared for high priority studies. Studies in this category for Fiscal Year 1972 are:

Framework Studies

Alaska Region
South Atlantic-Gulf Region

River Basin or Regional Studies

Hawaii Region
Upper Snake River Basin
Platte River Basin
Long Island Sound Region 1/

These studies will be conducted in accordance with the policy established in July 1970 by the Water Resources Council setting forth advancing levels of studies from problem identification to implementation. The advance preparation of study plans by the Council or river basin commission staff will enable rapid activation of the study effort by the participating agencies when the study start is authorized.

Looking Ahead

Plans, schedules, and budgets on future framework studies and river basin or regional plans will be carefully prepared on a step-by-step basis. In the first year of the study authorization specific goals, scope, assumptions, criteria, and the plans of study will be the primary output. The funding level will be low that year. It is anticipated that by concentrating on problem areas and making optimum use of the vast storehouse of physical and economic data compiled and interpreted over the past several decades, the total framework and river basin study costs will be substantially less than spent on these types of studies to date. Schedule will be shortened, and through central management there will be positive study control. In the past local agencies and coordinating committees have provided the

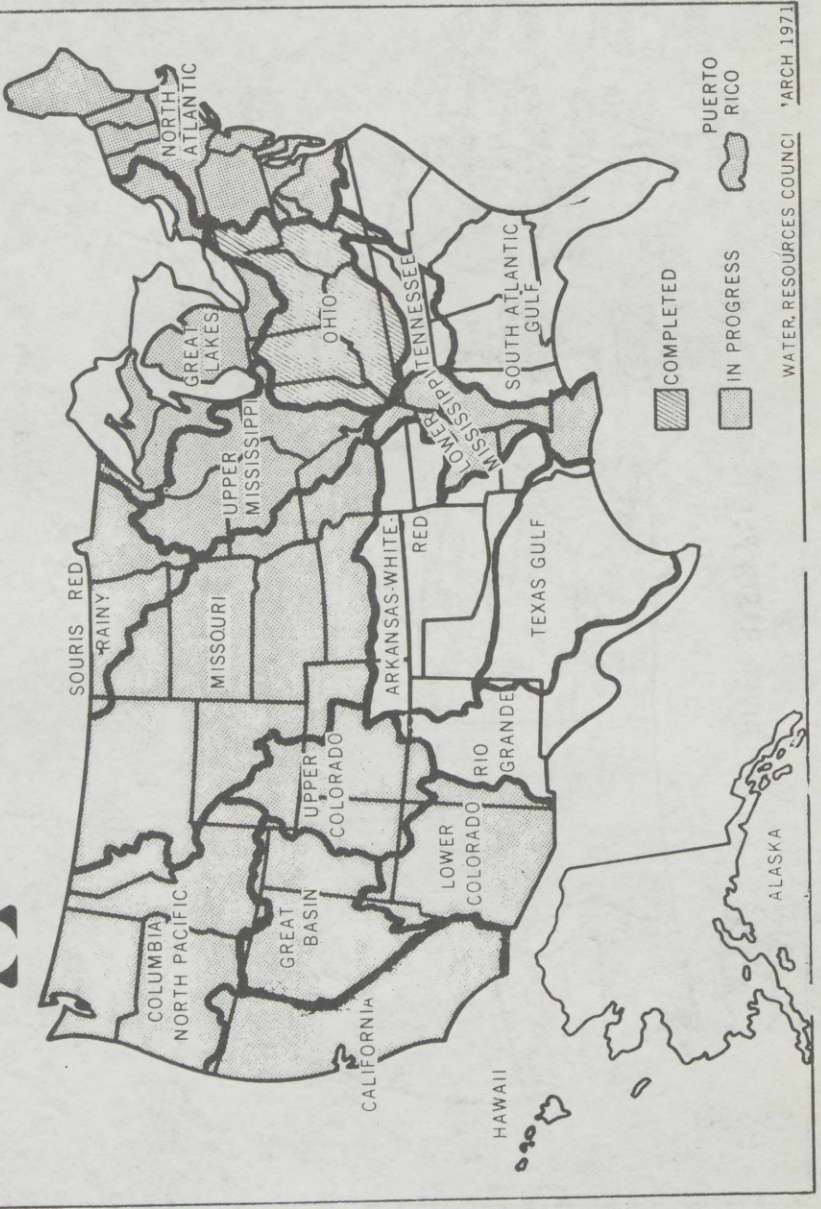
1/ \$100,000 has been transferred to the Council from the Corps of Engineer's FY 1971 appropriation to prepare the plan of study and cost estimates.

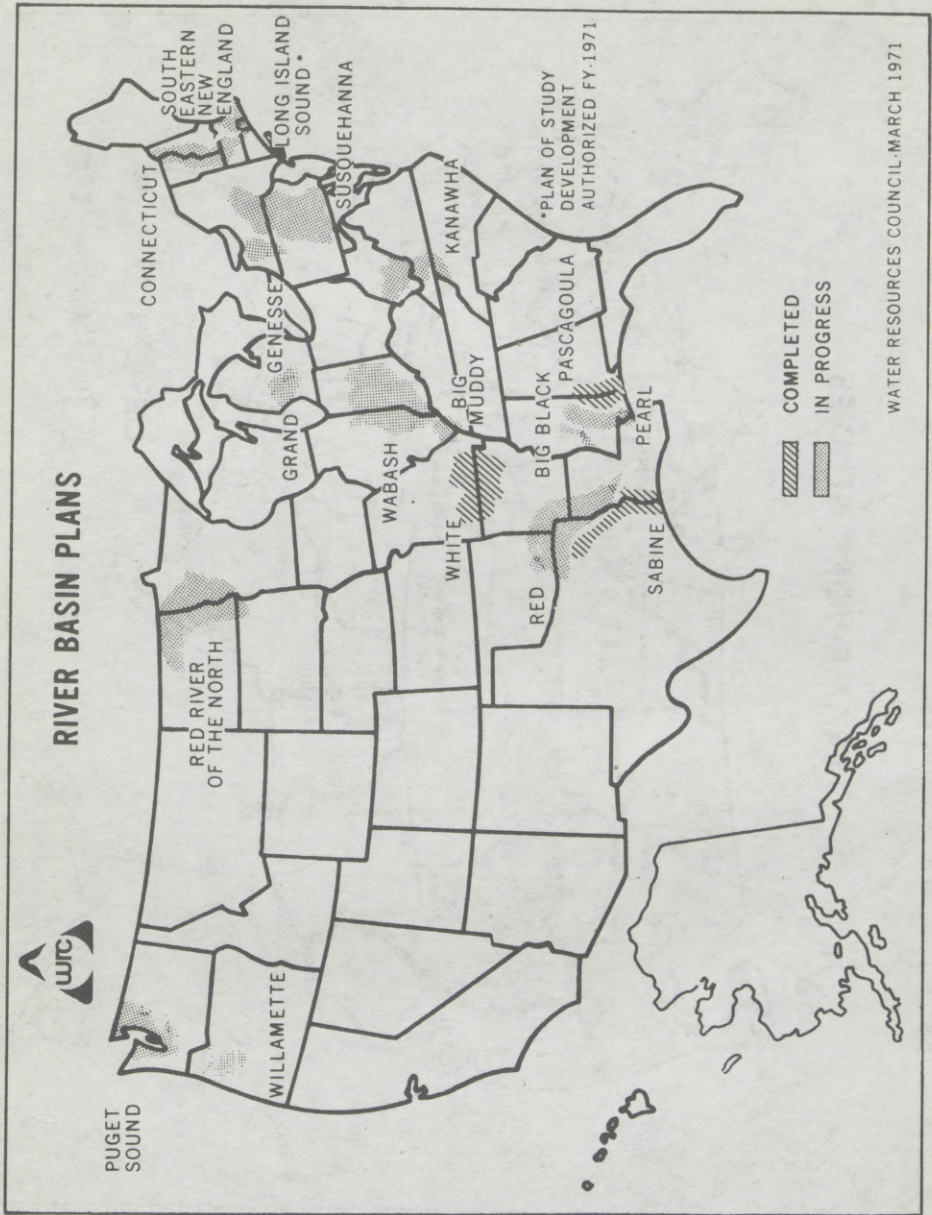
management. The State-Federal interagency inputs will continue, but under a study director reporting either to an authorized State-Federal regional institution, such as the river basin commission or directly to the Water Resources Council.

During Fiscal Year 1972 the Council will evaluate the results of framework studies which cover all but five river basins, namely the Rio Grande, Texas-Gulf, Arkansas-White-Red, Tennessee Valley, and South Atlantic-Gulf, and two States, Alaska and Hawaii. It is anticipated that framework studies will need to be updated about every five years, which would be consistent with 5-year reports on the National Assessment.

From the evaluations of the framework studies, priority lists for river basin and regional plans will be developed in consultation with regional institutions, States, local areas, etc. To the extent personnel are available on the Council staff, they will take the lead in preparing the plans of study. Where problems are well defined, the framework studies will be used as the basis for recommending feasibility or implementation studies which will be prepared under the direction of the primary implementing agency.

FRAMEWORK STUDIES





April 13, 1971

Annual Federal Study Costs Appropriated
to Water Resources Council Member Agencies
for Framework (Type 1) Studies

(Thousands of Dollars)

River Basin	Total estimated cost	Through FY 1965	FY 1966	FY 1967	FY 1968	FY 1969	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974
Missouri	5,970	1,192	1,274	1,336	965	920	283	---	---	---	---
Ohio	4,911	3,919	597	395	---	---	---	---	---	---	---
Upper Mississippi	4,075	944	830	788	565	673	275	---	---	---	---
Columbia-North Pacific	5,750	---	213	1,269	1,427	1,050	919	872	---	---	---
North Atlantic	4,609	---	210	883	1,116	868	838	694	---	---	---
Pacific Southwest											
California	5,818	---	---	327	1,176	1,171	1,608	1,536	---	---	---
Great Basin	2,729	---	---	---	---	584	929	1,216	---	---	---
Lower Colorado	2,895	---	---	299	563	640	638	755	---	---	---
Upper Colorado	2,938	---	---	304	645	558	674	757	---	---	---
Great Lakes	3,653	---	---	---	174	517	1,199	1,060	703	---	---
Souris-Red-Rainy	2,070	---	---	---	341	801	928	---	---	---	---
Lower Mississippi	3,351	---	---	---	---	---	500	1,224	1,138	489	---
Total	48,769.	6,055	3,124	5,601	6,972	7,782	8,791	8,114	1,841	489	---

Annual Federal Study Costs Appropriated
to Water Resources Council Member Agencies
for Regional and River Basin (Type 2) Studies

(Thousands of Dollars)

River Basin	Total estimated cost	Through FY 1965	FY 1966	FY 1967	FY 1968	FY 1969	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974
Big Black	540	196	171	173	---	---	---	---	---	---	---
Big Muddy	900	381	233	241	---	---	---	45	---	---	---
Connecticut	3,503	759	755	769	508	297	415	---	---	---	---
Genesee	1,125	624	222	279	---	---	---	---	---	---	---
Grand	1,902	565	377	391	374	195	---	---	---	---	---
Kanawha	3,893	811	590	690	561	484	757	---	---	---	---
Pascagoula	1,201	575	395	231	---	---	---	---	---	---	---
Pearl	1,449	519	333	357	240	---	---	---	---	---	---
Puget Sound	3,308	726	805	768	621	388	---	---	---	---	---
Red Below Denison Dam	3,160	1,287	661	718	494	---	---	---	---	---	---
Sabine	995	502	319	174	---	---	---	---	---	---	---
St. John	167	117	50	---	---	---	---	---	---	---	---
Susquehanna	5,368	1,600	830	967	483	474	1,014	---	---	---	---
Wabash	4,832	1,307	886	883	752	419	585	---	---	---	---
White	2,723	798	687	651	587	---	---	---	---	---	---
Willamette	5,020	1,481	981	1,081	805	549	123	---	---	---	---
Red (North)	1,232	---	---	---	---	---	---	515	717	---	---
Southeastern New England	2,970	---	---	---	---	---	---	200	840	1,930	---
Total	44,288	12,248	8,295	8,373	5,425	2,806	2,894	760	1,557	1,930	---

Westwide Study

This is the third time that the Water Resources Council has presented testimony to the Committee on the Western U. S. Water Plan Study or Westwide Study authorized by the Colorado River Basin Project Act of 1968. According to the Conference Report on the Colorado Basin Act "The purpose of the reference to the Water Resources Planning Act is to assure cooperation and coordination among all Federal agencies, affected States, and study commissions established pursuant to the Planning Act and to eliminate possible duplication in the overall water resources planning effort."

At the Appropriation Hearings in the spring of 1969, conceptualization of the study was just getting underway. The study plan was still not far along last year. However, I pointed out at that time that in excess of \$20 million was being spent on type 1 and 2 comprehensive studies in the west plus additional millions on reconnaissance-level planning. It was my view then, and it still is, that the Westwide Study requires the highest order of coordination and precise goal definition to assure value returned for the money spent on that study. We feel the Water Resources Council's role is to help formulate the plan of study, define scope and principles, standards, and criteria under which those studies will proceed. The Council's role in coordination depends largely on the decisions made within the Department of the Interior.

Experience gained over the past few years on comprehensive Federal-State interagency studies has convinced planning representatives of State and Federal agencies, and the Council staff that this type of study not only needs precise definition of the study goal and its scope; but clear enunciation of assumptions, criteria, and procedures; thorough commitment to utilize the plan of study; firm central management; early plan formulation, with reformulation continuing throughout study period; early consideration of major alternative plans including many not heretofore evaluated; and tight fiscal control and clear assignments to study participants.

All participants in the Westwide Study have put forth substantial efforts to help develop a viable plan of study. However, much remains to be done to carry out the study according to the plan. Our findings as of mid April 1971, include the following:

During Fiscal Year 1971 the Department of the Interior dealt directly with each study participant and the Council on most matters. To avoid duplication in coordination the Water Resources Council limited itself to a consultive role on coordination. The Fiscal Year 1971-72 role of the Water Resources Council, as spelled out in the plan of study, is to assist in keeping the plan of study up to date and to distribute materials and make arrangements for seminars on projections and new general planning and evaluation policies.

By common understanding, the Pacific Northwest River Basins Commission has a substantial role on the Westwide Study. Its members

have unanimously agreed that a single northwest plan should be prepared which would, with possible minor modification, serve the needs of a Commission's comprehensive joint plan, the Westwide Study, and the individual State water plans. The Commission's plan, when completed, will be a comprehensive, coordinated, joint plan for Federal, State, interstate, local, and non-governmental bodies to follow in implementing the development and conservation of water and related resources. That plan must include an evaluation of all reasonable alternative plans.

For Fiscal Years 1965 through 1971, inclusive, Federal agencies will have spent about \$60 million on framework and reconnaissance-level studies, about \$80 million on feasibility or survey-level studies, about \$50 million on a mixture of reconnaissance and feasibility studies, and the States will have spent over \$70 million primarily on reconnaissance or broader level studies. These figures include total costs of studies not yet fully completed by the Corps of Engineers. These estimates do not include HUD 701 programs, FPC river basin studies, and other miscellaneous studies of that type. The total study expenditure is of the order of a quarter of billion dollars.

These figures may be surprising because 7-year total water planning expenditures for an 11-State area are not often aggregated. Therefore, what do the figures mean? Will that amount of planning pay appropriate dividends? Only if we use the results and experience correctly. These are two of the primary goals of the Westwide Study. But, it is far easier to set goals than to reach them, and that is what I emphasize today.

No matter how much time and money has been spent in the past, conditions are constantly changing. Droughts and floods continue to occur in differing frequencies. Population projections undergo revisions. Public desires and interests change. Our economy fluctuates. Therefore, planning does not stop with the drawing of a plan but must continue through many adjustments. We ought to be increasingly selective in our planning, and concentrate better on solving pressing problems as we move to implementation of projects and preservation programs.

At present some of the major gaps in existing studies which require Westwide attention involve conceptualizing and comparing major alternative plans giving full consideration to recent emphasis on environmental factors, population growth, interest in accelerated rural development, possible reallocation of existing supplies, etc., in conjunction with orderly development of water and related land for the economic well-being of people.

To properly fill those gaps, in my opinion the Westwide effort would do well to invest a major portion of its time and funding on a small select group of experienced planners in Denver, headed by USBR personnel, which will formulate and reformulate general plans with the advice and assistance of interested local-State-Federal agencies. This select group would have its work frequently reviewed for policy guidance by a collective body of representatives of all major affected interests, chaired by a representative of the Secretary of the Interior. As the plan of study

states, very little time and money should be spent on traditional studies of topography, geology, hydrology, land classification, etc., because most of that data are available and have received extensive analysis.

A meaningful next step is for the Council to review and comment on the budget for the Westwide Study. The apportionment of costs for participants, estimated by the Interior Department, will be included in the revised plan of study to be available the end of this month.

Principles and Standards for Planning

Water and Land Resources

Nothing worthwhile stands still in society, including its approach to proper use and preservation of water and land resources. Either our planning for these resources keeps in step with the desires of the people and properly deals with past mistakes, or the new planning efforts and what they attempt to do have little impact.

When our country was young, technology in its infancy, population small, and land and water resources abundant, the overriding objective of resources use concerned the simplest means to produce the greatest immediate returns at the least immediate cost such as hydraulic mining. It did not take long, however, for conservation influences to be felt, and water and land planning and use have undergone many changes, with pressures for change being greater today than ever before. However, planning policies should be developed carefully so that lessons painfully learned from experiences of the past are properly applied to the problems of today and tomorrow.

Our objectives for water and land use must continue to include economic development, but effective consideration must be given to other substantive goals concerning the environment, population distribution, public health, etc. In addition we must deal in greater depth than ever before with balanced regional growth.

Over the past two years the Council has been developing meaningful principles and standards and procedures to systematically relate all aspects of water and related land resources planning to national, regional, environmental, and quality of life objectives. When adopted these planning principles would be used by Federal agencies at all levels of project and program planning of our water and land resources.

In the Flood Control Act of 1936 the Congress stated a policy relating to flood control which over the years has been broadened to other purposes. This policy was " . . . that the Federal Government should improve or participate in the improvement of navigable waters or their tributaries, including watersheds thereof, for flood-control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected."

In the 35 years since passage of that Act, many analytical procedures have been developed to evaluate benefits and costs. All of these efforts have recognized that all benefits and all costs must be considered. But the tendency has been to rely primarily on market or monetary considerations

with much less consideration being given to nonmonetary and intangible effects.

There has been a rising tide of public concern about the environment and the quality of life. This has been reflected in a series of Congressional enactments and Executive policies that give new directions to planning for water and land resources. A reconsideration of these and many other factors led the Task Force to recommend a multiobjective system of planning that does consider all benefits, costs, and effects as directed by the Congress.

I believe that through the use of a series of charts I can summarize their recommendations.

Functions of the Water Resources Council

First, however, I would like to summarize the functions of the Council as set out in the Water Resources Planning Act as follows:

1. Prepare national assessment
2. Recommend water policy
3. Establish planning standards
4. Coordinate comprehensive planning
5. Recommend river basin commissions
6. Review river basin plans
7. Assist State planning
8. Take other actions to carry out--
 - a. Water Resources Planning Act
 - b. Executive Office assignments

We are concerned with the third function which places the responsibility on the Council of establishing principles, standards, and procedures for Federal participants in the preparation of river basin plans and for the formulation and evaluation of Federal water and related land resources projects.

Council Actions Prior to June 1969

Over two years ago, the Council decided to review and if desirable revise the current evaluation practices used in planning. The Council appointed a Special Task Force to conduct the review and an initial public hearing was held at Washington, D. C., on January 13, 1969, to solicit views and recommendations. A preliminary report of the Special Task Force proposing a multiobjective approach to water and land resources was published by the Council in June 1969. The Council directed that the issues and the proposals in the report be widely discussed and tested on existing projects.

Council Actions After June 1969

Nine public hearings were held at which about 200 oral statements were presented and nearly 400 other statements were submitted for the record. The preliminary Task Force report, of which about 5,000 copies have been distributed during the past two years, was the subject of discussion at numerous meetings and seminars. The report was extensively reviewed by several Federal agencies and river basin commissions. In addition, the proposed procedures were tested. On the basis of this information and comments and suggestions of others,

the Task Force submitted its final recommendations to the Water Resources Council for consideration on August 12, 1970.

Field Tests

Ten projects were selected for field tests and 19 tests were made. The test teams were instructed to carry out the tests in two distinct steps involving the measurement of benefits and costs and the formulation of alternative plans. Ten test areas were chosen. The teams making the tests included teams from the University of Wisconsin, Michigan State University, Massachusetts Institute of Technology, University of Oklahoma, University of Michigan, and Cornell University. Teams were also established by the Corps of Engineers, the Bureau of Reclamation, the Soil Conservation Service, the Tennessee Valley Authority, and the Water Resources Council. Cornell, Howland, Hayes and Merryfield, a private consulting group at Seattle, Washington, conducted one test (Chart 1).

On the basis of these tests the Task Force concluded that the multiobjective approach is practical and that meaningful results and uniform application could be achieved by establishing carefully structured principles and standards and procedures for planning.

The Task Force involved many people in its effort through hearings, reviews, and tests and drew freely from the work of others. As a result, the preliminary findings made in June 1969 were greatly revised in the August 1970 principles and standards.

Multiobjectives

Planning for the use of water and land resources should be carried out in the context of four broad objectives relating to national economic development, environmental quality, quality of life, and regional development. Each of the objectives should be given equal consideration in the conservation, development, and use of our water and land resources (Chart 2).

Components of these multiobjectives refer to the types of outputs, environmental conditions, opportunities for improvements in the quality of life, or regional developments that are being sought as contributions to the multiobjectives. The term "component need" is used to refer to the type, quantity, and quality of the desired effect now and in the future. Please note that the approach is concerned with outputs, thus providing the basis of comparing alternative plans.

System of Accounts

Under the multiobjective approach, an account of the effects on all objectives would be prepared for each alternative plan. All positive or beneficial effects are to be evaluated as are all negative or adverse effects. Values would be expressed in appropriate monetary or quantitative units or in appropriate qualitative terms (Chart 3).

As will become evident from a discussion of the four objectives, these accounts are not mutually exclusive.

NED Objective

Benefits to the national economic development objective include all effects on national output regardless of the reason a plan may be formulated. This includes the value of output to users (willingness to pay), external economies, and the use of unemployed resources. The costs are resources required for the plan, external diseconomies, and displaced resources that remain unemployed (Chart 4).

All the benefits and costs can be expressed in monetary terms and net benefits can be calculated.

EQ Objective

Beneficial and adverse effects under the environmental quality objective are expressed in various quantitative units or in qualitative terms. Generally, net effects cannot be calculated. Sometimes the benefits may be expressed in terms of meeting legally established standards. Note that to the extent that beneficial or adverse effects result in changes in national output they are included in that account. For example, meeting water quality standards would have NED costs and also would benefit water users resulting in NED benefits (Chart 5).

QL Objective

Benefits and costs under the quality of life objective are the beneficial and adverse effects of a plan on people. Generally, benefits and costs will be expressed in nonmonetary units or in qualitative terms. However, some components such as real income distribution can be measured in monetary terms (Chart 6).

RD Objective

Benefits and costs to the regional development objective include effects of a plan on specified components for the region under consideration and the benefits or costs to the region of achieving NED, EQ, and QL objectives. The RD objective may include regional income, regional employment, economic stability, or some environmental feature, for example (Chart 7).

Regional Accounting System

Benefits and costs for each region would include the incidence of the national economic development effects. Thus, these effects accruing across the system of regional accounts would sum to the national total of such effects. The regional development account would also include the effects on location of related economic activities. These effects, offset by adverse location effects in other regions, would sum to zero for the Nation (Chart 8).

If the Nation is interested in the geographic pattern of its economic growth it can by its public investment policies influence the pattern of growth. The regional development account provides a method of estimating the consequences of alternative policies for regional development.

The Planning Process

The formulation and evaluation of water and land resource plans and projects in the context of the multiobjectives include the means of examining tradeoffs among objectives should that type of examination

be appropriate. Essential to this process is the formulation of alternative plans to achieve varying levels of contributions to the multiobjectives. One alternative should be formulated which makes optimum contributions to the NED objective (Chart 9).

Four tests should be applied--

1. Acceptability to public and compatibility with institutional constraints
2. Effectiveness in meeting components needs of the multiobjectives
3. Efficiency or least cost
4. Completeness in accounting for all investments and other required inputs or actions

As alternatives are developed and subjected to these tests, the basic steps in the planning process may be reiterated as necessary, with each iteration more detailed than the last.

Each alternative screened for final consideration should be "justified" in the sense that total benefits are expected to exceed total costs. The last step, the selection of a recommended plan, is based on judgment after an evaluation of tradeoffs among justified alternative plans. Participation of all concerned interests is essential in this planning process.

The tradeoffs between alternative plans would be determined by comparing the beneficial and adverse effects toward each objective. These will be expressed in quantitative units where possible; otherwise, in qualitative terms. To assure that this judgment can be given adequate

review, comparisons and resulting tradeoffs of the recommended plan to alternatives will be reported.

Illustration of Tradeoff

I would like to illustrate the tradeoffs between alternative plans by following through a comparison of two alternative plans designated as Plan A and Plan B.

Let's assume that our planning efforts have been directed toward the resolution of a local flood problem along a small stream passing through a town. Alternative Plan A involves the construction of a system of levees and channelization of three miles of the stream through the more urbanized section of the town. The plan would provide a high degree of flood protection to the industries and residences located along the flood plain. The national economic development benefits attributable to this plan are 12 units and its national economic development costs are 12 units resulting in zero net national economic development effects (Chart 10).

In addition to the value of flood control benefits which are expected to accrue locally, expenditures by imported construction workers and their subsequent net regional income impacts and the increased net income stemming from flood control will accrue locally resulting in an estimate that regional income will increase by 14 units over the life of the project. Offsetting these net gains in regional income would be the value of resources contributed locally for the project including land

easements and rights-of-way which have been estimated to cost 4 units of income resulting in an overall net increase in regional income of 10 units of income with and without the plan.

Alternative Plan B involves the construction of a small dam upstream from the town and the creation of a lake with an average surface area of 500 acres during the summer months. This alternative plan would provide a lesser degree of flood protection to the industries and residences located along the flood plain in the town. It is estimated that the plan would have 10 units of national economic development benefits associated with flood control and recreation and would have national economic development costs of 8 units resulting in net benefits of 2 units (Chart 11).

In addition to the national economic development benefits associated with flood control and a portion of the recreation use that would accrue locally, expenditures by imported recreationists and their subsequent net regional income impacts and the increased net income stemming from flood control are expected to increase regional income by 16 units. Offsetting these net gains in regional income would be costs incurred by the local community to share in the costs of development of recreation facilities and a loss of net income to the region stemming from the displacement of certain activities inundated by the reservoir. These reductions in regional income are estimated at 2 units resulting in an overall net increase in regional income of 14 units with and without the plan.

The comparison of Alternative Plan A with Alternative Plan B indicates a tradeoff of 2 units of net NED benefits, 4 units of net regional income effects and the creation of a 500 acre lake with channelization of three miles of stream and improved flood protection for the industries and residences in the flood plain. Thus, we are comparing a tradeoff of national output and regional income and the beneficial effects of the creation of a 500 acre lake on environmental quality with the adverse effects resulting from channelizing three miles of stream and the greater security of life and health for people in the flood hazard area represented by the higher level of flood protection (Chart 12).

Cost Allocation

When necessary to establish reimbursement or cost-sharing policies the Task Force recommended a method of allocating NED costs that would insure that all objectives and components are treated comparably and receive their fair share of the advantages from the multiobjective plan.

The Discount Rate

The Task Force recommended that the Water Resources Council establish the discount rate to reflect the relative values which the Nation places on benefits and costs toward the multiobjectives occurring in the future as compared with the present. It was proposed that the rate would be set for relatively long periods of time to reduce the disruption to ongoing planning activities that result from frequent change (Chart 13).

National Program Development

The Council in cooperation with the Office of Management and Budget would develop an information system to support national programming decisions for water and land resource activities. This program will result in long-range schedules of priorities and in regional program summaries for water and land activities. Such a program would, of course, build on and incorporate existing agency Planning-Programming-Budgeting Systems.

Participation

We are aware of the criticisms of the large number of interests and people that have become involved in comprehensive planning and the difficulty of effective management and decisionmaking under the circumstances. Yet, on the basis of our hearings and analyses, we are convinced that meaningful multiobjective planning will require a broader judgmental basis and more public participation. In the future, more rather than fewer interests will be involved. The challenge to our Council is to organize planning activities so that they can be efficiently and effectively conducted while providing for meaningful and satisfying participation in the important considerations and decisions.

Recommendations--Principles

The Special Task Force has recommended that the Council adopt the "Principles for Planning Water and Land Resources" subject to:

- a. Publication in the Federal Register, with an opportunity for public comment during a period of 60 days;
- b. A public hearing by the Council in Washington, D. C., 50 days after publication;
- c. Amendment resulting from public comment; and
- d. Submission of amended principles for approval by the President.

Recommendations--Standards

The Special Task Force has further recommended:

- a. That the Water Resources Council adopt the "Standards for Planning Water and Land Resources" subject to:
 - 1. Revision made necessary by amendments of the principles
 - 2. Approval of the principles by the President
- b. That the Council sponsor seminars to facilitate application of the principles and standards by river basin commissions and Federal agencies, and that State water planning agencies be invited to participate in the seminars;
- c. That the Water Resources Council publish the standards in looseleaf form to facilitate improvement and revisions; and
- d. That the standards apply to all planning studies initiated after the approval of the principles by the President, and that the Council urge river basin commissions and Federal

agencies to apply the standards to ongoing studies wherever practical.

Activities Since August 1970

The Task Force report has been discussed widely both within and outside government over the past nine months. The Task Force report has been made available to staffs of Congressional Committees, to States, universities, and to many individuals upon request. Summaries have been given to talks and have been distributed to large numbers of individuals. In short the Council has sought, received and appreciated public involvement.

The goal we seek can be safely reached in our present complex society only if we move ahead deliberately as previously mentioned. That means our reviews within government have to be intensive and to be productive the discussion will take time. Recent discussions have dealt in depth with component parts of the four objectives and with related aspects such as the discount rate, cost-sharing and programs to be covered.

I have confidence that the proposed principles and standards will be published in the near future in the Federal Register. There will be full opportunity for public review and comment before the Council takes final action and submits its recommendations to the President.

FIELD TESTS

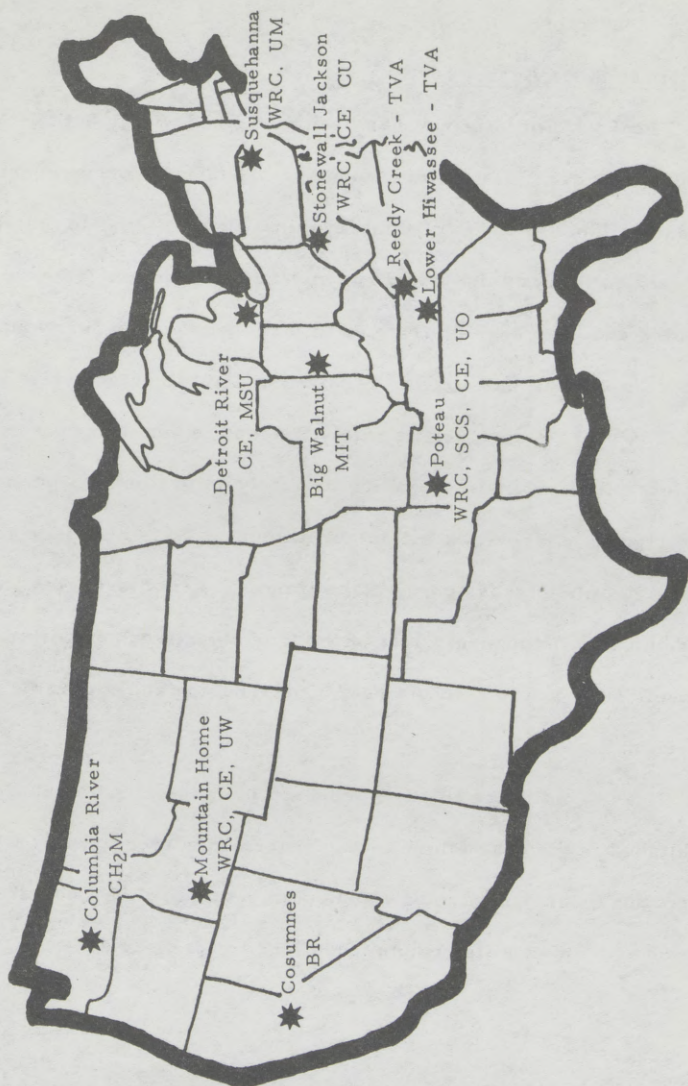


CHART NUMBER 1

OBJECTIVES

NATIONAL ECONOMIC DEVELOPMENT (NED)

- ★ Increase value of output of goods and services
- ★ Improve national economic efficiency

ENVIRONMENTAL QUALITY (EQ)

- ★ Protect or improve natural or cultural resources and ecological systems

QUALITY OF LIFE (QL)

- ★ Equitable distribution of real income, employment, population
- ★ Improve security of life and health
- ★ Improve educational, cultural and recreational opportunities
- ★ Contribute to national security

REGIONAL DEVELOPMENT (RD)

- ★ Increase regional income
- ★ Increase regional employment
- ★ Improve economic base, environment and social well-being

CHART NUMBER 2

- Schematic Diagram - System of Accounts

ACCOUNT	BENEFITS	COSTS	NET BENEFITS
NATIONAL ECONOMIC DEVELOPMENT	*	*	*
ENVIRONMENTAL QUALITY	*	*	*
QUALITY OF LIFE	*	*	*
REGIONAL DEVELOPMENT			
REGION 1	*	*	*
REGION 2	*	*	*
REST OF NATION	*	*	*

CHART NUMBER 3

Water Resources Council PLAN EFFECTS NED OBJECTIVE August 12, 1970		
BENEFICIAL	ADVERSE	NET
INCREASED OUTPUT EXTERNALITIES USE OF UNEMPLOYED RESOURCES	RESOURCES REQUIRED EXTERNALITIES DISPLACED RESOURCES	EFFECTS CAN BE NETTED

CHART NUMBER 4

Water Resources Council

August 12, 1970

PLAN EFFECTS E.Q. OBJECTIVES

BENEFICIAL	ADVERSE	NET
PROTECT AND IMPROVE NATURAL BEAUTY PRESERVE NATURAL AND CULTURAL SITES AND ECOLOGICAL SYSTEMS IMPROVE QUALITY OF WATER, LAND AND AIR EROSION CONTROL PRESERVE FREEDOM OF CHOICE CONCERNING IRREVERSIBLE EFFECTS	DESTROY NATURAL BEAUTY DESTROY NATURAL AND CULTURAL SITES AND ECOLOGICAL SYSTEMS REDUCE QUALITY OF WATER, LAND AND AIR INCREASED EROSION IRREVERSIBLE COMMITMENT PRECLUDING FUTURE CHOICE OF USE	GENERALLY EFFECTS CAN NOT BE NETTED

CHART NUMBER 5

Water Resources Council PLAN EFFECTS QL OBJECTIVE August 12, 1970		
BENEFICIAL	ADVERSE	NET
INCREASED REAL INCOME POPULATION DISTRIBUTION ENHANCE SECURITY, LIFE, HEALTH AND SAFETY IMPROVE ECONOMIC STABILITY PROVIDE EDUCATIONAL, CULTURAL AND RECREATIONAL OPPORTUNITIES CONTRIBUTE TO NATIONAL SECURITY BY PROVIDING RESERVE CAPACITIES IN WATER RESOURCE SYSTEMS	REDUCE REAL INCOME ADVERSE CONCENTRATION OF POPULATION INCREASE HAZARDS TO LIFE, HEALTH AND SAFETY ADVERSE EFFECTS ON ECONOMIC STABILITY ADVERSE EFFECTS ON CULTURAL, EDUCATIONAL AND RECREATIONAL OPPORTUNITIES ADVERSE EFFECTS ON NATIONAL SECURITY BY OVERLOADING WATER RESOURCE SYSTEMS	GENERALLY EFFECTS CAN NOT BE NETTED

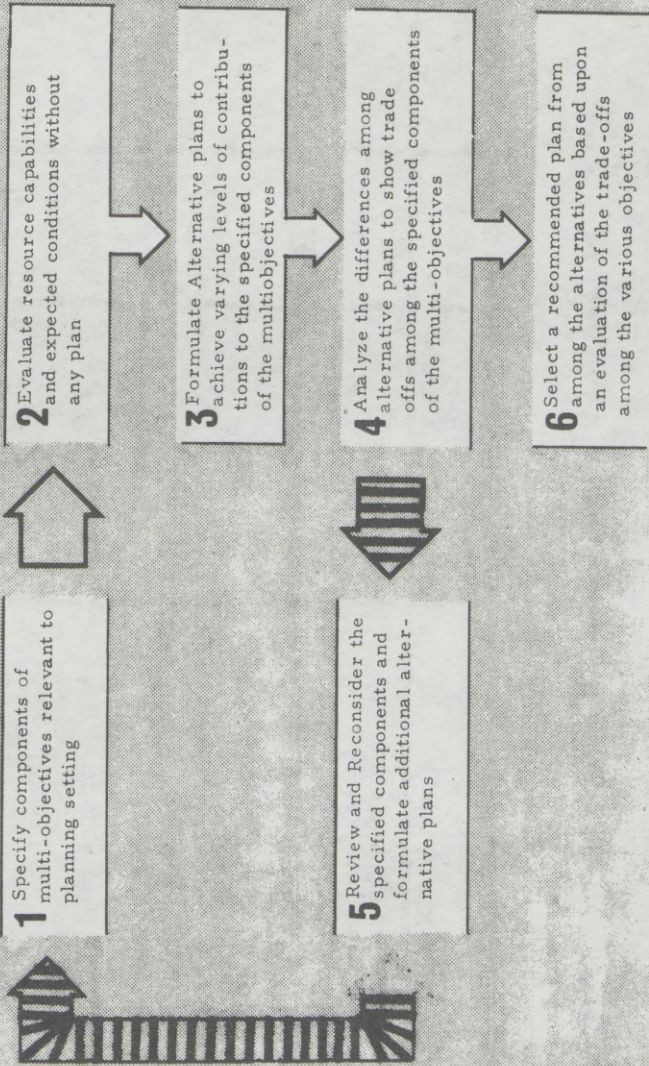
Water Resources Council PLAN EFFECTS RD OBJECTIVE		August 12, 1970	
BENEFICIAL	ADVERSE	NET	
INCREASED REGIONAL OUTPUTS EXTERNALITIES TO USERS RESIDING IN REGION USE OF UNEMPLOYED RESOURCES IN REGION ADDITIONAL NET INCOME FROM INDUCED ACTIVITIES INCREASED NUMBER AND/OR TYPE OF JOBS	RESOURCES CONTRIBUTED AND PAYMENTS BY REGION EXTERNALITIES TO USERS RE- SIDING IN REGION LOSS OF ASSISTANCE PAYMENTS FROM OUTSIDE REGION LOSS OF NET INCOME FROM DISPLACED ACTIVITIES LOSS IN NUMBER AND/OR TYPE OF JOBS	GENERALLY EFFECTS CAN BE NETTED	
IMPROVED REGIONAL ECONOMIC STABILITY ENHANCE REGIONAL ENVIRON- MENTAL QUALITY AND QUALITY OF LIFE	ADVERSE EFFECTS ON REGIONAL ECONOMIC STABILITY ADVERSE EFFECTS ON REGIONAL ENVIRONMENTAL QUALITY AND QUALITY OF LIFE	GENERALLY EFFECTS CAN NOT BE NETTED	

CHART NUMBER 7

Regional Accounting System

EFFECTS	REGION 1	REGION 2	REST OF NATION	NED
BENEFICIAL EFFECTS				
National Economic Development Effects	+800	+200	0	+1,000
Location Effects	+200	-150	-50	0
ADVERSE EFFECTS				
National Economic Development Effects	+200	+50	+350	+600
Location Effects	+150	-100	-50	0

The Planning Process



DISPLAY OF EFFECTS FOR ALTERNATIVE

PLAN A

OBJECTIVE	MEASURES OF EFFECTS
NED Beneficial Effects Adverse Effects Net Effects	12 12 0
EQ Beneficial Effects Adverse Effects	Channelize 3 Miles Stream
QL Beneficial Effects Adverse Effects	100-Year Flood Protection
RD Beneficial Effects (Income) Adverse Effects (Income) Net Effects	14 4 10

CHART NUMBER 10

DISPLAY OF EFFECTS FOR ALTERNATIVE

PLAN B

OBJECTIVE	MEASURES OF EFFECTS
NED Beneficial Effects Adverse Effects Net Effects	10 8 2
EQ Beneficial Effects Adverse Effects	500 - Acre Lake
QL Beneficial Effects Adverse Effects	50-Year Flood Protection
RD Beneficial Effects (Income) Adverse Effects (Income) Net Effects	16 2 14

CHART NUMBER 11

DISPLAY TRADEOFFS BETWEEN PAIRS OF ALTERNATIVE PLANS

OBJECTIVE	ALTERNATIVE PLAN B	ALTERNATIVE PLAN A	DIFFERENCE (A MINUS B)
NED			
Beneficial Effects	10	12	+2
Adverse Effects	8	12	+4
Net Effects	2	0	-2
EQ			
Beneficial Effects			Do Not Create Lake
Adverse Effects	500 Acre Lake	Channelize 3 Miles Stream	Channelize 3 Miles Stream
QL			
Beneficial Effects			Improved Flood
Adverse Effects	50-Year Flood Protection	100-Year Flood Protection	Protection
RD			
Beneficial Effects (Income)	16	14	-2
Adverse Effects (Income)	2	4	+2
Net Effects	14	10	-4

W.R.C. Should Establish Discount Rate For Planning

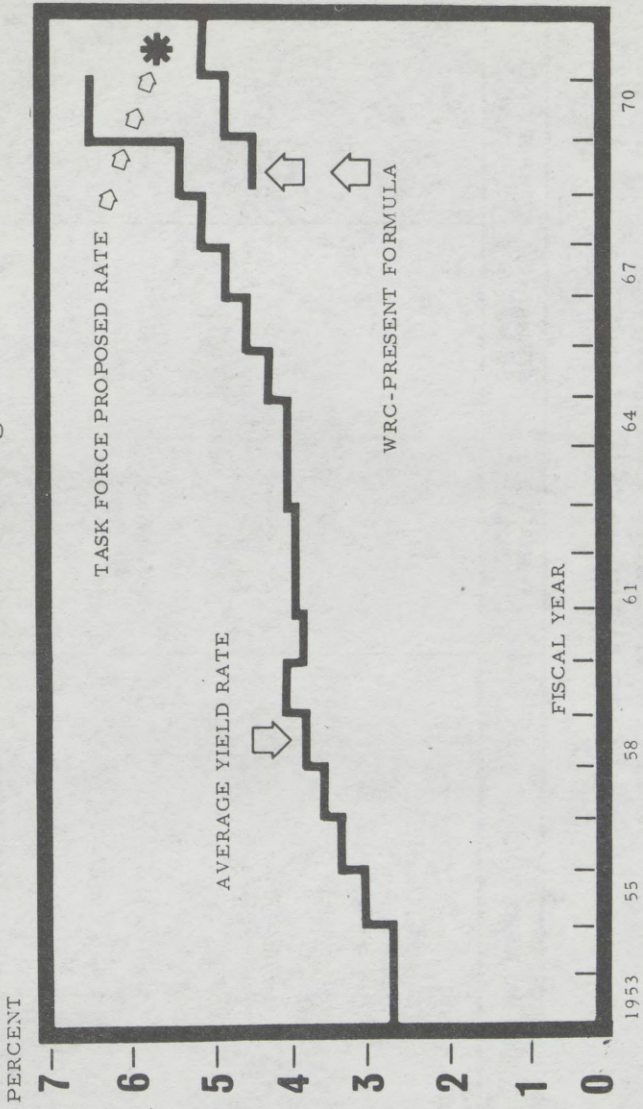


CHART NUMBER 13

Policy on Environmental Statements

The National Environmental Policy Act of 1969 (PL 91-190) under Section 102(2)(C), requires preparation of environmental statements. The policy of the Water Resources Council regarding such statements for framework studies and assessments, regional or river basin plans, and ongoing type 1 and type 2 comprehensive river basin studies was approved by the Council in February 1971.

Under the Council's policy, environmental statements will be prepared for each of the aforementioned studies. They will reflect the level of planning involved and address those environmental consideration and alternatives that are relevant to decision making at each level. Generally, this means that in the case of the framework studies and assessment and ongoing type 1 studies, the broadest level of planning, the environmental statements will be principally directed toward the alternative choices evaluated in the study which respond to the needs and the aspirations of the people. They will reflect the alternative parameters and assumptions upon which the planning was based, including, but not necessarily limited to, alternative assumptions regarding the level of future economic and population growth and environmental quality. In the case of regional or river basin plans and ongoing type 2 studies, the Council's policy provides that environmental statements will generally address alternative courses of action evaluated in planning for the use of the water and land resources of a region or river basin. This is the level of consideration

of alternatives at which the environmental issues and tradeoffs are most likely to be relevant to decision making.

The need for separate environmental statements called for by the Council's policy will be reviewed upon Presidential approval of revised planning Principles and Standards. The Principles and Standards for Planning Water and Land Resources, now being proposed by the Council, provide for full and systematic evaluation and consideration of environment effects.

Of course, as of this time, we have had no experience in implementation of this new policy, but our strong intent is to make the environmental statements as meaningful as possible for the comprehensive planning program recognizing the level of planning and related decision making involved. It is our intent that our policies and procedures not only recognize the specific procedural requirements under the Act but conform fully with the spirit and intent of the National Environmental Policy Act of 1969.

Federal-State-Local Cooperation

The general policy statement and specific provisions of the Act indicate that water and related land resource planning should include non-Federal parties. This intent to broaden resource planning activity to include all affected interests is implemented to a great extent by State participation in river basin commissions and by the planning grant program to the States.

To further implement the Act's intent a State Advisory Committee was established early in 1971. This Advisory Committee was formed by an agreement between the Interstate Conference on Water Problems and the Water Resources Council to provide the Council with State views and opinions. The Advisory Committee will (1) endeavor to express the viewpoints of all States and of water agencies within States, (2) consider and respond to specific issues at the initiative of either the Committee or the Council, and (3) provide an activity report at the end of its term which may be renewed for succeeding two-year terms.

The Act's statement of policy urges that water and related land resources management be carried out not only with the cooperation of Federal agencies and States but also with the cooperation of "local governments, individuals, corporations, business enterprises, and others concerned." Accordingly, efforts are being made to implement this policy by exploring the use of additional Advisory Committees to present the views of other segments of the public and private sectors. The mechanism for enlisting the cooperation and resolving differences of the development and environmental communities may very well turn out to be that of the Advisory Committee.

This year, in June, the Water Resources Council and the Interstate Conference on Water Problems, an agency of the Council of State Governments, are jointly sponsoring the fifth Conference of Federal and State Water Officials, to be held at Des Moines, Iowa, June 8-10, 1971. The

theme of the Conference is a timely one--"Public Involvement in Water and Related Land Resource Planning."

It will follow a format developed in previous Conferences, the most recent of which was held in Charleston, South Carolina, last summer. At that time, the participants met in plenary sessions and heard panel discussions and other speakers deal with the central topic, "Land and Water Issues of the Seventies."

Such Conferences are one means of Council efforts to bring about a deeper understanding between the Federal agencies and the States' planning and development counterparts. The idea of concentrating on one major topic and providing an opportunity to examine it from various points of view has been found to yield results in a better identification and understanding of problems and in turn leads to acceptable solutions.

The acceptability of water and related land resources programs in the future will be of particular concern to this year's Conference since it focuses on public involvements. Case studies will be reviewed, and workshops will enable participants to develop workable recommendations for the future.

A seminar sponsored jointly by the Water Resources Council and the Interstate Conference on Water Problems was held in February 1971, to review the Water Resources Planning Act's effectiveness. Extensive efforts were made to involve many different public and private interests

in this review. Various officials at all governmental levels, natural resources consultants and academics, and development and environmental communities of interest attended and actively participated in the review. Over 200 persons joined in evaluating past performance and in exploring future improvements in the Council, river basin commissions, and the State planning grant program.

Recommendations of the Seminar Panels were printed and distributed to meeting participants, news media, Council members, associates, and observers, the Chairmen and staff of key Congressional Committees, and river basin commission chairmen for their members. They include:

1. The structure of the Water Resources Council should be changed to provide a chairmanship which will increase the Council's influence in policy direction.
2. Funds for comprehensive planning should be appropriated to the Water Resources Council for transfer to all participating agencies.
3. The Water Resources Council should actively assist the States and river basin commissions in developing measures to effectively involve local and non-governmental entities and to assure opportunity for full citizen participation. Intrastate and regional organizations should also be involved.
4. States should participate more fully, especially in the development of basic study plans and in Level B (old type 2) plans. To

enhance State participation, actions by both the States and the Federal Government are required.

5. Title III fund authorization should be doubled and the 10-year funding limitation should be removed. Rules and Regulations need revision to permit greater flexibility in use of these funds.
6. The Water Resources Council should assist the States in developing consolidated planning grant requests and programs.
7. Land use should be included as a coordinated element in the comprehensive resource planning process and the artificial fragmentation of land, estuary, coastal zone, and water resources planning should be eliminated. The authorities and responsibilities of river basin commissions should be construed as applying to the above resource elements.
8. Reassessment of the resource planning process and institutions should be a continuing activity. Workshops of Federal, State and local interests are recommended for the purpose of evaluating planning efforts and to provide a forum for further recommendations.

The Council is actively pursuing the Seminar's recommendations.

As followup to the Seminar, meetings have been held with the development and environmental communities to see if a mechanism for enhancing the mutual cooperation of these interests and the Council can be developed. Further meetings are planned.

Flood Plain Management

Over the years there have developed a number of Federal, State, and local programs dealing in one way or another with the management of the Nation's flood plains. The Federal programs range from the construction of protective works to data collection and flood insurance. State and local programs in recent years have been, in the main, concerned with land use controls in the flood plains. The basic problem has been that these programs have not been unified or coordinated as a package in the specific flood plains.

The 1966 report, "A Unified National Program for Managing Flood Losses," published as House Document 465, recommended, among other things, that the several flood plain programs be strengthened and unified into a coherent manageable program. The report, however, did not specify how this should be accomplished.

Since the publication of HD 465 much work has been done to implement the recommendations of the report as they relate to Federal agency programs. In addition, the Flood Insurance Act of 1968 (PL 90-844) has provided a new dimension to flood plain management. Section 1302(c) of this Act states that the objectives of a Flood Insurance program should be integrally related to a unified national program for flood plain management, and that the President should transmit to the Congress for its consideration any further proposals for such a program.

At the direction of the Office of Management and Budget, the development of such a unified program that can focus these programs on specific flood plain problems is underway in the Council. The essential concern of this study is not to suggest more programs but to develop within existing programs and organizations a set of institutional arrangements that will bring together in the flood plain all of the programs and interests which can help in reducing flood losses.

To assist State and local governments in their flood plain management programs, the Council will publish in final form this summer, the first volume of a two-volume report on "Regulation of Flood Hazard Areas to Reduce Flood Losses." This report contains a detailed study of the legal aspects of State flood hazard regulation programs, and includes information, analysis, and draft statutes.

The actual research and drafting of the report was done under contract by the University of Wisconsin, and a number of Federal agencies contributed their expertise in its review and revision. In February 1970, a draft version of the report was distributed by the participating agencies to invite comment. Reaction to this review draft proved that there is considerable interest on the part of State and local governments to take action in this area and it confirmed that the report would meet a real need. The second volume of the report, now under preparation, will deal with regulation of coastal flood hazard areas and subdivision regulation. Publication of the second volume is some months off, but we expect that it too will be of great interest to States and localities.

Coastal Zone and Related Land Use Planning

Rapid development and indiscriminate use and abuse of our coastal zone has become of growing concern in the last few years. As a result, a number of the States are concentrating the use of Title III grant funds for water and related land resources planning in the coastal zone. Also, the New England River Basins Commission is working with the involved States to develop a program for the management of water and land resources in the coastal zone from the Merrimack River to Narragansett Bay. Included in this consideration will be protection of the ecological systems, marine resources utilization, water pollution control, flood and hurricane protection, navigation, estuaries, and wetlands management, and other factors. The Great Lakes Basin Commission has, as a part of its framework study, the determination of requirements for use of water and related land in the coastal zones of the Great Lakes.

Planning for the best use of our water and land resources, not only in the coastal zone but throughout the country, has emerged as a significant need. The Title III grant program assists the States in planning for use of their respective water resources and the land directly affected by water resource development. However, the scope of this program as well as the funds provided therefor are far from adequate to plan for all our land use, integrated with the water resources, to assure enhancement of, or least adverse effect on, the environment and the best use of these resources.

Wild and Scenic Rivers

Reports of the Departments of Agriculture and Interior on proposals for wild, scenic, and recreational rivers, prepared under PL 90-542, are transmitted to the Water Resources Council for review to insure coordination with the Water Resources Planning Act. The Council has recently completed reviews on the Upper Iowa River, Iowa, and the Suwannee River, Georgia and Florida. Both proposals were found to be compatible with comprehensive basin plans and the Council concurred in their designation as wild and scenic rivers.

A policy has been recently established for review of wild, scenic, and recreational river proposals. The policy provides for river basin commissions to prepare and coordinate comments on these proposals in commission areas.

River Basin Commissions

On January 13, 1971, President Nixon signed Executive Order 11587 which established the fifth river basin commission under Title II of the Water Resources Planning Act. This new commission includes all or parts of 11 States in the Ohio River Basin. Mr. Fred E. Morr was appointed Chairman. The Commission held its Organizational Meeting in Cincinnati, Ohio, March 24, 1971, at which it agreed upon a budget for Fiscal Year 1972, adopted bylaws, concurred that the Commission office be located in Cincinnati, and provided authority for the Chairman to recruit

staff. With the establishment of the Ohio River Basin Commission, 27 States are participating in commission activities (see map - River Basin Commissions). The aggregate population of these States exceeds one-half the population of the United States.

Two additional river basin commissions are being given serious consideration by States in their respective area. All of the Governors have concurred in the establishment of the proposed Upper Mississippi River Basin Commission and a draft of the Executive Order is now being circulated for comment by the Governors. It is expected that this Commission may be established by summer. In a proposed Missouri River Basin Commission, recent discussions with several of the Governors in this area indicate that a majority of States are now in favor of it. Confirmation of this is now being undertaken by correspondence among the Governors within the Basin.

The Souris-Red-Rainy River Basins Commission, established in 1967, has a termination date of June 30, 1972, unless a recommendation for extension is made by both the State and the Council, and the Executive Order amended by the President. Recently, the Governors of Minnesota and North Dakota have formally requested that the life of this Commission be extended, possibly on a revised basis. The comprehensive joint plan for the Red River portion of this Commission area will be completed by June 30, 1972. The Governors and the Commission feel that during the first year of extension a decision should be made on its long-range future, a

plan of survey developed for Devils Lake area, and an agreement reached as to the type of institutional arrangement required for implementing and keeping up to date the comprehensive joint plan. States, the Commission, and the Council are cooperatively reviewing this matter.

The Great Lakes Basin Commission will complete the framework part of its comprehensive joint study with the money provided for Fiscal Year 1972. In the preparation of this framework study, the need for a systematic analysis of physical, chemical, and biological data of all the Great Lakes Basin has become apparent. Many fragmented data gathering efforts and analyses are currently going on in the Basin. All of these efforts, together with data in areas not covered, need to be brought together in a limnological systems analysis model in which the effects of specific actions on the Lakes may be evaluated. This includes activities at all levels of government and by private interests in order to secure for the people of the Great Lakes area and the Nation the full range of uses and benefits which may be provided by balanced conservation and development of the Great Lakes resources. This special study will assist local, State, Federal, and international governmental units in the development of the optimum regional action programs. A full and carefully coordinated participation by the States and various Federal agencies will be pursued in accomplishing this study. The total cost is estimated at \$2,088,000 in

Federal funds and \$172,500 of State funds for the four-year duration of the study. The Great Lakes Basin Commission would be the monitoring agency. Within the past 10 days, Secretary of State William Rogers has requested membership for the State Department on the Commission to accomplish several things which are stated by the Secretary as follows:

"While the existing Executive Order offers means for the Commission to come to the Department of State with problems which it encounters which have international implications, it is our feeling that it does not offer the same opportunity to the Department to bring to the attention of the Commission existing and potential problems in our relations with Canada involving the waters of the Great Lakes. We feel that the Commission can serve a useful function in assisting this Department with numerous problems which arise in the Great Lakes Basin, and that direct Department representation would facilitate our contacts with the Commission.

"During the past year, as you know, we have been engaged in discussions with Canada concerning pollution of the Great Lakes. Mr. Frederick O. Rouse, the Chairman of the Great Lakes Basin Commission, has served as a member of the Canada-U. S. Joint Working Group on Great Lakes Pollution, and has been of great assistance, especially in coordinating the efforts of the Working Group with the governments of the eight States of the Great Lakes Basin. Representatives of the Department have dealt extensively with Mr. Rouse in this work. We believe that, had the Department been represented on the Great Lakes Basin Commission, we would

have been more immediately aware of some of the problems faced by the States in this area, and would have been able to resolve more quickly and with greater understanding many of the problems which Mr. Rouse brought to out attention."

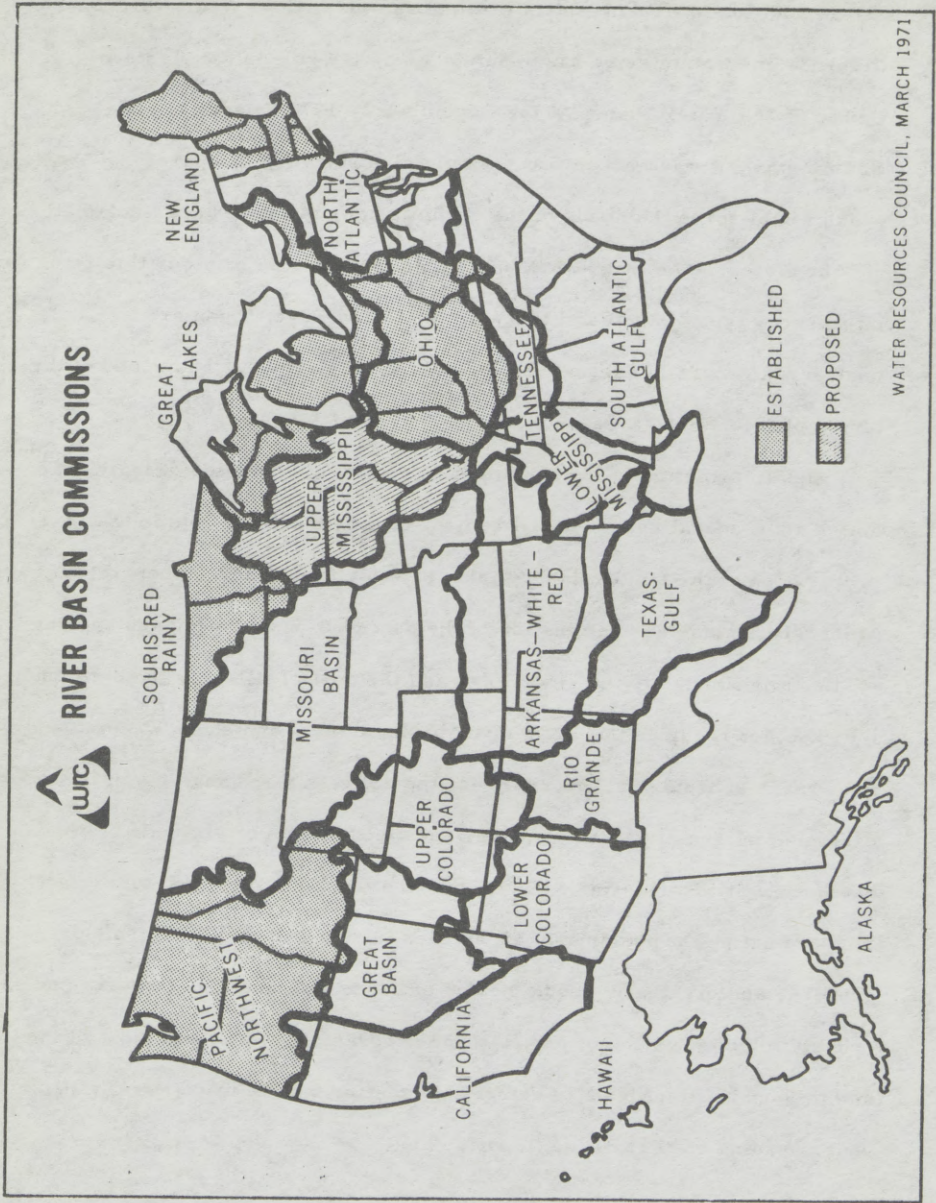
The New England River Basins Commission has initiated a joint Federal-State investigation for the development of water and related land resources of Southeastern New England covering the coastal regions of Massachusetts and Rhode Island and tributary rivers. A plan of study for similar joint Federal-State investigation under the leadership of this Commission is just getting underway for the Long Island Sound. The type 2 study on the Connecticut River has been completed by the Coordinating Committee. The New England River Basins Commission is now working with citizen groups and State, Federal, Interstate, and regional agencies in developing an implementing arrangement for the most effective intergovernmental and public-private cooperation for management of the valley resources. The Commission is also preparing its comments on the type 2 study.

Several special studies that have been or are being made by the Commission, including a power-siting study which resulted in a published report on "Laws and Procedures for Power Plant Siting in New England," and a flood plain management study, which identifies the wide range of natural resource values of flood plain land and seeks to strengthen regulatory programs in each of the States.

In addition to working in its framework study, the Pacific Northwest River Basins Commission has assumed an active role in the Western United States Water Plan. At the December 2, 1970, meeting of the Commission, it was agreed that a single plan should be prepared which would serve the needs of the Commission, the Bureau of Reclamation, and the States. The framework study will serve as the base for this plan. Interagency type 2 studies of the Willamette and Puget Sound are considered generally adequate to satisfy the requirements and scope of this single plan for these areas.

Also information in many completed and ongoing studies of individual States and Federal agencies will be used to the extent possible in the preparation of the single plan. A plan of study is now under preparation, which will include an examination of the contributions existing and ongoing studies might make to the single plan and the cost of filling in the deficiencies.

The Act requires that each river basin commission shall "recommend long-range schedules of priorities for the collection and analysis of basic data and for investigation, planning, and construction of projects." This has been a major undertaking in each of the four commissions. Its effect in coordinating the planning of all entities involved in the Commission is growing, and eventually should be one of the prime functions in assuming orderly implementation of projects and programs that will come out of the comprehensive joint plan. Further information on this matter is given under heading of "Priorities Reports."



The items indicated in the foregoing paragraphs are only a sample of activities to illustrate the growing significance of commissions in bringing together all interests in water and land in their respective areas to assure better formulation of alternative plans in utilizing the resources in the area. Each of the four commissions operating in Fiscal Year 1970 have published annual reports for that year, which were submitted to the Congress on March 5, 1971.

Priorities Report

The Council, in cooperation with the river basin commissions, is in the process of revising Guidelines to Assist River Basin Commissions in Preparation of Long-Range Schedules of Priorities. The Priorities Report is intended to clearly and concisely show, in one summary document, a river basin commission's judgment concerning (1) what programs are needed throughout the commission area, (2) when these programs should be implemented and (3) why the programs are required at the recommended time.

Experience and revised approaches will make these reports of growing value as a coordination tool. They will provide a common base of information to the many different public and private decision makers whose actions the river basin commissions and the Council are charged with coordinating. Priority recommendations will be based on the commission's comprehensive planning where possible. The extent and multiobjective structure of supporting information will insure that critical value judgments, which should

rightly be reserved to the Congress and other policy makers, will in fact be so reserved.

The process of preparing a Priorities Report will provide (1) a careful rethinking on a periodic basis of the river basin commission area's total water and related land resource problems and opportunities and (2) an opportunity for the involvement of the various public and private interests whose cooperation is required.

This year three of the river basin commissions are not submitting priority reports because little change has occurred since their last report. The Pacific Northwest River Basins Commission has just completed its report for this year and it is now being printed.

Susquehanna River Basin Compact Commission

The Council had an active leadership role in formulating the terms of Federal participation in the recently enacted Susquehanna River Basin Compact (PL 91-575). This compact, which includes both the Basin States and the Federal Government as signatories, establishes the Susquehanna River Basin Compact Commission as a joint Federal-State body and grants it a broad range of powers to plan, regulate and manage the water resources of the Basin.

The essential tasks of the Council were to coordinate the views of the various Federal agencies which would be involved in the operations of the Commission and to develop a set of Federal reservations to the compact that would permit the Commission to function as an effective vehicle of

intergovernmental cooperation. Specifically, this was a job of defining in some detail the Federal relationship to the Compact Commission so that Federal functions would fit harmoniously into the total joint effort. The Council was successful in bringing the Federal agencies involved into an agreed upon position on the reservations and in negotiating these with the States involved so that we were able to recommend to the Congress a set of reservations to the compact that were acceptable with only minor exceptions to both the Federal and State interests.

The Susquehanna Commission is now in the process of organizing. We believe that the Council will be able to provide useful assistance in connection with the continuing Federal representation on the Commission.

Planning Grant Program

The Title III grant program has provided a total of \$12.5 million between Fiscal Year 1967 and Fiscal Year 1971, to assist the States in planning for water and related land resources. All 50 States, Puerto Rico, and the District of Columbia are now participating in the cooperative program. The Virgin Islands, the only remaining potential participant, has indicated an interest in applying for a grant under the program.

The Water Resources Planning Act was enacted to encourage the conservation, development and utilization of water and related land resources of the United States. With the impetus provided by the Title III grant program, the States have (1) greatly increased their participation in Federal-State planning efforts (2) recruited and trained competent additions to their

staffs (3) accelerated Statewide planning efforts, thereby assuming a larger share of water resources development programs.

In 1967, the first year in which grants were made to States, 142 professional State staff were paid in whole or in part from Title III or State matching funds. Each year the program has shown an increase in planning personnel and in 1971 some 533 technical staff are engaged in approved program planning activities. In some States, such as Idaho and North Carolina, all the planning staff are associated with the grant program while in others, like California, New York, and Texas, only a few are engaged in grant program activities. In a few other cases, due to State restrictions or other difficulties, Federal funds are not used to pay State employees and grant allotments are mainly used for professional consulting services.

The addition to State staffs and the training of competent personnel is considered effective fulfillment of one of the primary purposes of the Title III grant program.

State expenditures for water and related land resources planning have also increased. In FY 1971, the States show a \$16,800,000 increase in planning effort over what was spent in the base period year of 1965. The States set aside nearly \$8,000,000 of this increase to match Federal Title III grants, but requested only \$4,400,000. Many States limit their requests to pre-estimated allotments, indicating they could use substantially larger grants if Federal funds were available.

Several examples of the effectiveness of the grant program are:

1. In Florida, the scheduled completion of a State plan for development and management of water and related land resources has been moved forward to 1975 from the 1980 date that would have been the target without the Title III program. Florida is divided into five planning areas and reports on two of these areas have been completed under the accelerated planning program. Work on the other three areas and on the State water plan is now underway.
2. Mississippi, because of specific State Legislative appropriation increases to match Title III amounts, has been able to enlarge its central technical staff and thereby has become a full partner in the many Federal-State planning efforts going on in the State. Major emphasis is now being given to the Lower Mississippi Comprehensive Framework Study.
3. The State of Idaho will expend some \$574,000 in Fiscal Year 1971 for Statewide water and related land resources planning; in Fiscal Year 1965, practically nothing was spent for this purpose. The increased funding has enabled the development of a well-rounded staff (16 professionals as of 6/30/70) and active participation as a member of the Pacific Northwest River Basins Commission. Major inputs are being made into the Columbia-North Pacific and the Great Basin Framework Studies in addition to studies required for intrastate planning.

4. The State of Maine has increased its State input to planning from \$20,000 in 1965 to an estimated \$250,000 in Fiscal Year 1971. Significant executive and legislative actions have been taken in recent years relating to conservation and the environment, e.g., executive orders covering "State Government Reorganization," and "Cooperative Action to Protect Maine's Coastal Zone." Pollution abatement and coastal development are assigned top priority in the State Action Programs scheduled through 1975. Title III is a great help for Maine in maintaining an appropriate rate of planning to meet its goal.

Consolidated Grants

Almost 2 years ago the Governor of Ohio transmitted to the Secretary of Housing and Urban Development an application for a grant of 701 funds for over \$2 million to be expended over a 2-1/2 to 3 year period. The proposed planning program included areas of responsibility which are normally funded by agencies other than HUD, namely the Bureau of Outdoor Recreation, the Federal Water Quality Administration in the Department of Interior, the Economic Development Administration in the Department of Commerce, the Farmers Home Administration in the Department of Agriculture, the Solid Waste Program in the Department of Health, Education, and Welfare, and the coordination activities normally covered by the Water Resources Council. The Secretary of HUD transmitted Governor Rhodes' letter and application to the Water Resources Council for review. After discussion between Council and the Ohio Department of

Natural Resources, a final application dated January 1970, was submitted by Ohio to the Council. The final application cleared the regional offices of all concerned agencies and was approved by the Council of Members in June, 1970. Two meetings were subsequently held in Ohio among representatives of all Federal & State agencies involved. At the second meeting in October, 1970, satisfaction was expressed for the consolidated approach by all participants.

The Council believes the consolidated grant application concept is workable and will encourage its use where appropriate. The Ohio experience with the modifications now underway has been valuable as a working model; a number of States have indicated they desire to use this approach in their FY 1972 applications.

National Water Commission

The Directors and the Senior Staff Members of the National Water Commission and the Water Resources Council have been meeting on a periodic basis to discuss interrelationships of our respective programs; and last fall the Director of the Council met with the Commission members. As the Commission completes its reports, they will be submitted to the Water Resources Council for review and comment in accordance with the National Water Commission Act. Recently, the Council commented on Interim Report 2 covering the Commission's activities during 1970. This report provides information on the scope of the 22 studies underway, and progresses to date. The Council expressed concern in regard to the

Commission's approach to interbasin transfers to provide supplemental water supplies in water-short areas. It appeared from the report that the interbasin transfer problem would be considered in only two of the studies, which might be insufficient for development of a well substantiated national policy recommendation of this subject. Subsequent meetings with the National Water Commission explored this matter in considerable depth. In regard to economic and population projections for its report, the Commission is using a series of forecast procedures which could be useful to the Council in preparing its future national assessment.

The Council will continue to keep the Commission informed in a timely manner of its policy and program developments.

International Activity of Water Resources Council

Mr. Christian A. Herter, Jr., Special Assistant to the Secretary of State, has requested the Water Resources Council to coordinate the input of the United States into the Water Problems Committee for the Economic Commission for Europe (ECE) and the Water Management Research Group of the Organization for Economic Cooperation and Development (OECD). In order to assure that the most qualified representation from the United States participates in the international programs being pursued by these committees, an Advisory Committee has been appointed by the Water Resources Council. This permits all of the member agencies to be aware of the international interest in water resources planning and provide meaningful information and participation in meetings that assist in resolving international problems.

In July 1970, the Department of State and the Water Resources Council were hosts to the United States part of the North American meeting of the OECD. The Council assisted in arranging for case studies discussing the United States approach to a series of water resource management problems that had international significance. The Canadians arranged for similar participation for the Canadian part of this meeting. The OECD is publishing the case study presentations in one volume, with a view to worldwide distribution.

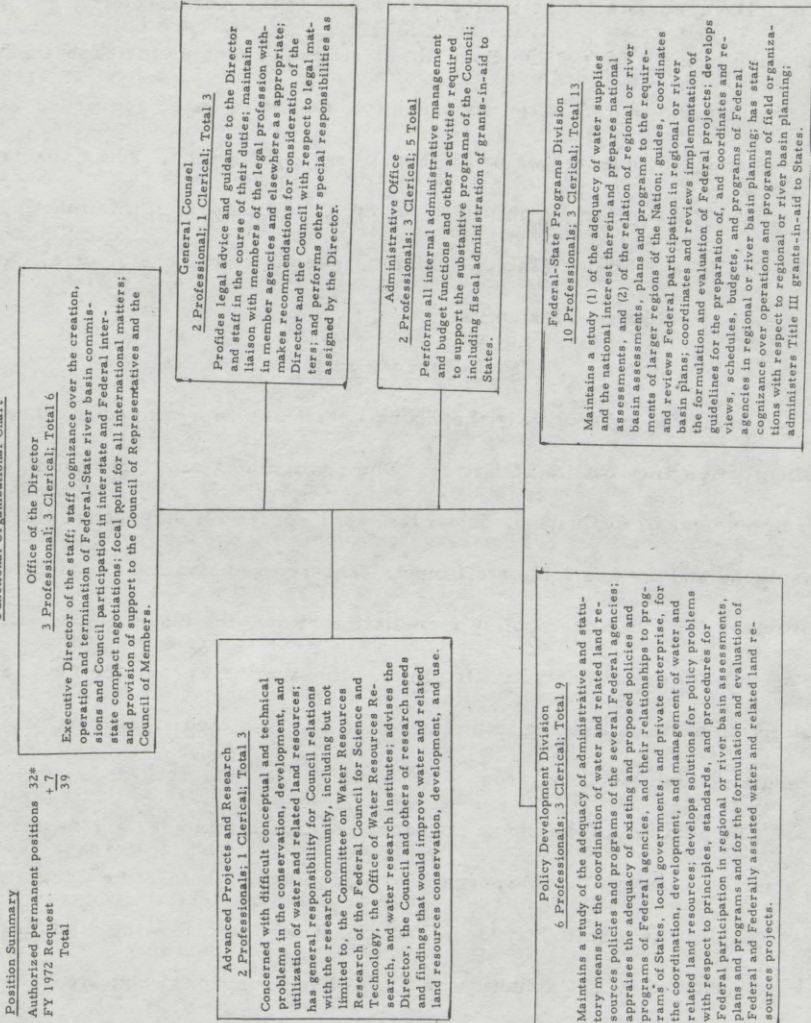
Staff Reorganization

During the current year the Council staff was reorganized to more effectively carry out its activities. The realignment of effort results from an overall evaluation, begun last year, of the total responsibilities assigned and the available staff input. The revised structure basically provides for a balanced policy formulation effort, the placement of all Federal-State planning activities in one division, and provision for undivided attention to be paid to the implementation of urgent and significant projects requiring high level analyses.

The addition of the seven positions requested this year are required to permit an improved staff approach to issues placed before the Council.

Table D is a Staff Functional Organization Chart showing also the distribution of staff, including the 7 additional positions requested.

WATER RESOURCES COUNCIL
Functional Organizational Chart



* Plus 6 River Basin Chairmen

TABLE D

Coordination Handbook

The important coordination function of the Council requires sophisticated communication. To achieve this, all water and related land resources planning agencies must at all times know how to reach each other. Accordingly, in 1969, the Council issued its first Handbook for Coordination of Planning Studies and Reports. We are now in the process of revising this information for reissuance this summer. The material will be revised in two parts as follows:

1. Coordination procedures will be detailed in one publication which will include a time table for review of plans and studies. The procedures will require review at the Washington level and at the regional, State, and local levels to achieve the complete coordination that is required. The new requirements of the Council on Environmental Quality and of Budget Circular A-95 will also be incorporated.
2. The second part is to be issued in looseleaf form so that hereafter it may be kept current at all times. Agencies represented in Council activities are described, and maps depicting the various regional boundaries and jurisdictions are included.

Senator JORDAN. The existing law contains ceilings on annual appropriations, \$500,000 for the Council's administrative work under title I and \$400,000 for the administration of title III, a total of \$900,000. Now, I understand by your testimony that you are requesting that these ceilings be removed?

Mr. MAUGHAN. That is correct, Senator Jordan.

Senator JORDAN. Why?

Mr. MAUGHAN. Primarily because the Council's activities have undergone changes, one of which is that on the basis of experience we are moving toward central management of interagency studies. This means providing management funds through the Council instead of to the participating agencies. Our activities require a flexible approach and we think that we could operate through the appropriation cycle to stay within whatever is reasonable as far as the Government is concerned.

Senator JORDAN. Well, if the committee should elect to continue to impose ceilings on these two categories, how much of an increase would you think you would have to have?

Mr. MAUGHAN. Well, we have given that some thought and so that we would not have to be back too quickly before you in case these other things pan out the way we are projecting them, we think that the minimum would be \$1,800,000, but we would like to have the present two ceilings combined within one ceiling.

Senator JORDAN. You think it would be twice as high as your presently imposed ceiling?

Mr. MAUGHAN. Yes. As I say, because of some of these new factors that have been agreed to by the Council in its new policy statement, rather than having each of the agencies budget for the management of some of these studies, we are budgeting that money as a council item for central management. It does not increase the cost of studies, but it increases the funding through the Council.

Senator JORDAN. Are you not getting top heavy in administration in proportion to the amount of money that goes out into the field for studies?

Mr. MAUGHAN. Well, this I think I need to clarify. Out of the budget request this year much of the increase goes to the field. It is just handled through our Council. Some of the money will go to the Pacific Northwest River Basin Commission, some will go to the New England River Basin Commission, but it is funded through the Council. We also have \$100,000 to renew our work on the national assessment and that would go out in contracts. That would not be in salaries.

Senator JORDAN. The removal of these ceilings would not come out of funds that would otherwise be allocated for field work and research?

Mr. MAUGHAN. Only to the extent of the management of the studies. The actual conduct of the studies would still be done by the agencies, just as it has been in the past.

Senator JORDAN. But do you propose to do a second national assessment?

Mr. MAUGHAN. We certainly do.

Senator JORDAN. When?

Mr. MAUGHAN. Our present schedule is to publish the next report in 1975 and then republish it every 5 years.

Senator JORDAN. Do you not get some funds in from areas besides the amount that is appropriated to the Federal level?

Mr. MAUGHAN. Yes, the first assessment that was published was put together with State and Federal agency help almost exclusively. Under our present plan we need funds for the management of the work and the development of new methodology. We are asking for \$100,000 in this budget.

Senator JORDAN. How much was the first assessment that you did?

Mr. MAUGHAN. How much did it cost?

Senator JORDAN. Yes.

Mr. MAUGHAN. It was before my time at the Council. I have heard only estimates of that cost, as almost all of the assessment was done without direct appropriation. As far as the cost to the Water Resources Council, it was quite minimal. There were only about two people working full time on it. I would have to furnish you the cost data. The rest of it came from the willingness of agencies and States to help us out.

Senator JORDAN. That is all I have, Mr. Chairman; thank you.

Mr. MAUGHAN. Thank you very much.

Senator ANDERSON. Those were some good questions. How long will it take to have a complete record on this?

Mr. MAUGHAN. We could do that within 2 or 3 days—by Monday, on anything you need.

Senator ANDERSON. Well, that is fine. We appreciate it a whole lot. Is there anything else?

Senator JORDAN. I have nothing.

Senator ANDERSON. Thank you very much for your appearance here.

Mr. MAUGHAN. Thank you, Mr. Chairman.

Senator ANDERSON. The hearing is concluded.

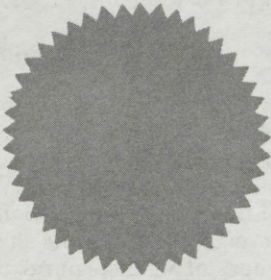
(Whereupon, at 10:07 a.m., the hearing was concluded.)

(The material referred to follows:)

ESTIMATED COST OF THE FIRST NATIONAL ASSESSMENT PUBLISHED IN 1968

NOTE.—The first national assessment was based on readily available data and very limited analysis. The following estimate does not include costs for the OBERS national and regional projections, base data, and review by the Planning Committee and the Water Resources Council.

	1967-1968 dollars
Agriculture.....	95,000
Army.....	107,000
Commerce.....	17,000
Federal Power Commission.....	23,000
Health, Education, and Welfare.....	21,000
Housing and Urban Development.....	3,000
Interior.....	142,000
Transportation.....	15,000
Tennessee Valley Authority.....	9,000
River Basin Commissions.....	8,000
Cooperating States.....	70,000
Water Resources Council.....	90,000
Total.....	600,000



A POLICY
STATEMENT

*Water and Related
Land Resources
Planning*

WATER RESOURCES COUNCIL
Washington D.C.
July 22, 1970

PREFACE

The Council's first National Assessment was completed in November 1968. Three of twenty-five studies initiated during the eight-year history of the comprehensive water and related land resources planning program have been completed and most of the remaining are nearing completion. Experience gained in the development, review and reception of the Assessment and comprehensive studies established the need to strengthen water and related land resources planning programs.

Objectives of the new policy are to:

1. Establish levels instead of types of planning, and to clearly interrelate the levels.
2. Upgrade Federal-State-Local coordination and communication.
3. Strengthen study management by placing authority and responsibility in a single individual reporting to the Council or a river basin commission, rather than placing such responsibility in a committee.

Approval and Effective Date

This Policy Statement, approved by the Council of Members, is effective July 22, 1970, and supersedes and replaces previous statements on the subject.

Related and Subsequent Efforts

The Council's Special Task Force on Evaluation Procedures is nearing completion of its work. Generally, this Policy Statement provides the "what" and the Special Task Force effort will provide the "how".

There will be issued guidelines and handbooks to assist in the implementation of the Water and Related Land Resources Planning Policy Statement. These will include plan of study, management, budgeting, coordinating and reporting requirements.

July 22, 1970

WATER RESOURCES COUNCIL

WATER AND RELATED LAND RESOURCES PLANNING

I. National Policy

The Congress declared in the Water Resources Planning Act (P.L. 89-80) a policy to encourage the conservation, development, and utilization of water and related land resources of the United States on a comprehensive and coordinated basis by all levels of government and non-government entities and individuals.

II. Objectives of Planning

Broadly, the objectives are to provide a guide for Federal, State and local interests to conserve, develop and utilize their water and related land resources in an efficient and timely manner. Further, such planning should provide a sound basis for rational, well considered decisions among alternative or competing uses of these resources—the meeting of needs and desires of people which includes the improvement in the quality of the environment, the enhancement of national economic development, the betterment in the quality of life, and the stimulation of regional development.

Another major objective of the planning effort is the achievement of joint plans or programs. To accomplish this end, all interests, Federal, State, local and private, must be involved from the beginning in the planning effort to identify as many alternatives as possible. In the process of identifying alternatives, consideration must be given to all means of meeting the needs and desires of people, whether they be development or non-development, or whether they be capable of implementation at the Federal, State or local level.

The planning process shall identify the responsible entity for implementing the separable aspects of the plan or program and how each such action taken individually relates to other pieces of the total picture. Finally, to be successful, the plan or program must have wide public acceptance.

III. Planning Method

To achieve the National Policy and objectives of water and related land resources planning, methods must be updated and made responsive to changing needs and desires of people.

The method described herein continues implementation of directions to the Water Resources Council in the Water Resources Planning Act (P. L. 89-80) through the preparation of plans for major regions of the country; maintaining a continuing study and preparing a framework or an assessment of the adequacy of supplies of water necessary to meet the water requirements in each water resource region; maintaining a continuing study of the relation of regional or river basin plans and programs to the requirements of larger regions of the Nation. It leads from a broad national view of frameworks and assessments to detailed regional consideration of specific problems or issues. Each step of the process may disclose the need for special studies (basic data collection and analysis, etc.) which shall be separately programmed and accomplished by the appropriate Federal, State or local agency. As each element of the program progresses, the experience gained will be fed back to define and refine ongoing and future elements of the program.

The process is designed to meet needs and desires which are not already being met or assured of being met by projects or programs in very advanced stages of implementation. The impact of programs to meet short range needs and desires on resource use shall be carefully evaluated so that irreversible actions proposed which would preclude meeting longer term needs and desires are thoroughly considered before final decisions are reached.

A. Framework Studies and Assessments

Framework studies and assessments are merged into the first and broadest level of planning. They are the evaluation or appraisal on a broad basis of the needs and desires of people for the conservation, development and utilization of water and related land resources, and will identify regions (hydrologic, political, economic, etc.) with complex problems which require more detailed investigations and analyses, and may recommend specific implementation plans and programs in areas not requiring further study. They will consider Federal, State and local means and will be multiobjective in nature.

These studies will not involve basic data collection, cost estimating, or detailed plan formulation.

The National Assessment will give a general appraisal of overall national needs for water-related goods and services based on correlated projections of population and economic activity in each region of the Nation (i. e. updated sets of OBERS projections). The process will be a continuing study reported every five years and will be based upon and serve as a national constraint to regional framework studies which should be kept viable by updating.

Updated Type 1 framework studies or their equivalent will give a continuing appraisal of overall regional needs based on more detailed projections of population and economic activity in the area, and upon emerging influences relating to total environmental considerations. They will be prepared and revised as necessary by River Basin Commissions or WRC Coordinating Committees where required to contribute to the National Assessment. In regions of the country where Type 1 framework studies have not been made, framework studies may be undertaken on a reduced scale.

B. Regional or River Basin Plans

A regional (political, economic, etc.) or river basin plan (hydrologic region) is a preliminary or reconnaissance level water and related land plan for a selected area. These are prepared to resolve complex long-range problems identified by framework studies and the National Assessment and will therefore vary widely in scope and detail; will focus on middle term (15 to 25 years) needs and desires; will involve Federal, State and local interests in plan development; and will identify and recommend action plans and programs to be pursued by individual Federal, State and local entities.

They will be programmed only where problems are interdisciplinary and of such complexity that an intermediate planning step is needed between framework and implementation level studies.

Regional or river basin plans may be developed through Federal-State water and related land studies involving interested State and Federal agencies and through cooperative, comprehensive studies between individual State and Federal agencies. Such plans will be prepared by River Basin Commissions in their areas of jurisdiction. The size and limits of the region will depend on such considerations as the interrelationship of the problems, and the possibilities for effective plan implementation. Appropriate regions include river basins, sub-basins; one or more States or political subdivisions thereof; economic regions; demographically significant areas; etc.

The plans will provide a more detailed interpretation of national and regional projections; identify alternative methods and programs; identify alternative projects and uses of water and related land resources; include multipurpose considerations in each project or program; and evaluate the impacts of both proposed land uses and projects on the environment. Beneficial and adverse effects will be determined only to the extent necessary to insure selection of the proper alternatives.

The programs or projects recommended in the plan must recognize and be based on reasonable assumptions of investment capabilities of agencies designated to carry out such programs or projects, whether such agencies be Federal, State or local. Alternative levels of investment and their impacts may be shown where justified.

While primarily focusing on middle term needs and desires, those plan elements identified in the long-range portion of the plan will serve as a guide for future development and will also give an indication as to the magnitude of the program required to meet long-range needs and desires.

Regional or river basin plans should generally be completed within three years.

C. Implementation Studies

Implementation studies are program or project feasibility studies generally undertaken by a single Federal, State or local entity for the purpose of authorization or development of plan implementation. These studies are conducted under normal Federal, State or local agency responsibilities and authorities, and implement findings, conclusions and recommendations of assessments and regional plans found needed in the next 10 to 15 years.

Implementation studies encompass the broad spectrum from preservation to full development, and lead to administrative, legal, or other non-development action programs, to structural meeting of needs and desires, and combinations thereof.

Implementation study plan formulation includes multipurpose multiobjective considerations, benefit and cost determinations including all intangible aspects, and cost allocation, cost sharing and repayment analysis. Where implementation studies are initiated from a source other than a regional plan recommendation, the study will be expanded

to show the present and anticipated relationship of the proposal to alternative methods and means of meeting the needs and desires of people and to other present and anticipated water and related land programs in the basin.

Implementation studies stemming from regional plans should be completed within two years.

IV. Management of Multi-Agency Studies

Multi-agency water and related land resources planning shall be performed under the guidance of the Water Resources Council. Study leaders shall be provided or designated by River Basin Commissions (in their area) or by the Council for framework studies, the National Assessment and multi-agency regional or river basin plans. Study leaders shall have responsibility and authority for the conduct of framework studies and regional plans, and shall be chairmen of parent committees or groups established to develop such assessments and plans.

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