It is no longer possible in any area of the United States to formulate water resources plans for single purpose projects as has been done in past years. No longer can one of our greatest natural resources, water, be used solely for navigation, power generation, irrigation, or controlled for reducing floods. This resource must now serve a multitude of purposes in our society.

Determining the present status of our water resources, what the future requirements will be, how to plan for these future needs, and implementation of these plans represents a major undertaking of local, State, and Federal authorities having interests in this field. In the Pacific Northwest, the Willamette Basin Task Force, acting under the auspices of the Columbia Basin Inter-Agency Committee, has been created to provide the coordinating mechanism for the prosecution of a comprehensive study for the management and development of the water and related land resources of the Willamette River Basin. This study is presently underway.
In this thesis, information was collected from individuals associated with the Task Force, from minutes of meetings, and from other publications not readily available, to provide a single document giving the organization and objectives of the Task Force. The National comprehensive planning mechanism was studied to provide background information relating to the evolution of the Task Force and its operation.

Water quality control is one of the areas of investigation of the Willamette Basin Task Force. It is directly related to and influenced by the several other multiple-purpose uses of the basin's water resources. It is this aspect of the comprehensive planning mechanism that has been considered in this thesis to evaluate what progress is being made in planning for present and future water quality control requirements for the basin.

The results of this study indicate that additional study will be necessary, after further progress has been made by the Task Force, to fully evaluate the planning procedures and accomplishments of the Task Force. Conclusions indicate problems that have been encountered using this particular approach to water resources comprehensive planning. Various problems in the water pollution phase of the study are discussed.

Several research study areas are suggested as a means of solving water quality problems which exist now in the Willamette
River Basin and those water quality problems which are anticipated in the future as greater demands are placed on this resource.
AN EVALUATION OF PLANNING FOR WATER QUALITY CONTROL IN THE WILLAMETTE RIVER BASIN

by

KENTON KIRKPATRICK

A THESIS

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OREGON STATE UNIVERSITY

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Professor of Civil Engineering
In Charge of Major

Redacted for privacy

Head of Department of Civil Engineering

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Dean of Graduate School

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I would also like to acknowledge the several individuals associated with the Willamette Basin Task Force who provided much of the information necessary to prepare this manuscript.

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Special thanks must also go to my wife Linda for her help in typing preliminary manuscripts, for her patience throughout this year, and for her moral support and encouragement.
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AN EVALUATION OF PLANNING FOR WATER QUALITY CONTROL IN THE WILLAMETTE RIVER BASIN

INTRODUCTION

General

It is no longer possible in any area of the United States to formulate water resource plans for single purpose projects as has been done in past years. No longer can one of our greatest natural resources, water, be used solely for navigation, power generation, irrigation, or controlled for reducing floods. This resource must now serve a multitude of purposes in our society.

The need for comprehensive planning for maximum beneficial use or combination of uses of our water resources has arisen from the heavy demands being placed on our waters. The population explosion and continued environmental, economic, and social improvement has brought about this planning need. Multiple purpose planning for the use and development of water and related land resources must now be completely comprehensive with consideration given to: domestic, municipal, agriculture, and industrial uses of water; water quality control; navigation; hydroelectric power; flood protection; land and beach stabilization; drainage, including water quality consideration of salinity control; watershed protection and management; forest and mineral production; grazing and cropland
improvement; outdoor recreation, as well as sport and commercial fish and wildlife protection and enhancement; and preservation of unique areas of natural beauty, historical and scientific interest.

Figure 1 illustrates what planners are forecasting future water requirements for the United States will be to the year 1980. It is quickly recognized that reuse of water is inevitable and that a well coordinated planning effort is necessary now to assure that present and future demands will be satisfied.

Determining the present status of our water resources, what the future requirements will be, how to plan for these future needs, and implementation of these plans represents a major challenge for local, State, and Federal planners. There has been considerable legislation enacted, both State and Federal, to authorize and guide this planning to insure that the best possible plans for the future will result. Several approaches to comprehensive planning for water resource development have been suggested and used across the country in an effort to find a method which best satisfies the objectives and needs of a given area. The river basin concept appears to be the most appropriate method of comprehensive water resources planning known at this time.

Of interest in the Pacific Northwest is a comprehensive study, presently underway, of the water and related land resources of the Willamette River Basin. This study is coordinated by the Willamette
Figure 1. Past, Present, and Projected Water Supply and Demand.
Basin Task Force which consists of representatives from appropriate Federal departments and a representative of the State of Oregon. The Task Force was created under the auspices of the Coordinated Planning Subcommittee of the Columbia Basin Inter-Agency Committee. This particular study and planning approach has not been used per se in this country. Its operation and function is, therefore, of considerable interest to engineers and others involved in comprehensive water resource planning and development elsewhere in the United States.

With the quantity of water available becoming limited, greater emphasis is being placed on water quality in order that supplies are usable for multiple purposes. In the Willamette River Basin, water quality degradation from pollutants is already adversely affecting many water uses of importance to the economy of the area. Much progress has been made to date to decrease this pollution through the efforts of industry and the State and Federal agencies. There are yet many problems to be solved for an optimum water quality control program. Measures that may be taken to control pollution and subsequent water quality degradation include: (1) reduction or elimination of pollution at its source; (2) removal of pollutants through use of waste water treatment methods; (3) waste water discharge regulation; and (4) dilution of residual wastes by streamflow regulation through low flow augmentation. Based upon technological
and economic considerations, it appears that a combination of these methods will need to be employed.

Water pollution control is one of the areas of investigation of the Willamette Basin Task Force comprehensive study of the basin. It is directly related to and influenced by the several other multiple-purpose uses of the basin's water resources under study by the Task Force. It is this aspect of the comprehensive planning mechanism and its relationship to the other water and land related resources that is the basis for this thesis.

**Objectives and Scope of Thesis**

The objective of this thesis is to make an evaluation of planning for water quality control in the Willamette River Basin. More specifically, this study will: (1) bring together under one document the organization, objectives, planning mechanism, and accomplishments of the Willamette Basin Task Force to date; (2) examine the planning method of the Task Force to determine if objectives are being reached; (3) point up the apparent strengths as well as weaknesses of this planning system in reaching its objectives; (4) evaluate in particular the water quality control aspects of the Task Force to determine how this coordinated effort will influence water quality needs now and in the future; (5) determine what progress is being made in the research field to meet this area's water quality control
planning needs at the present time and what future research needs might be.

The value of this study and publication will enable others involved in water and land resource planning to study, without researching minutes of meetings and other documents, the organization and comprehensive planning techniques of the Willamette Basin Task Force. This study will also serve as a useful tool to examine critical research needs to implement additional water quality control developments for the Willamette River Basin.
THE COMPREHENSIVE PLANNING AND
DEVELOPMENT MECHANISM

General

Many steps have been taken at the National level that have formed the basis of comprehensive planning and development methods for water and related land resources in use today. A review of several of the more significant historical developments has been made to facilitate understanding the problems of this complex field and the major undertakings required to accomplish and satisfy the country's needs for continued growth. This review is too lengthy to be appropriate here, but appears as Appendix A to this study for persons wishing to study it in detail.

The sections of the main body of this thesis are devoted to the forces that are acting at the present time to guide water resources planners in the Pacific Northwest area and more specifically, the Willamette River Basin.

To gain a better understanding of the operations and objectives of the planning mechanism being used in the Willamette Basin, the "Willamette Basin Task Force," it is necessary to examine the higher levels of authority from which the Task Force evolved and now operates. These authorities are the U.S. Inter-Agency Committee on
Water Resources and one of its field subcommittees, the Columbia Basin Inter-Agency Committee. The material covering the comprehensive planning techniques in use in the Pacific Northwest is scattered in many publications.

It is the intention of this study to combine this material to provide an easily understood document of the present planning mechanism for water and related land resources.

**U.S. Inter-Agency Committee on Water Resources**

The coordination of planning and development of the Nation's water and related land resources in several river basins is guided by the U.S. Inter-Agency Committee on Water Resources (ICWR--appropriately nicknamed "Icewater") which operates in Washington, D.C. This Committee was formerly known as the Federal Inter-Agency River Basin Committee until a new agreement for coordination among Federal Departments was approved by the President on May 26, 1954 (see Appendix B).

The origin of this coordinating body came about on December 29, 1943, when representatives of the Departments of War, Interior, and Agriculture and the Federal Power Commission signed an agreement to coordinate the development of water resources more effectively (see Appendix C).

Although this agreement constituted the charter of the Federal
Inter-Agency River Basin Committee, the agreement followed closely the wording of a prior agreement among the Departments of War, Interior, and Agriculture. This prior agreement was one established on August 14, 1939 by the National Resources Planning Board (NRPB). When the NRPB was terminated during the war by insufficient funds, the Federal Inter-Agency River Basin Committee was created by the 1943 agreement (20, p. 1).

Six field committees have been authorized by the Federal Inter-Agency River Basin Committee to implement the policies and purposes of the parent committee. These field committees, dates established, and participating States are shown in Figure 2.

Membership of the Inter-Agency Committee on Water Resources has been expanded since its beginning to include representatives of seven Federal Departments having interests in the water resources field. The corresponding field committees of the "Icewater" include as members seven Federal Department representatives as well as the Governors of each State under the jurisdiction of the particular field committee.

Columbia Basin Inter-Agency Committee

The Columbia River system is the greatest unifying factor in the Pacific Northwest, a region otherwise characterized by great diversity in natural features. This basin covers portions of seven
Figure 2. Organization of the Inter-Agency Committee on Water Resources.
States and Canada with a drainage area of 259,000 square miles.

The Columbia Basin Inter-Agency Committee (CBIAC) was authorized by the Federal Inter-Agency River Basin Committee on February 5, 1946 (19, p. 1). The CBIAC was established to implement the policies and purposes of the Federal Committee. This was to be accomplished through field representatives of the participating Federal agencies and the Governors of the States of the area encompassed by the Committee.

The specific charge and operating procedures of the Columbia Basin Inter-Agency Committee is given in a revised charter issued on November 16, 1954 to the CBIAC by its parent committee (see Appendix D). An organizational chart of the CBIAC is shown in Figure 3.

It is through this coordination mechanism, the Columbia Basin Inter-Agency Committee and its technical subcommittees, that the extensive comprehensive planning program for water and related land resources is being accomplished by State and Federal agency participation.

The CBIAC's influence encompasses the entire States of Oregon (except the Klamath River Drainage Basin), Washington, Idaho (except that part draining into Great Salt Lake), Montana west of the Continental Divide, and those portions of the States of Wyoming, Utah, and Nevada lying within the Columbia River Basin. Plate I illustrates the
Figure 3. Organization of the Columbia Basin Inter-Agency Committee.
area in the Pacific Northwest of interest to the CBIAC.

Willamette Basin Task Force

Description of Study Area

Of interest in this thesis is the comprehensive planning of water resources taking place in one of the eight major sub-basins of the Columbia Basin, this being the Willamette River Basin. Located entirely within the State of Oregon, this river lies to the south and at approximately right angles to the main stem of the Columbia River. The Willamette Basin is roughly rectangular in shape with a maximum north-south dimension of 150 miles and an average width of 75 miles. The main stem of the Willamette River flows generally from south to north having its confluence with the Columbia River near the north limits of the City of Portland. The basin drainage area is 11,200 square miles.

The Cascade Mountain Range, rising to elevations in excess of 10,000 feet form the eastern boundary of the Willamette River Basin. The southern boundary of the basin is formed by the Calapooya Mountains, with elevations of 5,000 feet and the Coast Range rises approximately 3,000 feet along the western boundary. A range of low hills, varying from 200 to 1,000 feet form the northern basin boundary separating the Willamette and Columbia River drainage. The valley
floor proper is about 3,500 square miles in area extending from above Eugene to near Oregon City and lies, generally, below elevation 500 (15, p. 1683).

Because of its water supply relationship with the City of Portland, the Sandy River Basin has been included in the Task Force study. This basin contains an area of 835 square miles lying adjacent to and north and east of the Willamette Basin. Plate II illustrates the geographical extent of the Willamette and Sandy River Basins.

The climate of this area is characterized by dry, moderately warm summers and wet, mild winters. Basin average annual precipitation is approximately 61 inches, varying from about 130 inches in the Coast Range to 30 inches in the interior valley. At the higher elevations, particularly in the Cascade Range, the precipitation occurs as snow. About 10 percent of the annual rainfall occurs during the four summer months while about 60 percent falls during four winter months. Less than three percent of the annual precipitation occurs during the months of July and August (13, p. 1).

Approximately 65 percent of Oregon's population reside in the Willamette River Basin (basin population in 1960 was approximately 1,200,000). Major cities include Portland, Salem, Albany, Corvallis, and Eugene. Agriculture, food processing, forestry, and lumber and paper production are considered to be the major industries of the area.
Practically every water problem conceivable exists in the Willamette Basin. Of the potential 800,000 acres of irrigable land in the basin, 200,000 acres are presently irrigated through individual effort. The basin is plagued with serious flooding, drainage, and erosion problems. Navigation facilities exist or are being planned. Potential hydro-power development is definitely limited. Water quality problems have been created by pollutants entering the watercourses throughout the basin. It is an area of major recreation interests. Anadromous fish runs exist and are considered to be a valuable sport and commercial asset to the basin. The extreme seasonal rainfall patterns create a wide variance in streamflow. It is these factors and others that make this basin well suited to a coordinated effort for water and related land resources planning and development. The complexity of the coordination effort may be further appreciated by examining the long list of State and Federal agencies having interests in this field as shown in Table I (7, p. 4).

Establishment and Authorization

The establishment and authorization of the Willamette Basin Task Force did not result from a sudden action of the Columbia Basin Inter-Agency Committee but evolved from considerable thought, study, and discussion of the CBIAC members and subcommittees. It is difficult for those who have not been directly involved in the CBIAC
### TABLE I

**AGENCIES ACTIVE IN OREGON IN WATER RESOURCES PLANNING AND DEVELOPMENT**

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<td>Fish Commission</td>
<td>Corps of Engineers</td>
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<tr>
<td>Game Commission</td>
<td>Department of Interior</td>
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<tr>
<td>Sanitary Authority</td>
<td>Bureau of Reclamation</td>
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<tr>
<td>Oregon State University</td>
<td>Geological Survey</td>
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<tr>
<td>University of Oregon</td>
<td>Bureau of Commercial Fisheries</td>
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<tr>
<td>Highway Department</td>
<td>Bureau of Sport Fisheries and Wildlife</td>
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<tr>
<td>Parks and Recreation Division</td>
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<tr>
<td>Marine Board</td>
<td>Bureau of Outdoor Recreation</td>
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<td>Board of Forestry</td>
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<td>Department of Geology and Mineral Industries</td>
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<td>Committee on Natural Resources</td>
<td>Soil Conservation Service</td>
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<tr>
<td>Department of Planning and Development</td>
<td>Economic Research Service</td>
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<tr>
<td>Board of Census</td>
<td>Forest Service</td>
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<tr>
<td>Soil Conservation Committee</td>
<td>Agricultural Stabilization and Conservation Service</td>
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<td>Mapping Advisory Committee</td>
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activities to understand the creation of the Task Force. This coordination mechanism is intimately related and directly responsible to the Coordinated Planning Subcommittee.

Because the origin of the Task Force is obscured by time and many details, it will be necessary to revert to several previous actions of the CBIAC and the Coordinated Planning Subcommittee to fully understand the development of the Task Force.

In September, 1959, the CBIAC established its Subcommittee on Comprehensive Planning. The charge to this subcommittee was as follows (3, 119th Meeting, p. 18):

(a) Inventory the status of investigations and planning for each significant program element;

(b) Prepare rough estimates of the cost and time required to bring plans for each element into proper status, in an orderly manner;

(c) Prepare a general schedule of planning priorities for program elements, placing first things first and identifying lagging elements;

(d) Identify the State and Federal agencies with primary responsibilities for such planning;

(e) Establish regional ten-year goals.

The Subcommittee completed its work on items (a) and (b) above, issuing a report entitled "Report on Organizations Responsible for Water Resource Planning in the Columbia Basin and Current Status of Planning."

During this time interval the "Water Resources Planning Act of 1961" was being drafted (this Act was not passed by the 1961
Congress, however, forms of this Act have appeared before succeeding Congressional sessions. If enacted, it would directly affect the activities of the CBIAC as well as its sister field committees across the country. Because of this pending legislation, the Comprehensive Planning Subcommittee remained relatively status quo in 1961 and 1962 awaiting the outcome of Congressional actions.

It was also in 1961 that the report of the Senate Select Committee on National Water Resources was released (16, 17). The recommendations and goals of the Senate Select Committee (see Appendix A, p. 69-73) were accepted by the executive branch of the Federal government. President Kennedy, in his February 23, 1961 message on water resources, endorsed the recommendations of the Committee and asked that comprehensive plans be developed by 1970 for all major river basins in the nation.

On October 6, 1961, President Kennedy requested the Secretaries of Army, Interior, Agriculture, and Health, Education, and Welfare, to review existing standards for the formulation and evaluation of water resources projects and recommend any necessary changes.

In complying with this request, the designated Secretaries prepared a statement, which became Senate Document No. 97, 87th Congress, entitled "Policies, Standards, And Procedures In The Formulation, Evaluation, And Development Of Water And Related
Land Resources." This document has become a general guideline for much of our present comprehensive planning, and because of its significance to present planning procedures, it is appended to this study as Appendix E for reference purposes. It should be noted that S. D. 97 is a **guideline only**. Modification of its recommendations may be necessary in adopting its use to various sections of the country.

The Administration of the Federal government emphasized the need to move forward toward the goals set forth by the Select Committee on National Water Resources. The Director of the Bureau of the Budget made the following statement in letters directed to the four Secretaries who would comprise the Water Resources Council proposed in the Water Resources Planning Act of 1961 (3, 119th Meeting, p. 20):

> It is, of course, essential in carrying out any comprehensive studies initiated by one agency, that full use be made of the resources of the other concerned agencies, and that effectiveness is not impaired by inadequate coordination of planning budgets. Accordingly, I am also asking you to jointly consider means by which adequate coordination of the planning program of your agencies may be assured, and to take such steps as you may consider appropriate to achieve an effective coordination of your planning programs in the 1964 budget estimates.

The opportunity for the Columbia Basin Inter-Agency Committee to implement many of the recommendations and objectives of the Senate Select Committee on Water Resources, Senate Document No. 97, and the Administration's request came late in 1961.
The Corps of Engineers was authorized by a resolution adopted November 15, 1961 by the Committee on Public Works of the U.S. Senate (18) to review the report of the Chief of Engineers' on "Columbia River and Tributaries," published as House Document No. 531, 81st Congress, 2nd session (15), and other reports with a view to determining whether modifications of the existing projects for the Willamette River and tributaries was advisable at that time.

At a meeting of the CBIAC held September 19, 1962, a representative of the Corps of Engineers proposed there be established, within the CBIAC, a Coordinating Committee for the Willamette River study to fully coordinate the various interests in line with existing policies (3, 119th Meeting, p. 22-23). Several suggestions were made regarding the operation of this proposed Committee. The proposal was referred to the Executive Committee of the CBIAC for review, analysis, and recommendations. The plan for a truly comprehensive study of the Willamette River Basin had been initiated.

At the next meeting of the CBIAC, the Executive Committee submitted a proposal for coordination of basin planning (3, 120th Meeting, p. 41). Nine members of the CBIAC voted to adopt the proposal; one member voted against it on the basis that he wanted additional time to review the proposal.

In summary, the proposal provided that: (1) the function of the Subcommittee on Comprehensive Planning be broadened to include the
coordination of planning for the CBIAC; (2) this Subcommittee be
directed to establish, as needed, coordinated task forces for each
major river basin; (3) the membership of the Comprehensive Plan-
ing Subcommittee remain unchanged; (4) each task force consist of
one formal representative from each of the State or Federal agencies
with an interest in the study; (5) the State's representative serve as
chairman where the study area is situated in a single State, and
for inter-state studies, the chairman be elected by the task force
members. The proposal also provided for the change in the name of
the Subcommittee on Comprehensive Planning to that of the Subcom-
mittee for Coordinated Planning. Because of the significance this
proposal has had on the comprehensive planning mechanism in this
area, it is appended, as approved by the CBIAC, as Appendix F for
future reference purposes.

It was announced at the March 1963 meeting of the CBIAC that
the Subcommittee for Coordinated Planning had established a Willam-
ette Basin Task Force on January 4, 1963. The functions and objec-
tives of the Subcommittee for Coordinated Planning were also stated
at this meeting to inform the CBIAC members of the Subcommittee's
role in the comprehensive and coordinated planning effort. These
were as follows (3, 121st Meeting, p. 15):

(1) Provide a forum for the free exchange of informa-
tion concerning the planning activities of member
agencies;
(2) Work towards the establishment of mutually satisfactory priorities and schedules for water and related land resource planning throughout the Pacific Northwest, and towards the development of fiscal requirements to meet these coordinated planning schedules;

(3) Work towards the selection of comparable criteria and procedures, uniform basic data, and consistent projections of future conditions and needs;

(4) Provide and supervise separate Task Forces, as required, for major basin or subregional studies, to effect detailed coordination of planning at the working level;

(5) Keep the Columbia Basin Inter-Agency Committee fully informed concerning the status and needs of coordinated planning activities.

The Willamette Basin Task Force had been established by the Subcommittee for Coordinated Planning with authorization to begin coordination of the water resources planning activities of the Willamette Basin. It should be noted that an additional task force has been established by the Subcommittee for Coordinated Planning in another area under the CBIAC jurisdiction. This is the Puget Sound Task Force created in March 1964.

Purpose and Objective

The purpose of the Willamette Basin Task Force is to provide a coordinating mechanism for prosecution of a comprehensive study for the management and development of the water and related land resources of the Willamette River Basin and the adjacent Sandy River Basin. The Task Force provides the form whereby interested
State and Federal agencies may resolve conflicts of interest and duplication of effort in analyzing the basin's water problems and needs.

The objective of the study effort is to formulate a coordinated plan that will delineate and recommend measures to meet the water and related land resources needs for the present and at least 10 to 15 years in the future. The plan will also provide a framework to meet long range needs in this field. The requirements of the State of Oregon as well as the requirements of all Federal agencies will be satisfied in the development of the plan.

Four basic steps have been recognized as the mechanics leading to a comprehensive plan for the basin. They are as follows (4, March 15, 1963, p. 3):

1. The definition of data needs and potentials;
2. An inventory of planning and proposals;
3. A plan formulation step;
4. Presentation of the formulated plans to the people.

The final report is scheduled to be completed in mid-1969 and will consist of a summary report supported by appendices covering the following general categories as follows: (1) study area description; (2) hydrology considerations; (3) an economic base study; (4) beneficial uses of water as defined in Senate Document 97; and (5) the plan formulation.
Task Force Membership

The Task Force is comprised of eight members which form a policy-level group. Since this basin lies wholly within the boundaries of a single State, the representative of the State serves as chairman (Appendix F, sec. 5). This position is filled by the Secretary of the State Water Resources Board.

Figure 4 illustrates the general organization of the Willamette Basin Task Force and the areas of concern under study which will lead to the analyses and, finally, the formulated plan (10).

Data Teams

To accomplish the first of the previously mentioned four basic steps leading to a comprehensive plan, the Task Force established data teams early in 1963 (4, March 3, 1963). These data teams were directed to assess existing available data and programs and determine necessary additional data collection programs to fulfill the requirements of a comprehensive study. The 13 fields of interest established were: Climatology, Economics, Fish and Wildlife, Forestry, Geology, Hydrology, Lands, Legal, Mapping, Navigation, Power, Recreation, and Water Quality.

A Data Storage and Retrieval Team was established to correlate the findings of the data teams regarding data available and data
Figure 4. Structure of Willamette Basin Task Force and Areas of Investigation.
required. A Data Catalog was prepared and has been made available for use by all agencies participating in this study.

**Outline-Schedule Team**

The Task Force established an Outline Team for the purpose of developing an outline of subject coverage for a coordinated comprehensive report (4, January 30, 1964). As seen in Figure 4, the team was composed of one representative from the Departments of Agriculture, Army, Interior, Health, Education, and Welfare, and the State of Oregon.

An outline was developed by this team using the study outlines of the Texas Study Commission and Southeast Basin Commission as guidelines. Assignments of responsibility to appropriate agencies for development of more specific outlines for coverage of their respective fields was made.

To continue the progress toward the objectives of the Task Force, detailed outlines for all report elements and the establishment of time schedules for their preparation were prepared. The Outline Team performed this task and was subsequently renamed Outline-Schedule Team.

A tentative outline was developed and provided for a multi-agency coordinated report to be acted on by each of the four Federal planning agencies through appropriate Departmental channels. This
outline provided for a main or summary report, supported by appendix material as necessary, to include a Syllabus; Introduction, Discussion of the Study Area, Natural Resources, Economic Environment, Current Water Utilization, Future Water Needs, Water and Related Land Resource Problems, Project Analyses, and a Recommended Plan (6).

After considerable time and study, the Outline-Schedule Team presented the Task Force a listing of report elements, to include a summary report, as mentioned above, three supporting data appendices, nine project function appendices, and, finally, a plan formulation appendix.

The Outline-Schedule Team prepared and distributed completed outlines for all appendices except Plan Formulation. The assignments of responsibility for preparation of each appendix were made. Work timing schedules have been studied to determine discrepancies which might result in a delay of meeting the completion of the study. The time schedule established is based on the needs and capabilities of all concerned in the preparation of the plan.

Public Hearings

To determine the needs and desires of the citizens in the study area, public hearings have been conducted throughout the basin on several occasions by the Task Force. At each hearing, the public
was informed of the purpose of the study, its objectives, progress, and the function of each interested agency relating its interest in the over-all study.

The views and information obtained from the public at these meetings will be evaluated and included in the final report.

Report Preparation

The report is planned to be cooperatively prepared, with provisions for multiple submittal, through Departmental channels (6). The basic time schedule that has been established to accomplish the task of preparing this report is shown in Figure 5 (10).

The summary report is to contain recommendations for adoption of a framework plan, and for construction of certain projects within that plan. No problems among the various agencies in agreeing to this plan are expected at the reporting level.

The report will show available water resources, their present degree of utilization, and projected needs for future utilization for each of the eight Congressionally recognized project functions (6). The report will indicate the potentials for development of the water resources to meet the needs. Consideration will be given to the fact that joint use of storage space in reservoirs for flood control and water conservation is practicable. Multiple use of releases of stored water will be evaluated. A comparison of projected needs and the
Figure 5. Planning Schedule of Task Force.
degree to which joint use of recommended storage projects will satisfy those needs will be made.

Several other aspects of water and related land resources needs will be evaluated in this report which, along with those mentioned above, will undoubtedly have a great impact on the development of the basin.
WATER QUALITY CONTROL PLANNING

General

The water quality control planning aspects of this coordinated comprehensive study involves the interests of several agencies, both State and Federal. Each has its own responsibilities and statutory authority for operation; however, these agencies are closely related to each other in carrying out their objectives.

Water pollution control is one of the nine project functions, as set forth in Senate Document 97 (Appendix E), being investigated by the Willamette Basin Task Force. The committee to study this phase of water and related land resources has been designated by the Outline-Schedule Team and will include the efforts of 14 agencies. The findings of the Water Pollution Control Committee will appear as a supporting appendix to the final report of the Task Force as will the other eight project functions studied.

To understand and appreciate the effort of coordination in the water pollution control planning mechanism, a brief description of each agency or Department participating in this phase of the study is made to relate its function and interests to the study.
The Public Health Service, in this Department, has specific legislated responsibilities in the field of water supply and pollution control. Because it is recognized as the lead agency in this field, DHEW has been named chairman of the Water Pollution Control Committee.

The provisions from which this Department participates come from the Federal Water Pollution Control Act, Public Law 660 - 84th Congress, 1956, as amended by Public Law 87 - 88th Congress, 1961.

This legislation provides for a strong Federal role in water pollution control; it recognizes the primary responsibilities and rights of the States in preventing and controlling water pollution; it provides for continued Federal-State cooperation in the development of comprehensive programs for water pollution control; the Act provides for technical assistance to States and intensifies research efforts; it authorizes collection and dissemination of basic data on water quality relating to water pollution prevention and control; it authorizes grants to States for water pollution control activities, and Federal grants for construction of municipal sewage treatment plants; the Act as amended provides Federal authority to enforce abatement of intrastate and interstate pollution; and finally, the Act authorizes
the inclusion of storage for regulating streamflow for the purpose of water quality control in the survey or planning of Federal reservoirs and impoundments.

The Public Health Service is presently completing a Willamette River Basin comprehensive study for water supply and pollution control as provided for in the Water Pollution Control Act. The findings and conclusions of this study will be included as part of the study efforts of the Water Pollution Control Committee of the Task Force.

Oregon State Board of Health

Water pollution control activities in the State, as set forth in the Oregon Revised Statutes, Chapter 449, are the responsibility of the Oregon State Sanitary Authority, a Division of the State Board of Health. Section 449.077 of these Statutes sets forth the State's policy on water pollution as follows (11):

449.077. Declaration of policy on water pollution.

(1) In the interest of the public welfare, safety, peace and morals of the people, it is declared to be the public policy of the State of Oregon to:

(a) Maintain reasonable standards of purity of all rivers, streams, lakes, watersheds and the coastal areas of the state consistent with the protection and conservation of the public health, recreational enjoyment of the people, the economic and industrial development of the state, and for the protection of human life and property and conservation of plant, aquatic, and animal life.
(b) Foster and encourage the cooperation of the people, industries, incorporated cities and towns and counties in preventing and controlling the pollution of those water.

(2) This chapter shall be liberally construed for the accomplishment of these purposes.

To strengthen its program of water pollution control, the Oregon State Sanitary Authority adopted Regulation I entitled "Standards of Purity for Waters of the State of Oregon and General Requirements for the Disposal Therein of Sewage and Industrial Waste." This regulation establishes definite water quality standards and pollution abatement measures for the waters of the State.

This State agency is engaged in collecting and analyzing data on water quality of the Willamette River Basin and contributes much to the planning for the basin's waters.

U.S. Geological Survey

The Geological Survey has a responsibility for inventorying and appraising the quantity and quality of the Nation's surface and ground water. A national network of quality stations are operated by this agency to determine chemical properties, sediment content, and temperature of surface water. The USGS prepares reports on chemical quality of water which are available to other agencies for use in water quality management programs.
Various organic acts establish this Department's interest in water resources and quality control. Three agencies within this Department have primary interests in water quality control.

The Soil Conservation Service, under Public Law 566, 1954, contributes assistance in providing for water supply and water quality in local small multiple-purpose projects.

The Forest Service has interests in pollution problems which might occur from National Forest watershed which supply municipal water, several of which are located in the Willamette and Sandy Basins.

The Economic Research Service provides analyses of water pollution resulting from various agriculture operations.

This Bureau has interests in water pollution control planning where various programs such as management of livestock, prevention of range fires, and control of the use of chemicals on lands influence water quality control plans.

Water that is safe and aesthetically acceptable for recreation purposes is of major interest to this agency. The heavy demands for
water-related recreation has placed greater emphasis on water pollution control.

**U.S. Bureau of Commercial Fisheries**

This Bureau has major interests in water pollution control because of the commercial fisheries dependence on high quality water. Since the Willamette River and some of its tributaries have experienced pollution problems creating low dissolved oxygen concentrations, this Bureau is vitally interested in a coordinated planning effort to improve the water quality of the basin.

**U.S. Bureau of Sport Fisheries and Wildlife**

This Bureau is concerned with maintaining optimum natural waters for the biologic requirements of the sport fishery.

**Oregon State Water Resources Board**

The Oregon State Legislature established this Board in 1955 as a central agency authorized to execute a single State water policy and to resolve conflicts regarding water use. The Board provides consultation to the Water Pollution Control Committee concerning State water resources planning.
Oregon State University

Oregon State University has been designated to serve on the Committee to provide consultation regarding research activities of the University relating to water quality control.

Oregon State Engineer

The State Engineer has responsibilities concerning ground water investigations and certain aspects of surface water investigations. These responsibilities do not include planning but involve elements essential to planning.

Oregon State Department of Planning and Development

This Department presently has seven land-use problem studies underway in the basin, one of which is air and water pollution. This study will be of interest to the coordinated effort and will provide information useful to the analysis of the problems in the basin.

Oregon State Fish Commission

Water quality requirements of fish in the study area are being investigated by this Commission. Various research is being conducted concerning water pollution and its effects on the fisheries of the basin.
This Commission has conducted activities within the Willamette Basin that apply to the fish and wildlife information required for the coordinated study. Water quality needs for fish and wildlife are being studied at the present time.

**Scope of Water Pollution Control Study**

Outlines for preparing the reports of the nine project functions were established following much study and discussion to determine what must be included in a comprehensive study of this extent. The outlines vary in specific content but conform over-all. This will permit the total final report to read as one rather than several reports within a report. The outline for the Water Pollution Control appendix includes five major subjects with numerous subtopics. These subjects will be covered briefly in the material that follows to provide a picture of how the planning is to proceed and generally what the report will contain when completed in 1969. It should be recognized that an outline for such a study serves as a guide only and is not final until the report has been completed.

The first section of the report, Introduction, will provide the purpose and scope of the study and indicate its relationship to other portions of the over-all report. A general description and history
of the basin will be given from a pollution control viewpoint.

The second section is entitled Present Status. The present status of pollution factors of interest will be evaluated. These factors include municipal, industrial, irrigation return flow, agricultural (livestock and poultry), thermal power, mining (including gravel dredging and washing), other land uses (logging, road construction, etc.), and impoundments and stream regulation aspects of pollution. The location of each pollutant will be made by subbasin and standard river mile index. The quantity and characteristics of wastes generated will be determined. Efficiency of present treatment processes will be determined where applicable. Finally, the pollutants being discharged to receiving bodies of water will be established.

Also under Present Status is a section devoted to determining data needed for water quality calculations. Included under this section are stream characteristics such as flow and time of travel given by subbasin or by stream reach. Climate considerations including temperature, solar radiation, and evaporation by subbasin or areas will be determined. The present status of treatment requirements, legal or statutory, will be established.

A third subsection under Present Status will provide an inventory of present water quality data including means and extremes at selected points to describe water quality and the effects of pollutants by river reaches and ground water areas. The quality data will
include biochemical oxygen demand, temperature, bacteria, toxic materials, and minerals.

Present water uses with water quality requirements will also be included under the Present Status section of the report. An inventory of water uses by river reaches and groundwater areas and water quality requirements to serve such uses will be determined.

The last topic under Present Status will identify areas requiring corrective action at the present time.

The third major subject to be covered in this report is that of Future Demands. Demand projections to the years 1980, 2000, and 2020 will be made by subbasins. Projected raw wastes generated by municipalities, industries, and land use facilities will be identified by river reach and groundwater areas. Projections will be made on types of water use for which quality is important along with projected quality goals to serve those water uses. Benefits associated with each of these water uses will also be projected.

Under the fourth major subject, Alternative Means to Satisfy Demands, alternative systems to meet various quality objectives will be presented. The water quality achieved by various combinations of flow, treatment, and other measures will be described. Cost analyses will be made for combinations of measures for various quality objectives. This section will include legal and administrative requirements for alternate means to satisfy demands. The research and further
study needs for implementing alternate plans will be determined.

The fifth and final subject of the Water Pollution Control appendix will be the Conclusions of the findings. An evaluation of the water pollution control aspects of the proposed comprehensive plan will be made.

**Individual Agency Planning Efforts**

At the time the Willamette Basin Task Force was established, several studies and programs relating to water quality control were already in progress under the direction of various State and Federal agencies. The State Sanitary Authority has for years promoted programs for improvement of the quality of the waters of the Willamette Basin.

The Public Health Service's comprehensive program for water supply and pollution control was begun in 1962 and has been carried out in close cooperation with the Oregon State Sanitary Authority.

These are only two of many water quality improvement programs that are underway along with the Task Force study. These are mentioned to point out that individual agency efforts of planning are not being curtailed by the Task Force study. The findings of these individual efforts will be used by the several Federal water resources planning agencies and various State agencies in the long range comprehensive plan being developed by the Willamette Basin Task Force.
CONCLUSIONS

A definite coordinated and comprehensive plan for water quality control in the Willamette River Basin has not maturated at this date. Other phases of comprehensive planning for water and related land resources are in a similar stage of partial development.

The Willamette Basin Task Force has been created to provide a mechanism whereby State and Federal agencies are able to coordinate their efforts in planning. Although this planning mechanism has been defined, it is not possible at this date to report and evaluate the application of this planning approach regarding its effectiveness in accomplishing its objectives. However, several conclusions may be made based upon the activities and progress of the Task Force to date. These are as follows:

(1) The report to be completed by the Task Force will represent a higher degree of planning than has ever been accomplished in past planning attempts for this basin;

(2) There have been problems of communicating with the public and industry in seeking out their needs and desires. This is not a new problem in planning of this nature and has not been solved completely in this planning effort;

(3) The inter-agency committee planning mechanism is so
organized that prolonged time delays can occur because of the responsibilities that lower policy level planning committees have in reporting to and coordinating with their respective higher authorities;

(4) Problems involving inadequate funds and staffing in several phases of the study have prevented some agencies from participating fully in the study and contributing to their maximum ability;

(5) There appears to be a great need to project and identify foreseeable water quality problems now and implement research that will lead to solution of these problems;

(6) There is a need for those presently involved and those entering the water resources planning and development field to have a better understanding of the planning mechanisms and a working knowledge of what the functions and objectives of the various State and Federal agencies involved in this field are. This would lead to more effective and expedient planning programs;

(7) At the present time, comprehensive plans for our present and future water and related land resources needs are prepared based on today's knowledge and on the basis that enough information is now available, or will be within the next five years, that we know how to accomplish this
planning task. It is questionable if our society is able to predict and project needs and requirements 55 years hence to the year 2020. Evidence of the difficulty of long range planning can be appreciated by examining the ability of planners in the year 1910 to accurately predict the needs of today's society. It must be recognized that comprehensive plans prepared now for future needs are not final. They must continuously be modified to meet needs which are unforeseeable now. Therefore, the value of attempting to predict as far as 50 to 55 years in the future is questionable.
FUTURE STUDY AND RESEARCH RECOMMENDATIONS

It is recommended that this study be extended by other students in order that, after a period of time when further progress has been made, a single document of the comprehensive planning and development practices for water and related land resources in the Columbia River Basin will be developed.

Several research projects to supply added knowledge for water quality management are needed in the water resources planning and development field and are suggested as follows:

(1) There is a need for further research to accurately project regional distribution of population, industrial, and economic growth. Present methodology available for this is only partially understood;

(2) Increased information and knowledge for the mathematical simulation of factors influencing water resources over total river basins which can be applied by computer technology is needed. Along with this, methods for testing alternative schemes and the effects of these various schemes must be investigated;

(3) There is a needed research effort to examine the capabilities of our social and legal institutions in implementing
truly comprehensive water resources plans. This should consider the adequacy of agency authority as well as conflicts of interest within and among various agencies.

Many research needs can be cited to increase our knowledge of the physical, chemical, and biological processes significant to developing and implementing water quality requirement aspects of a comprehensive water resources plan. A few of the more significant of these needs are as follows:

1. Improved methods for evaluating self-purification capacities of streams must be sought;
2. Physical characteristics of streams are not well known, particularly in the headwaters;
3. The effects that reservoirs and impoundments have on water quality have not been adequately determined and much study is needed;
4. The effects of return flows from agricultural practices on water quality are not well defined and understood;
5. There are many unsolved problems in providing efficient and economical waste treatment methods for industries, particularly the pulp and paper and cannery industries of this area;
6. Improved methods for treating domestic waste waters are needed. Accompanying this is the need for determining
methods for improving operation of the treatment devices we now have.

As man strives to solve the above suggested problems as well as others in satisfying society's needs and requirements, many more problems in the water and related land resources field will evolve. In fact, it seems that during the past decades there have been at least two new problems evolve for every one that has been solved. This increased quest for knowledge will undoubtedly continue as man's understanding, curiosity, and concern for his environment increases.
BIBLIOGRAPHY


APPENDIX A

Review of Significant Historical Events in National Water Resources Planning
Introduction

It is not necessary to review and examine in detail the entire historical evolution of our national water resources planning and development policies and procedures to recognize the progress that has been made to date and the difficulties encountered in accomplishing this task. It is important, however, that those involved in planning for our present and future water and related land resources needs have at least a general understanding of past national developments that have led us to the present comprehensive river basin planning methods in use today.

A chronology of the more significant events leading to our present planning concepts is shown in Appendix Table I at the end of this section. To avoid a lengthy and complicated bibliography, the references throughout this appendix shown as A1 through A51 refer to the "Reference Number" in Appendix Table I. The source of the material may be noted by looking at the "Event" opposite the reference number in the table. The material that follows was taken primarily from an extensive national water resources review made by the Senate Select Committee on National Water Resources and from a review by Schad (Bibliography reference numbers 17, print #2, and 12). It was condensed to provide a quick view of the more significant water resources events through the years.

Many reports and recommendations contained therein were generally ignored in several of the earlier planning attempts. However, these studies were the basis for later evaluations and legislation enabling water resources planning and development to proceed.
Nineteenth Century Planning

The primary concern in the early days of water resource planning was that of transportation. Navigation was a major means of travel. Development of inland areas depended on access to these sections of the country via rivers, canals, and roads.

Out of this vital need for improved transportation came a report on roads and canals prepared by Secretary of the Treasury Albert Gallatin in 1808 (A1). It was this study and report that may be said to have been the beginning of waterway planning policy of the United States.

In 1874, the Windom Committee revived interest in comprehensive planning with a report proposing major improvements of the Nation's waterways for transportation (A2). The recommendations were generally ignored.

A report submitted to Congress in 1878 by Major John Wesley Powell, considered land and water planning in the arid western regions (A3). Again, Congress generally ignored the comprehensive principle and continued to legislate primarily on the basis of individual objects and purposes.

The Mississippi River Commission was established in 1879 (A4). The charge to the Commission could be considered a comprehensive approach to water and land resources planning and development. Authorization was given to the Commission to prepare plans that would:

...correct, permanently locate, and deepen the channel and protect the banks of the Mississippi River; improve and give safety and ease to navigation thereof; prevent destructive floods; promote and facilitate commerce, trade, and the postal service.
Conservation Movement

It was during the administration of President Theodore Roosevelt in the early 1900's that the important concept of multiple use and comprehensive planning for water resources planning was actively promoted. He appointed the Inland Waterways Commission (IWC) on March 14, 1907, composed of congressional and executive branch officials (A5). The President's letter to the members is worthy of reprint because of its far-reaching effects on water and land resources at that time and in the future. The letter said:

Numerous commercial organizations of the Mississippi Valley have presented petitions asking that I appoint a commission to prepare and report a comprehensive plan for the improvement and control of the river systems of the United States. I have decided to comply with these requests by appointing an Inland Waterways Commission...

...Works designed to control our waterways have thus far usually been undertaken for a single purpose, such as the improvement of navigation, the development of power, the irrigation of arid lands, the protection of lowlands from floods, or to supply water for domestic and manufacturing purposes. While the rights of the people to these and similar uses of water must be respected, the time has come for merging local projects and uses of inland waters in a comprehensive plan designed for the benefit of the entire country. Such a plan should consider and include all the uses to which streams may be put, and should bring together and coordinate the points of views of all users of water. The task involved in the full and orderly development and control of the river systems of the United States is a great one, yet it is certainly not too great for us to approach. The results which it seem to promise are even greater.

In their report released on February 3, 1908, the IWC recommended comprehensive planning for all purposes including water pollution abatement, development of power, flood control, land reclamation by irrigation and drainage, and all other uses or benefits
to be derived from the control of water (A6). The recommendations encompassed equitable cost-sharing among beneficiaries, consideration of the interrelationship of water and land transportation, and other proposals. Also recommended by the IWC was that legislation be enacted to authorize the coordination and proper development of existing public services connected with waterways, through the means of a national waterways commission appointed by the President, to coordinate the Corps of Engineers, the Bureau of Soils, the Forest Service, the Bureau of Corporations, the Reclamation Service, and other branches of the public service insofar as their work relates to inland waterways.

The Rivers and Harbors Act of March 3, 1909 was one of the last legislative enactments during the administration of Theodore Roosevelt. This act included a section creating a temporary National Waterways Commission (NWC), made up of members of Congress, to investigate and make recommendations to Congress pertaining to water transportation and the improvement of waters. This act is also significant in that it required all reports on preliminary examination and surveys of proposed waterway improvements to include consideration of water power development for industrial and commercial purposes (A9).

Another delegation appointed June 8, 1908 by President Roosevelt was the National Conservation Commission (NCC) (A7). The NCC undertook the making of an inventory of the natural resources of the United States in cooperation with the executive departments of the Government, State officers, and with national organizations. The report of the NCC, submitted on January 22, 1909, emphasized that each stream is a unit from its source to the sea, and that benefits of a comprehensive system of waterway improvements would extend to all the people in the several sections and states of the United States.
The priority of water use for water supply, followed by navigation in humid regions and irrigation in arid regions, with coordinated development of water power, was set forth, and the report stated that:

Broad plans should be adopted providing for a system of waterway improvement extending to all uses of the waters and benefits to be derived from their control, including the clarification of the water and abatement of floods for the benefit of navigation; the extension of irrigation; the development and application of power; the prevention of soil wash; the purification of streams for water supply; and the drainage and utilization of the waters of swamps and overflow lands.

In January, 1910, the National Waterways Commission made a preliminary report recommending specific navigation projects. It also examined the practicability of impounding reservoirs for flood prevention, the influence of forestation on navigability of streams, and the need for legislation for the development and control of water power. The NWC cited this legislation need as one of the most important questions before Congress. The final report of the NWC was submitted in 1912.

Acting on the importance of comprehensive development in regard to water power, Congress amended the General Dam Act on June 23, 1910. This amendment called on the Chief of Engineers, with the purpose of approving plans for construction of dams across or in any navigable waters of the United States, to "consider the bearing of said structure upon a comprehensive plan for the improvement of the waterway for which it is to be constructed with a view to the promotion of its navigation quality and for the full development of water power."

Two significant pieces of legislation giving recognition to the principle of comprehensive development were enacted by the Congress in the year 1917. The Mississippi and Sacramento River Flood Control Act of March 1, 1917 provided that all examinations and surveys
of projects relating to flood control should include a comprehensive study of the watershed, and required its reports to consider all uses of the water. The Act also authorized the other governmental department heads, at their discretion, to detail representatives to assist the Corps of Engineers in the study and examination of such watersheds (A13).

The Rivers and Harbors Act of August 8, 1917 established the Waterways Commission (sometime referred to as the Newlands Commission) (A14). This Act authorized the Commission:

...to bring into coordination and cooperation the engineering, scientific, and constructive services, bureaus, boards, and commissions of the several governmental departments of the United States and commissions created by Congress that relate to study, development, or control of waterways and water resources and subjects related thereto, or to the development and regulation of interstate and foreign commerce, with a view to uniting such services in investigating, with respect to all watersheds in the United States, questions relating to the development, improvement, regulation, and control of navigation as a part of interstate and foreign commerce, including therein the related question of irrigation, drainage, forestry, and arid and swampland reclamation, clarification of streams, regulation of flow, control of floods, utilization of waterpower, prevention of soil erosion and waste, storage, and conservation of water for agricultural, industrial, municipal, and domestic uses, cooperation of railways and waterways, and promotion of terminal and transfer facilities, to secure the necessary data, and to formulate and report to Congress, as early as practicable, a comprehensive plan or plans for the development of waterways and water resources of the United States for the purposes of navigation and for every useful purpose, and recommendations for the modification or discontinuance of any project herein or heretofore adopted.

The members of the Waterways Commission were never appointed, probably because of our entrance into World War I. The provision creating the Waterways Commission was expressly repealed by the
1920 Federal Water Power Act (A15). This ended Senator Newland's attempt to effectuate the coordination of the activities of the several Federal agencies engaged in water resources planning that had been recommended by the IWC in 1908.

The Federal Water Power Act restated the Congressional position on comprehensive planning by instructing the Federal Power Commission (FPC) to issue licenses only to projects that would:

...be best adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water power development, and of other beneficial public uses...

There were no funds made available by Congress to the FPC or specific authorization made to prepare comprehensive plans. Therefore, none were made.

A major step in the development of the Nation's water resources policy evolved from the Rivers and Harbors Act of March 3, 1925 (A16). Section 3 of this Act directed the Army Engineers and the Federal Power Commission jointly to prepare and submit an estimate of the cost of making examinations and surveys of those navigable streams and their tributaries "whereon power development appears feasible and practicable." This was directed to be done with a view to formulating "general plans for the most effective improvement of such streams for the purpose of navigation and the prosecution of such improvements in combination with the most efficient development of the potential water power, the control of floods, and the needs of irrigation." The result led to a list of streams submitted to Congress in 1926 and printed in House Document 308 (69th Congress, 1st session) (A17).

Authorization for the surveys came from the Rivers and Harbors Act of 1927 (A18) out of which came the famous "308" reports of the Corps of Engineers. These reports were the first of a comprehensive
They have formed the basis for many of the multiple-purpose river basin developments in the United States.

**Depression Years**

The great economic depression and drought of the 1930's renewed emphasis on national water resources planning. On February 2, 1934, Congress requested President Franklin Roosevelt (A19) to report on "...a comprehensive plan for the improvement and development of the rivers of the United States, with a view of giving the Congress information for the guidance of legislation which would provide for the maximum amount of flood control, navigation, irrigation, and development of hydroelectric power."

The President appointed a Committee on Water Flow which proposed the development of comprehensive plans for ten major drainage basins in the United States (A20).

During this same period of time, studies were being made by the Mississippi Valley Committee of the Public Works Administration. These studies were to formulate a plan for the use of the water within the Mississippi drainage basin. The subsequent report issued on October 1, 1934, presented new recognition of the broad problems of social and economic policy inherent in water resources planning (A22). In its report, the Committee warned of the difficulties in determining the most ideal use of a river, and stated that scientific planning requires a use pattern for each community, district, or region, as well as geographical pattern which will reflect as fairly as possible the dominant needs of each locality.

On June 30, 1934, the President established the National Resources Board (NRB) as successor to the National Planning Board and the Committee on National Land Problems (A21). The Mississippi Valley Commission became the Water Planning Committee of the
NRB. The functions of the Water Planning Section would be (a) to assemble basic data existing in scattered places; (b) to proceed rapidly with constructive programs for water resources development; (c) to make full use of existing public agencies; and (d) to investigate water pollution in all its phases. The Board recommended 17 drainage basins for detailed engineering, social, financial, and legal study of water resources. It recommended that studies for water projects and programs for adoption by Congress be prepared on the basis of drainage basins as a whole and consider a great variety of water and land uses and controls. It also recommended further study concerning division of responsibility and costs among Federal, State, and local authorities.

The National Resources Committee was organized in June 1935, reconstituting the National Resources Board (A23). The Water Resources Committee of the National Resources Committee was instructed to undertake a national drainage basin study. The major effort of the Committee resulted in the report "Drainage Basin Problems and Programs," submitted in December, 1936 (A24). This report discussed the principal water problems in each area and recommended lists of projects for investigation or construction in order of priority. A number of reports on various aspects of water resources planning and public works were published under the sponsorship of the National Resources Committee before it was reorganized into the National Resources Planning Board (NRPB) in 1939 (A26).

The NRPB was terminated by Congress by refusing to appropriate funds for the 1943 fiscal year because of the United States' involvement in World War II (A24). Transfer of the planning activities of the NRPB to other agencies was expressly prohibited. This ended the first major attempt at national water planning on a large scale.

During the 1930's, construction of projects for the development of water resources was underway. With emergency authorizations,
construction was begun on the Bonneville and Grand Coulee Dams and their related irrigation projects in the Columbia River basin. Other projects across the country were also being built. The Tennessee Valley Authority (TVA) was formed and had undertaken its vast program of development based largely on the "308" report of the Corps of Engineers.

**World War II Years**

During the war years, there was a continuous debate concerning water resources planning. Supporters of potential Missouri Valley and Columbia Valley authorities were very active during this period. It is probable that these activities speeded up the authorization of the comprehensive Missouri Basin development on the basis of reports prepared separately by the Bureau of Reclamation and by the Corps of Engineers. These two plans were merged forming the Pick-Sloan Plan, the initial phases of which were authorized in the 1944 Flood Control Act (A29). Subsequent provisions in the 1946 Flood Control Act authorized the entire comprehensive plan.

In Section 1 of the 1944 Flood Control Act, Congress laid down the principle of Federal-State cooperation in planning for navigation, flood control, and irrigation projects, and declared its policy "to facilitate the consideration of projects on a basis of comprehensive and coordinated development" (A29). This provision has been incorporated, by reference, into all subsequent rivers and harbors and flood control legislation, and has been made an essential part of all the water resources planning that has been conducted by the Corps of Engineers and the Bureau of Reclamation.
Postwar Years

Following World War II, Congress authorized the Commission on Reorganization of the Executive Branch of the Government (First Hoover Commission) in 1947 (A30). The Commission created 24 task forces, one of which was the Task Force on Natural Resources. This Task Force and later the Commission, disclosed several differences of opinion concerning how water resources development should be handled. Conflicting ideas were presented by the Commission's task forces on water resources and public works (A31).

President Truman established the Water Resources Policy Commission (WRPC) in 1950 (A32). The report of this Commission (A33) emphasized the importance of cooperation among the responsible Federal agencies in water resources planning. It suggested that river basin commissions be established by Congress for each of the major river basins. Further, that these commissions should be authorized to coordinate the surveys, construction activities, and operations of the Federal agencies in the several basins, under guidance of independent chairmen and appointed by the President and with the participation of State agencies in the planning process. The WRPC also suggested the creation of a Federal Board of Reviews to evaluate water resources projects and made over a hundred detailed recommendations concerning all aspects of water resources policy. With the change of administrations, the WRPC recommendations were never formally submitted to Congress. The Bureau of the Budget did, however, issue a budget circular attempting to establish a consistent basis for the evaluation of proposed Federal water resources projects.

The Engineers Joint Council (EJC) prepared a report in 1951 on water policy under the auspices of its national water policy panel (A35). This panel had been established to submit recommendations
to the Water Resources Policy Commission. The EJC document emphasized the importance of local, state, and private responsibility in water resources.

The President's Materials Policy Commission (Paley Commission) (A34) reported in June 1952, indicating several water resource needs (A38). These were actions toward pollution abatement, ocean and brackish water research, and coordination and integration of Federal water planning and programs.

In 1951 and 1952, the Committee on Public Works of the House appointed (A36) a special subcommittee (Jones Subcommittee) to study "...the policies, practices, and procedures in connection with the authorization and construction of river-and-harbor and flood-control projects and report back to the committee with the utmost dispatch its findings and recommendation thereon." In its findings (A39) the subcommittee felt that the problems in the field of water resources could not be solved by simple reorganization or by the establishment of a board of review. It believed that conflicts among the agencies should be eliminated and greater coordination affected.

The subcommittee stated that if Congress would clearly establish four elements of policy, many of the problems would be resolved. These four policy elements were as follows (A39): (1) phases in water resource development for which the Federal government should assume some responsibility and some measure of the degree of that responsibility; (2) the place of local and State interests in the Federal development of water resources; (3) uniform standards for use by the executive branch for the measurement of economic justification of water resource development projects; and (4) uniform standards for the allocation of costs in multiple-purpose projects and uniform criteria for the establishment of rates for the sale of products to recover such costs. A series of four reports were made to the main Committee by the Jones subcommittee. These reports were shelved.
During this time interval, the studies of the Missouri Basin Survey Commission were of national interest. President Truman, in establishing the Commission in 1952 (A37), asked the members to "give the country their advice as to the best way to proceed to achieve any orderly, businesslike development of the resources of the basin." The Commission unanimously agreed to the need for a central organization to direct and coordinate land and water resources development in the Missouri Basin. However, the Commissioners could not agree on the best form of organization (A41).

The Commission on Organization of the Executive Branch of the Government (Second Hoover Commission) established July 10, 1953 (A43), created a Task Force on Water Resources and Power. Several Recommendations made by this Task Force included limiting Federal responsibilities and activity and encouraged local authority participation in water resources planning and development; elimination of competition with private enterprises; project justification and local payments and contributions; and a strengthening of congressional control over water resources and power programs.

The report of the Task Force was not accepted by the Hoover Commission for various reasons. The Commission itself reported its own series of recommendations on June 30, 1955, asking Congress to adopt a nine-point national water policy (A45).

The Hoover Commission also recommended that a water resources board be established to make broad policy recommendations to the President and Congress. The board would also coordinate plans and actions of the Federal agencies. No serious consideration was given to implementing the recommendations of the Hoover Commission report due to the change of Congressional leadership.

Prior to the Hoover Commission's report, President Eisenhower appointed the Presidential Advisory Committee on Water Resources
Policy on May 26, 1954 (A44). The charge to the Committee was to make recommendations for "strengthening, clarification, and modernization of water policies, together with a suggested approach to the solution of organization problems involved." The Committee consisted of the Secretaries of Interior, Agriculture, and Defense. The Secretaries of Commerce, and Health, Education, and Welfare, along with the Director of the Bureau of the Budget participated on an ad hoc basis.

The report of the Advisory Committee was submitted to Congress on January 17, 1956 (A46). As other various committees had done in the past, the Advisory Committee recommended:

...(1) that the present program of basic data collection (such as rainfall, streamflows, and hydrology) be accelerated, and be programed and carried out on a more consistent and definite basis; (2) that planning for water resources and related developments be conducted on a cooperative basis with representatives of all Federal, State, and local agencies involved, and that this joint participation be continuous from the beginning in order that plans and projects developed assure the best and most effective use and control of water to meet both the current and long-range needs, of the people of a region, State, or locality, and of the Nation as a whole.

To implement and accomplish the goals set forth, the Committee recommended an organization plan be substantially as follows:

(a) The position of Coordinator of Water Resources be established to provide Presidential direction to agency coordination and to establish principles, standards, and procedures for planning and development of water resources projects; (b) An independent Board of Review be created to analyze the engineering and economic feasibility of projects and report to the President through the Coordinator; (c) Regional or river basin water resources committees be formed with a permanent nonvoting chairman appointed by the President and with membership composed of representatives of all Federal departments and States involved; (d) A permanent Federal Inter-Agency Committee, advisory in character, on Water Resources be
established under the chairmanship of the Coordinator composed of principal policy-making officials of the agencies concerned.

Other recommendations of the Presidential Advisory Committee concerned Federal, State, and local relationships in the field of water rights, priority of use of water, evaluation and authorization of projects, and cost-sharing among the beneficiaries.

The President asked Congress for prompt attention to the recommendations of the Presidential Advisory Committee on Water Resources Policy. However, no specific legislative proposals were introduced by the President. The Senate Committees on Interior and Insular Affairs and Public Works held hearings and called for a reassertion and re-establishment of the power and functions of the Congress in the field of land and water resources development. The Senate continued its interest in this matter, requesting a study be made by its Interior and Insular Affairs and Public Works Committees for the purpose of designing and formalizing standards and criteria for water resource project evaluation.

The study undertaken led to the adoption of Senate Resolution 148 of the 85th Congress (A47). There appeared to be a significant difference of opinion between the Administration and the Senate. The Advisory Committee recommended tightening standards for economic evaluation of proposed projects and an increased sharing of costs by local beneficiaries, together with a centralization of Federal power in the water resources field in the executive branch. The Senate in its Resolution 148, however, appeared to liberalize procedures for economic analysis, speed the authorization of projects, and strengthen the decision-making role of the Congress in the water resources field.
Recent Activities

The lack of action on the many recommendations of various study groups on water resources in the past, coupled with the great demand on our water resources, brought about the formation of the Senate Select Committee on Natural Water Resources in April, 1959 (A48). The Committee was authorized to make studies:

...of the extent to which water resources activities in the United States are related to the national interest, and of the extent and character of water resources activities, both governmental and non-governmental, that can be expected to be required to provide the quantity and quality of water for use by population, agriculture, and industry between the present time and 1980, along with suitable provisions for related recreational and fish and wildlife values; to the end that such studies and the recommendations based thereon may be available to the Senate in considering water resources policies for the future.

Some 90 studies covering all aspects of water resources activities in the United States were made by the Committee (A49). It held hearings in all parts of the country. The findings of the Committee along with its report to the Senate are considered to be an invaluable contribution to the water resources field.

The Committee reported five major categories of effort needed in the future for meeting prospective demands on a long-range basis so as not to inhibit national or regional economic growth (A50). These were:

1. Regulating streamflow through the construction of surface reservoirs and watershed management.
2. Improving the quality of our streams through more adequate pollution abatement programs.
3. Making better use of underground storage.
4. Increasing the efficiency with which water is used through elimination of wasteful practices, improved sewage treatment methods, recirculation, increased irrigation efficiency and substitution of air for water cooling.
(5) Increasing the natural water yield by desalting, weather modification, and other artificial means.

The summary report of the Committee contained five recommendations which pertained primarily to water resources planning (A50). The recommendations are worthy of reprint here because of their significance on the present and future of the nation's water resource planning and development policies. These recommendations are as follows:

(1) Federal Government, in cooperation with the States, should prepare and keep up to date plans for comprehensive water development and management for all major river basins of the United States. Such plans should take into account prospective demands for all purposes served through water development giving full recognition to non-revenue yielding purposes such as streamflow regulation, outdoor recreation, and preservation and propagation of fish and wildlife, and keeping in mind the ultimate need for optimum development of all water resources. All practicable means of meeting demands should be considered. The executive branch should be requested to submit plans to the Congress in January 1962, for undertaking and completing such studies in all basins by 1970. Once prepared, the plans should be brought up to date periodically. Reports on individual projects submitted to Congress for authorization should specify how the project fits into the comprehensive long-range program, and the range of alternative purposes that might be served by the resources needed for the recommended projects.

(2) The Federal Government should stimulate more active participation by the States in planning and undertaking water development and management activities by setting up a 10-year program of grants to the States for water resources planning. A minimum of about $5 million in Federal funds should be made available annually for matching by the States for use in the preparation of long-range comprehensive plans for water resources development along the lines recommended in No. 1 above.
(3) The Federal Government should undertake a coordi-
nated scientific research program on water. This
should include both research into ways to increase
available supplies, and ways to increase efficiency
in the use of water required to produce manufactured
goods and crops. The committee recommends that
existing programs be strengthened by taking the
following action:

(a) Expanding the programs of basic research dealing
with atmospheric physics, solar activity, hydrology
of groundwater movement and recharge, the physi-
cal chemistry and molecular structure of water,
photosynthesis, climatic cycles, and other natural
phenomena associated with water in all its forms.
Such research is essential to a major breakthrough
in such fields as short- and long-range weather
forecasting, weather modification, efficient man-
agement of underground reservoirs, evaporation
reduction, desalinization, and pollution abatement,
as well as to major improvements in works for the
storage and control of water.

(b) Providing for a more balanced and better con-
structed program of applied research for increas-
ing water supplies through desalinization, weather
modification, and evaporation and evapotranspira-
tion reduction.

(c) Providing for an expanded program of applied
research for water conservation. Special empha-
sis should be given to research on improved
waste treatment methods, on ways of increasing
efficiency in the agricultural use of water, on fish
and wildlife needs, and on methods of system plan-
ning for the optimum development of water resources
of river basins.

(d) Evaluating completed projects with a view to de-
termining modifications to enable them more
effectively to meet changing needs, to provide
better guidelines for future projects, and to better
determine their effect on the local, regional, and
national economy.

The executive branch should be requested to review
present research programs in the field of water and
to develop a coordinated program of research designed to meet the foregoing objectives. This should be sub-
to Congress in January 1962, so that it can be consid-
ered along with the budget estimates for the 1963,
fiscal year.

(4) The Federal Government should prepare bienially an
assessment of the water supply-demand outlook for
each of the water resource regions of the United States,
as a means of informing the Congress and the public of
current and prospective public action needed to meet
future demands. The executive branch should be re-
quested to submit the first such report to the Congress
in January 1963.

(5) The Federal Government in cooperation with the States
should take the following steps to encourage efficiency
in water development and use:

(a) Regulate flood plain use as a means of reducing
flood damages whenever such regulation provides
greater net benefits to the national economy than
would be provided through other methods of pre-
venting flood losses. Additional steps should be
taken to delineate flood hazard areas so that the
public will be aware of the risks involved in
occupying flood plains.

(b) Study the emerging water problems of the areas
in which water shortages will be most acute by
1980, with a view to finding ways that these water
shortages can be dealt with in such manner as to
minimize adverse effects on the economy of the
area.

(c) Study the future needs for major storage reser-
voirs for river regulation for all purposes, and
report to the Congress with specific recommenda-
tions as to steps that should be taken to preserve
any necessary sites so that they will be available
for use when needed at minimum cost.

(d) Provide for public hearings to be held in the
vicinity of federally sponsored water resources
facilities whenever such facilities are proposed
for development or whenever any major change
in works or policies is to be made. Prior to the
hearings, the proposed change or development
should be made public, and comments should be solicited from State and local agencies and from organizations and individuals affected.

The Committee hoped that appropriate legislation to implement these recommendations would be introduced in the Senate and considered by the appropriate legislative committees.

In action areas for meeting national goals, the Committee stated the need for adequate public understanding for the support of any desirable public program. It believed "that development of informed public opinion about water resources would do more toward getting what the country needs in water resources policy, and implementing that policy in the long run, than any other specific recommendation it might make."

The Committee pointed out that comprehensive planning is not being applied in many river basins in the United States. It suggested that "concept of comprehensive development be redefined to include all purpose served by water resources and all measures available for meeting prospective demands, including the preservation and improvement of water quality, instead of limiting this definition to the mere volumetric management of surface water resources, which has generally gone under the term of comprehensive development in the past."

The need for improved State and local planning and decision making was stressed by the Committee. It was believed that "any steps toward comprehensive planning for river basins must continue to be worked out within the framework of local and regional needs." Progress toward this goal was noted by the Committee recognizing the work and contributions of the Missouri Basin Inter-Agency Committee.

After reviewing the possibility of reorganizing portions of the Federal administrative procedures dealing with water resources, the
Committee discharged proposals for change and concluded that, "The Committee believes that the existing agencies are and will be able to accommodate themselves to carrying out the improvements in the areas suggested herein and should do so."

The Select Committee report was endorsed by the executive branch of the government. President Kennedy urged immediate action on several of the Select Committees' recommendations and sent draft legislation to the 87th Congress for the Water Resources Act of 1961, S. 2246 and H. R. 8177. These two bills were introduced into Congress on July 14 and July 17, 1961. In a letter accompanying the proposed legislation, the President said these bills would implement the recommendations made by the Senate Select Committee on National Water Resources in its final report.

In general terms, the Administration bill would authorize appropriation of $5 million a year for 10 years for matching grants to States for the planning of water resources development projects. The measure would also create a four-member interdepartmental Water Resources Commission to coordinate river basin planning and to maintain a continuing study of water supply requirements and management. The Commission would consist of the Secretaries of Interior, Agriculture, Army, and Health, Education, and Welfare. In addition, river basin commissions would be established to prepare and keep current comprehensive, integrated, joint plans for Federal, State, and local development of water and related land resources.

Hearings were held on S. 2246 by the Senate Interior and Insular Affairs and Public Works Committee but no action was taken before Congress adjourned in September, 1961.

In his March 1, 1962 Conservation message, President Kennedy renewed his request for Congressional action on legislation (S. 2246 and H. R. 8177) for water resources planning. No action had been
taken by the 2nd session of the 87th Congress when it adjourned in October, 1962.

During the 88th Congress, 1st session, in 1963, the Senate passed two water resource bills. These were S. 1111, which was a slightly modified version of the 1961 Water Resources Planning Act, and S. 2, which provided for the establishment of water resources research centers at land-grant colleges and state universities. The sponsors of the two bills said that S. 1111 would implement four of the five major 1961 recommendations of the Select Committee and S. 2 would implement the fifth. The House failed to act on either bill in 1963.

Actions of the 2nd session of the 88th Congress resulted in the enactment of S. 2, on July 17, 1964 (P. L. 88-379). This law authorizes Federal grants to encourage research in water resources problems and training of water scientists. This law also directs coordination of all Federal water resources research projects and provides for a central catalog of Federal and other water research.

The Water Resources Planning Act, S. 1111, was again not passed in 1964 primarily because of fears that State water rights would be encroached upon by the Federal government.

A Water Resources Planning Act, similar to the original Act proposed in 1961, was again introduced, this time into the 89th Congress, 1st session, in 1965. The House and Senate bills introduced are H.R. 1111 and S. 21.

S. 21 was passed with amendments on February 25, 1965 by the Senate and was submitted to the House for consideration.

H.R. 1111 was passed by the House with amendments on March 31, 1965, but passage of this bill was vacated on that same date in favor of S. 21 as amended by the House after receiving it from the Senate.
A conference of members of the House and Senate was called to resolve conflicting issues. The conference report on the bill, which indicates approval of a compromise bill, was agreed to on July 13 by the House and July 14 by the Senate. Approval of the compromised bill by the House, Senate, and President is all that is needed to make this very significant event in water resources planning law.

The compromised bill which will be returned to the Senate and House for approval is too lengthy to discuss in its entirety here. In broad terms, the bill provides for the optimum development of the Nation's natural resources through the coordinated planning of water and related land resources. This planning is to be accomplished through the establishment of a Water Resources Council and river basin commissions, and by providing financial assistance to the States in order to increase their participation in such planning.
### APPENDIX TABLE I

**SIGNIFICANT HISTORICAL EVENTS IN NATIONAL WATER RESOURCES PLANNING**

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>A2</td>
<td>April 24, 1876</td>
<td>&quot;Report of the Select Committee on Transportation Routes to the Seaboard,&quot; by the Windom Committee, U.S. Senate Report No. 307, 43rd Congress, 1st session.</td>
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<tr>
<td>A5</td>
<td>March 14, 1907</td>
<td>President Theodore Roosevelt appointed the Inland Waterways Commission (IWC).</td>
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<td>A7</td>
<td>June 8, 1908</td>
<td>President Theodore Roosevelt appointed the National Conservation Commission (NCC), Executive Order No. 809.</td>
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<td>Reference Number</td>
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<tr>
<td>A16</td>
<td>March 3, 1925</td>
<td>&quot;Rivers and Harbors Act,&quot; Section 3 of Act led to later '308' reports, 43 Stat. 1185, 1190.</td>
</tr>
<tr>
<td>A17</td>
<td>April 13, 1926</td>
<td>&quot;308&quot; Report, list of streams prepared by the Army Engineers and the Federal Power Commission, House Document No. 308, 69th Congress, 1st session.</td>
</tr>
<tr>
<td>A18</td>
<td>January 21, 1927</td>
<td>&quot;Rivers and Harbors Act,&quot; famous '308' reports evolved from this Act, 44 Stat. 1010, 1015.</td>
</tr>
<tr>
<td>A19</td>
<td>February 2, 1934</td>
<td>Congress requested President Franklin Roosevelt to report on water problems; acting on this request, Senate Res. 164 and House Res. 248, 73rd Congress, 2nd session, the President appointed a Committee on Water Flow.</td>
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<tr>
<td>A21</td>
<td>June 30, 1934</td>
<td>National Resources Board (NRB) established by the President, Executive Order No. 6777.</td>
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<tr>
<td>A22</td>
<td>October 1, 1934</td>
<td>Mississippi Valley Committee of the Public Works Administration issued a report on water resources planning.</td>
</tr>
<tr>
<td>A23</td>
<td>June, 1935</td>
<td>National Resources Committee organized, Executive Order No. 7065.</td>
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<tr>
<td>A24</td>
<td>December, 1936</td>
<td>&quot;Drainage Basin Problems and Programs,&quot; report issued by the National Resources Committee.</td>
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<tr>
<td>Reference Number</td>
<td>Date</td>
<td>Event</td>
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<tr>
<td>A26</td>
<td>1939</td>
<td>National Resources Board reorganized into the National Resources Planning Board.</td>
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<td>A27</td>
<td>1943</td>
<td>National Resources Planning Board terminated by lack of operating funds.</td>
</tr>
<tr>
<td>A28</td>
<td>December 29, 1943</td>
<td>&quot;Procedure to Insure Cooperation in the Preparation of Reports on Multiple-Purpose Projects,&quot; inter-agency agreement establishing Federal Inter-Agency River Basin Committee.</td>
</tr>
<tr>
<td>A30</td>
<td>July 7, 1946</td>
<td>Commission on Reorganization of the Executive Branch of the Government (First Hoover Commission) established.</td>
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<td>A34</td>
<td>January 22, 1951</td>
<td>Materials Policy Commission (Paley Commission) created by President.</td>
</tr>
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<td>A36</td>
<td>August 20, 1951</td>
<td>Subcommittee to study Civil Works, House of Representatives (Jones Subcommittee), established.</td>
</tr>
<tr>
<td>A38</td>
<td>June 2, 1952</td>
<td>Materials Policy Commission report; contained chapter entitled &quot;Supplying Industry with Water.&quot;</td>
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<tr>
<td>A39</td>
<td>December 5, 1952</td>
<td>Jones Subcommittee reported issuing a series of four committee prints.</td>
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<tr>
<td>Reference Number</td>
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<tr>
<td>A42</td>
<td>July 10, 1953</td>
<td>Commission on Intergovernmental Relations (Kestnbaum Commission) established, P.L. 109, 83rd Congress</td>
</tr>
<tr>
<td>A44</td>
<td>May 26, 1954</td>
<td>Presidential Advisory Committee on Water Resources Policy established by President Eisenhower.</td>
</tr>
<tr>
<td>A47</td>
<td>January 28, 1958</td>
<td>Senate Resolution 148</td>
</tr>
<tr>
<td>A48</td>
<td>April 20, 1959</td>
<td>Select Committee on National Water Resources created, Senate Resolution No. 48, 86th Congress, 1st session.</td>
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</tbody>
</table>
APPENDIX B

Agreement for the U.S. Inter-Agency Committee on Water Resources

Letter of Presidential Approval
INTERAGENCY AGREEMENT ON COORDINATION OF WATER AND RELATED LAND RESOURCES ACTIVITIES

1. PURPOSE

It is the purpose of this agreement to provide improved facilities and procedures for the coordination of the policies, programs, and activities of the Departments of the Interior, Agriculture, Commerce, Health, Education, and Welfare, and the Army, and the Federal Power Commission in the field of water and related land resources investigation, planning, construction, operation, and maintenance; to provide means by which conflicts may be resolved; and to provide procedures for coordination of their interests with those of other Federal agencies in the water and related land resources field.

2. ESTABLISHMENT

For this purpose, there is established, subject to approval by the President, an Inter-Agency Committee on Water Resources to be comprised of representatives of the Departments of the Interior, Agriculture, Commerce, Health, Education, and Welfare, and the Army, and the Federal Power Commission.

(a) Membership on the Committee shall be composed of a principal policy official from each agency, such as the Secretary, Under Secretary, or an Assistant Secretary of Interior, Agriculture, Commerce, Health, Education, and Welfare, and Army, and the Chairman or a member of the Federal Power Commission. In addition, the Chief of Army Engineers may act for the Secretary of the Army. When alternates are required, they will also be selected from principal policy officials.

(b) The chairmanship of the Committee shall rotate annually among the member agencies.

(c) The Committee shall have such staff assistance as the members may, on request, assign to it.

3. METHOD OF OPERATION

(a) Meetings of the Committee shall be held as often as required, but at least once every two months.

(b) Meetings shall be executive in nature, with attendance generally limited to members, alternates, and supporting staff having direct assignment on matters under discussion.
(c) The chairman agency shall provide the Secretary for the Committee. In addition, the other member agencies shall each provide a principal staff assistant to assist the Committee Secretary. The Secretary and five assistants will constitute the primary staff of the Committee.

(d) The Committee shall serve as a means for achieving final agreement among the member agencies on issues or problems which may arise. Staff work necessary to present the essence of such issues or problems to the Committee shall be carried on by the Committee staff, with the assistance of such special subcommittees as may be appointed by the Committee.

(e) Minutes of Committee meetings will be prepared to record the decisions of the Committee. These minutes will be for use of member agencies only, unless a wider distribution is agreed to by the Committee.

(f) The Committee will establish further procedures governing its operation as required.

4. RESPONSIBILITIES

It will be the responsibility of the Committee to establish means and procedures to promote coordination of the water and related land resources activities of the member agencies; to undertake resolution of interagency differences to the extent possible under existing law and administration policy; and to suggest to the President changes in existing law or administration policy which would promote coordination and eliminate or reduce interagency differences.

Coordination of work and resolution of conflicts will be directed to activities such as the following:

(a) Collection and interpretation of basic data

Continuing procedures would be established to coordinate agency activities in collection and interpretation of basic data both at field level and in Washington. Work would be carried on through standing subcommittees on hydrology and sedimentation.

(b) Investigation and planning of water and related land resources projects

Continuing procedures would be established to coordinate agency activities in the investigation and planning of water and related land resources projects and programs, beginning
at the earliest stages of investigations at field level. Included would be coordinated programming and scheduling of investigations, interchange of basic data and information during the planning process, exchange of planning reports first at field level and finally at the Washington level. Included also would be a means for reconciling differences among agencies before planning reports are submitted in final form to the President and the Congress. For this latter purpose, a special subcommittee of the main Committee would be established should it be required for the particular case.

(c) **Programming (including scheduling) of water and related land resources construction and development**

Procedures would be established to insure coordination of agency programs of construction and development, with particular emphasis given to the scheduling of programs requiring joint financing or involving transfer of funds between agencies.

A standing subcommittee, meeting periodically as required, would be established for this purpose.

(d) **Evaluation standards**

To insure coordinated standards for project and program evaluation, a standing subcommittee would be established to develop and recommend to the Committee uniform standards and procedures in this field, and to consider special problems on evaluation and economics as they arise.

(e) **Water resources policies**

Coordination of specific policy issues involving, for example, power development and marketing, reimbursement, land reclamation, or flood control would require special treatment by the Committee. In some cases, the Committee would handle the problem directly through its committee staff. In other cases, a special subcommittee would be appointed to study the problem and make recommendations to the main committee.

5. **ASSOCIATE MEMBERSHIP AND PARTICIPATION BY OTHER FEDERAL AGENCIES**

The Department of Labor will be invited to become an associate member of the Committee, and to designate representatives to attend meetings and participate in the work of the Committee and its subcommittees within the scope of its interests.
Where appropriate, other Federal agencies will be asked to participate in Committee meetings and to appoint representatives to specific subcommittees, in order that the work of the Committee members may be coordinated with the related work of all agencies.

6. **FIELD INTER-AGENCY COMMITTEES**

(a) Federal membership on the Missouri Basin Inter-Agency Committee, the Columbia Basin Inter-Agency Committee, and the Pacific Southwest Federal Inter-Agency Technical Committee shall be reconstituted to conform with membership on the main Committee. State participation on these committees shall not be affected by this agreement.

(b) Federal membership on the Arkansas-White-Red Basins Inter-Agency Committee and the New England-New York Inter-Agency Committee would continue as at present until completion of the studies by June 30, 1955. The future of these committees would be considered at that time.

(c) The main Committee will revise the charters of the Missouri Basin, Columbia Basin, and Pacific Southwest Committees to conform with the provisions of this agreement.

(d) The main Committee shall establish procedures for dealing with matters involving the field committees on a continuing basis.

7. **EFFECTIVE DATE**

This agreement will become effective upon its approval by the President.

SIGNED:  
Douglas McKay  
Secretary of the Interior  
Oveta Culp Hobby  
Secretary of Health, Education, and Welfare

Ezra T. Benson  
Secretary of Agriculture  
Robert T. Stevens  
Secretary of the Army

Sinclair Weeks  
Secretary of Commerce  
Jerome K. Kuykendall  
Chairman, Federal Power Commission
Dear Mr. Secretary:

I have reviewed the enclosed "Inter-Agency Agreement on Coordination of Water and Related Land Resources Activities" submitted by the Department of the Interior to the Director of the Bureau of the Budget. This agreement provides for the replacement of the existing Federal Inter-Agency River Basin Committee by an Inter-Agency Committee on Water Resources.

The objectives, functions, and methods of operation proposed for the new Committee seem to me to be desirable and appropriate for an inter-agency group of the type described by the agreement. I am also pleased to note that the participating departments and agencies will be represented on the Inter-Agency Committee on Water Resources by principal policy officials such as secretaries, under secretaries, and assistant secretaries. The importance of the work envisaged for the new Committee requires representation at this level.

Since the representative of the Department of Commerce is now Chairman of the existing Inter-Agency River Basin Committee, I suggest that the representative of that Department serve as the initial Chairman of the Inter-Agency Committee on Water Resources.

The Department of Labor will take part in the work of the main committee and its subcommittees as an associate member. It is my understanding that this relationship will permit adequate participation by that Department in matters affecting its responsibilities.

I hereby approve the "Inter-Agency Agreement on the Coordination of Water and Related Land Resources Activities." Each participating department and agency should make every effort to assure the successful achievement of the objectives set forth in the agreement.

Sincerely,

(signed) Dwight D. Eisenhower

The Honorable Douglas McKay
The Secretary of the Interior
Washington 25, D. C.

Enclosure
APPENDIX C

Agreement Creating The Federal Inter-Agency River Basin Committee
PROCEDURE TO INSURE COOPERATION IN THE PREPARATION OF REPORTS ON MULTIPLE PURPOSE PROJECTS

To permit agencies of the Departments of War, Interior, and Agriculture, and the Federal Power Commission, to cooperate more completely in the preparation of reports on multiple-purpose projects and to correlate the results to the greatest practicable extent, the following procedure is established:

1. When investigations on multiple-purpose projects are ordered by any one of the agencies named above, each of the others will be advised.

2. To insure that prompt contact is established by field offices, whenever the Chief of Engineers, The Commissioner of the Bureau of Reclamation, the Land Use Coordinator of the Department of Agriculture, or the Chairman of the Federal Power Commission shall determine that his organization has a direct responsibility in a project to be investigated by another agency, he shall notify the latter to that effect.

3. In all cooperative projects the field offices will be instructed to communicate and confer with each other to:

   (a) Determine what pertinent data are in existence and to arrange for the interchange of such data so as to avoid duplication of effort.

   (b) Determine what pertinent data each agency intends to secure for its own purposes and to arrange a schedule which will avoid duplication and facilitate the concurrent submission of reports so far as practical.

   (c) Arrange for interchange of information throughout the preparation of reports.

   (d) Arrange for conferences between field offices during preparation of reports and when reports are completed and ready to forward. Each office will be authorized to submit its comments on the reports of other agencies, such comments to be forwarded with the reports.

4. Conferences will be held in Washington not less often than once each calendar month between the Chief of Engineers,
the Commissioner of Reclamation, the Land Use Coordinator and the Chairman, Federal Power Commission, or their duly authorized representatives, for the purpose of discussing the results of studies and investigations, adjusting differences of opinion and promoting ways and means for the implementation of this agreement.

5. All work done by one agency at the request of and for the use of a second agency will be paid for by the latter; all work performed by one agency for its own purposes, even though the resulting data are made available to a second agency, shall be paid for by the former.

6. Information obtained by one agency from another will be treated as confidential until released by the giving agency or until the final report is released.

(SIGNED) E. Reybold
Chief of Engineers

H. W. Bashore
Commissioner, Bureau of Reclamation

E. H. Wiecking
Land Use Coordinator, U. S. Department of Agriculture

Leland Olds
Chairman, Federal Power Commission

29 December 1943
APPENDIX D

Charter of Columbia Basin Inter-Agency Committee
November 16, 1954

CHARTER
FOR A
COLUMBIA BASIN INTER-AGENCY COMMITTEE

1. INTRODUCTION - In order to facilitate progress on the program of water and related land resources development in the Pacific Northwest, the Columbia Basin Inter-Agency Committee was established February 5, 1946, by the Federal Inter-Agency River Basin Committee to implement the policies and purposes of the Federal Inter-Agency agreement dated December 29, 1943. A new Federal Inter-Agency agreement on coordination of water and related land resources activities was approved by the President on May 26, 1954. The Charter of the Columbia Basin Inter-Agency Committee is accordingly herein revised to be in consonance with the new Federal Inter-Agency agreement.

2. PURPOSE - It is the purpose of this agreement to provide in the Columbia River region improved facilities and procedures for the coordination of the policies, programs, and activities of the Departments of the Interior; Commerce; Labor; Agriculture; Health, Education, and Welfare; and the Army, the Federal Power Commission; and the States in the field of water and related land resources investigation, planning, construction, operation, and maintenance; to provide means by which conflicts may be resolved; and to provide procedures for coordination of their interests with those of other Federal, local governmental, and private agencies in the water and related land resources field.

3. ESTABLISHMENT -
(a) For this purpose there is established a Columbia Basin Inter-Agency Committee to be comprised of representatives of the
Departments of the Interior; Commerce; Labor; Agriculture; Health, Education, and Welfare; and the Army; the Federal Power Commission; and any of the States of Washington, Oregon, Idaho, Montana, Wyoming, Utah, and Nevada which accept an invitation to participate.

(b) The Federal members on the Committee shall be designated by the head of the Federal agency they are to represent and shall preferably be resident in the area.

(c) The Governor of each of the States concerned will be invited to be a member of the Committee.

(d) Committee members may designate other officials to serve as alternates.

(e) Federal agencies will participate in the work of the Committee in accordance with their respective responsibilities and interests and with the intent of the "Inter-Agency Agreement on Coordination of Water and Related Land Resources Activities" as approved by the President on May 26, 1954.

(f) When appropriate, other Federal, State, public and private agencies will be asked to participate in Committee meetings and to appoint representatives to specific subcommittees, in order that the work of the Committee may be coordinated with the related work of all agencies.

(g) A Chairman shall be elected annually from and by the Federal members provided that, except by unanimous consent of the Federal members, the Chairman agency shall not succeed itself.

(h) The Chairman agency shall provide the Secretary for the Committee and the necessary administrative support incident to his tenure.

(i) The Committee shall have such additional staff assistants as the members may, upon request, assign to it.
4. **METHOD OF OPERATION** -

   (a) Meetings will be held as often as required, at times and places appropriate to the agenda, and normally at intervals of not more than two months. Meetings normally will be open to the public and the press. Special executive sessions of the Committee may be held at the call of the Chairman.

   (b) The Committee shall serve as a means for coordinating activities and achieving accord or agreement, at the regional level, among its member agencies and States on issues or problems which may arise. Staff work necessary to coordinate activities and present the essence of any issues or problems to the Committee shall be carried on by the Committee staff or by subcommittees as appropriate and as may be appointed by the Chairman and approved by the Committee.

   (c) Problems or questions which cannot be fully or satisfactorily resolved by the Committee may be referred to the Inter-Agency Committee on Water Resources for consideration.

   (d) Minutes of meetings will be prepared to record the actions and recommendations of the Committee. The minutes will be primarily for use of the participating agencies, but a wider distribution may be made when considered desirable by the Committee.

   (e) The Committee may establish further procedures governing its operations as required.

5. **RESPONSIBILITIES** -

   (a) It will be the responsibility of the Committee to establish means and procedures to promote coordination of the water and related land resource activities of the Federal agencies and the States; to promote resolution of inter-agency problems at the regional level; to suggest to the Inter-Agency Committee on Water Resources and the States changes in law or policy which would promote coordination,
or resolution of inter-agency problems; and in its discretion to communicate with the Inter-Agency Committee on Water Resources on any matters of mutual interest.

(b) The efforts of the Committee on coordination of work and resolution of conflicts will be directed towards all agency and State activities involved in their respective water and related land resources development responsibilities and shall include coordination of the following:

(1) Collection and interpretation of basic data.
(2) Investigation and planning of water and related land resources projects.
(3) Programming (including scheduling) of water and related land resources construction and development.

6. GEOGRAPHICAL JURISDICTION - The geographical area to be encompassed within the sphere of Committee influence will include the entire States of Oregon (except the Klamath Drainage Basin), Washington, Idaho (except that part draining into Great Salt Lake), Montana west of the Continental Divide, and those portions of the States of Wyoming, Utah, and Nevada lying within the Columbia River Basin.
APPENDIX E

Senate Document No. 97
POLICIES, STANDARDS, AND PROCEDURES IN THE FORMULATION, EVALUATION, AND REVIEW OF PLANS FOR USE AND DEVELOPMENT OF WATER AND RELATED LAND RESOURCES

PREPARED UNDER THE DIRECTION OF
THE PRESIDENT'S WATER RESOURCES COUNCIL
TOGETHER WITH A STATEMENT BY
Senator CLINTON P. ANDERSON
OF NEW MEXICO

MAY 29, 1962.—Ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1962
S. Res. 342

IN THE SENATE OF THE UNITED STATES,
May 29, 1962.

Resolved, That there be printed as a Senate document an agreement of the Secretary of the Army, the Secretary of Agriculture, the Secretary of Health, Education, and Welfare, and the Secretary of the Interior entitled "Policies, Standards, and Procedures in the Formulation, Evaluation, and Review of Plans for Use and Development of Water and Related Land Resources," together with correspondence of the Secretary of the Interior and the President of the United States in regard to the matter, and the explanatory remarks of Senator Clinton P. Anderson, of New Mexico, on the floor of the Senate May 17, 1962, and that there be printed twenty-five hundred additional copies for the use of the Committee on Interior and Insular Affairs.

Attest:

FELTON M. JOHNSTON, Secretary.
Mr. ANDERSON. Mr. President, on May 15, 1962, President Kennedy approved for application by the agencies of the executive branch, including the Bureau of the Budget, policies, standards, and procedures for the formulation, evaluation, and review of plans for water and related land resource projects. Those standards had been developed at the President's direction by the Secretaries of the Departments of the Army; Agriculture; Health, Education, and Welfare; and Interior, with the latter serving as chairman. The heads of those four Departments which, under the President, have the principal statutory responsibilities for Federal activities concerned with water and land resources conservation and development, were unanimous in their joint recommendations.

This action will place Federal water resource projects proposals in a realistic and forward-looking context that will enable both the executive and the legislative branches to make informed judgments of the merits and desirability of the projects. Thus a significant advance has been made in the resources field. As a consequence, it will be possible soundly to devise, authorize, and execute the large programs that are urgently needed to match water supplies to the water requirements of our rapidly growing population and expanding economy. Furthermore, State officials and the public will also be fully informed about proposed projects.

The recommendations of the four Department heads, and the President's approval of them, are consistent with the established policies of the Senate. They are, in fact, in compliance with requests of the Senate.

The new policies and standards, established in an agreement of the four Department heads, replace Budget Bureau Circular A-47 which caused considerable contention, both as to content and as to the propriety of its source.

On July 26, 1956, in the 84th Congress, the Senate expressed its sense relative to the conservation and development of water and related land resources in Senate Resolution 281 which stated:

Land and water resources development should be planned on a comprehensive basis and with a view to such an ultimately integrated operation of component segments as will insure the realization of the optimum degree of physical and economic efficiency.

Pursuant to the direction provided in Senate Resolution 281 of the 84th Congress, studies and hearings on the matter were conducted jointly by the Committees on Interior and Insular Affairs and on Public Works over a period of a year. These led to a resolution proposing standards and criteria for the authorization of projects. on January 28, 1957, after full debate for 2 days, that resolution—Senate Resolution 148 of the 85th Congress—was agreed to by the Senate.
STATEMENT

Senate Resolution 148 sets forth in considerable detail the Senate's concept of proper standards and criteria for evaluation of water and land resource projects proposed for authorization. It is significant that the standards that have just been approved by President Kennedy for executive branch use in formulation of project plans and proposals conform in an important degree with those set forth in Senate Resolution 148.

An interesting historical sidelight is that Senator Kennedy was in the chair as Presiding Officer when the Senate agreed to Senate Resolution 281 which initiated the valuation standards that 5 years later, as President, he applied to the executive branch.

The document approved by President Kennedy states as objectives of planning:

The basic objective in the formulation of plans is to provide the best use, or combination of uses, of water and related land resources to meet all foreseeable short- and long-term needs. * * *

National economic development, and development of each region within the country, is essential to the maintenance of national strength and the achievement of satisfactory levels of living. Water and related land resources development and management are essential to economic development and growth. * * *

Well-being of all of the people shall be the overriding determinant in considering the best use of water and related land resources. Hardship and basic needs of particular groups within the general public shall be of concern, but care shall be taken to avoid resource use and development for the benefit of a few or the disadvantage of many. In particular, policy requirements and guides established by the Congress and aimed at assuring that the use of natural resources, including water resources, safeguard the interests of all of our people shall be observed. * * *

President Kennedy said to his four department heads, "You have done a difficult task well."

In order that the Senate and citizens throughout the Nation may be fully informed of this important accomplishment, I am submitting a resolution to have the new agreement between the departments, approved by the President, printed as a Senate document, together with an exchange of correspondence on the matter between Secretary of the Interior Udall and President Kennedy and these explanatory remarks.
LETTER TO THE PRESIDENT

The President,
The White House,
Washington, D.C.

DEAR MR. PRESIDENT: In memorandum of October 6, 1961, to each of us, the Secretaries who would comprise the Water Resources Council under your proposed Water Resources Planning Act, you cited the need for an up-to-date set of uniform standards for the formulation and evaluation of water resources projects. You requested us, consulting with officials of other interested agencies, to review existing principles and procedures and make such recommendations as we might deem appropriate.

Our recommendations in response to your request are embodied in the enclosed statement of "Policies, Standards, and Procedures in the Formulation, Evaluation, and Review of Plans for Use and Development of Water and Related Land Resources." Upon your approval, we intend that the provisions of this document shall be applied by each of our Departments.

During preparation of the statement, a draft was reviewed by other interested agencies. Comments were received from these agencies and staff discussions in most instances were held. The views of these agencies were carefully considered in final preparation of the statement.

In addition to the policies, standards, and procedures set forth in this statement, there is need for up-to-date policies, standards, and procedures relating to cost allocation, reimbursement, and cost sharing, and other subjects of mutual concern to our four Departments. If you approve, we intend to consider these subjects and make further recommendations to you.

ELVIS J. STAHR, JR.,
Secretary of the Army,

STEWART L. UDALL,
Secretary of the Interior,
Chairman.

ORVILLE L. FREEMAN,
Secretary of Agriculture,

IVAN A. NESTINGEN,
Acting Secretary of Health, Education, and Welfare.

MAY 15, 1962.
LETTER OF PRESIDENT JOHN F. KENNEDY TO THE SECRETARY OF THE INTERIOR; THE SECRETARY OF AGRICULTURE; THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE; AND THE SECRETARY OF THE ARMY

THE WHITE HOUSE,
May 15, 1962.

Your joint response to my memorandum of October 6, 1961, requesting you to review existing standards for the formulation and evaluation of water resources projects and to recommend any necessary changes constitutes a major improvement. You have done a difficult task well.

The statement of "Policies, Standards, and Procedures in the Formulation, Evaluation, and Review of Plans for Use and Development of Water and Related Land Resources" enclosed with your memorandum of today is approved for application by each of your Departments and by the Bureau of the Budget in its review of your proposed programs and projects.

There is need, as you indicate, for up-to-date policies, standards, and procedures relating to cost allocation, reimbursement, and cost sharing, and no doubt other water and related land resource subjects of mutual concern to your four Departments upon which uniformity and consistency would be in the public interest. Consideration of subjects such as these and establishment, with my approval, of necessary policies, standards, and procedures will be the responsibility of the Water Resources Council when it is created. In the meantime, I agree that you should move ahead now to a consideration of those subjects you have indicated need immediate attention.

JOHN F. KENNEDY.
POLICIES, STANDARDS, AND PROCEDURES IN THE FORMULATION, EVALUATION, AND REVIEW OF PLANS FOR USE AND DEVELOPMENT OF WATER AND RELATED LAND RESOURCES

I. PURPOSE AND SCOPE

The purpose of this statement is to establish Executive policies, standards, and procedures for uniform application in the formulation, evaluation, and review of comprehensive river basin plans and individual project plans for use and development of water and related land resources. Problems of cost allocation and of reimbursement or cost sharing between the Federal Government and non-Federal bodies will be covered subsequently.

These provisions shall govern, insofar as they are consistent with law and other applicable regulations, all formulation, evaluation, and review of water and related land resources plans. Any proposed variation from these policies and standards shall be specified in planning reports and the reasons therefor indicated.

II. OBJECTIVES OF PLANNING

The basic objective in the formulation of plans is to provide the best use, or combination of uses, of water and related land resources to meet all foreseeable short- and long-term needs. In pursuit of this basic conservation objective, full consideration shall be given to each of the following objectives and reasoned choices made between them when they conflict:

A. Development

National economic development, and development of each region within the country, is essential to the maintenance of national strength and the achievement of satisfactory levels of living. Water and related land resources development and management are essential to economic development and growth, through concurrent provision for—

- Adequate supplies of surface and ground waters of suitable quality for domestic, municipal, agricultural, and industrial uses—including grazing, forestry, and mineral development uses.
- Water quality facilities and controls to assure water of suitable quality for all purposes.
- Water navigation facilities which provide a needed transportation service with advantage to the Nation's transportation system.
- Hydroelectric power where its provision can contribute advantageously to a needed increase in power supply.
- Flood control or prevention measures to protect people, property, and productive lands from flood losses where such measures are justified and are the best means of avoiding flood damage.
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Land stabilization measures where feasible to protect land and beaches for beneficial purposes.
Drainage measures, including salinity control where best use of land would be justifiably obtained.
Watershed protection and management measures where they will conserve and enhance resource use opportunities.
Outdoor recreational and fish and wildlife opportunities where these can be provided or enhanced by development works.
Any other means by which development of water and related land resources can contribute to economic growth and development.

B. Preservation
Proper stewardship in the long-term interest of the Nation's natural bounty requires in particular instances that—
There be protection and rehabilitation of resources to insure availability for their best use when needed.
Open space, green space, and wild areas of rivers, lakes, beaches, mountains, and related land areas be maintained and used for recreational purposes; and
Areas of unique natural beauty, historical and scientific interest be preserved and managed primarily for the inspiration, enjoyment and education of the people.

C. Well-being of people
Well-being of all of the people shall be the overriding determinant in considering the best use of water and related land resources. Hardship and basic needs of particular groups within the general public shall be of concern, but care shall be taken to avoid resource use and development for the benefit of a few or the disadvantage of many. In particular, policy requirements and guides established by the Congress and aimed at assuring that the use of natural resources, including water resources, safeguard the interests of all of our people shall be observed.

III. PLANNING POLICIES AND PROCEDURES

A. National, regional, State, and local viewpoints
1. All viewpoints—national, regional, State, and local—shall be fully considered and taken into account in planning resource use and development. Regional, State, and local objectives shall be considered and evaluated within a framework of national public objectives and available projections of future national conditions and needs. Similarly, available projections of future conditions and needs of regions, States, and localities shall be considered in plan formulation.
2. Significant departures from a national viewpoint required to accomplish regional, State, or local objectives shall be set forth in planning reports by those charged with their preparation. Such reports shall also describe the present economy of the locality, State, and region, changes which can be expected on the basis of current trends, specific economic problems of the area, and the manner in which the project is expected to contribute to the sound economic growth and well-being of the locality, State, and region.
3. Comprehensive plan and project formulation shall be based upon an analysis of the relationship of goods and services to be provided
USE AND DEVELOPMENT OF WATER RESOURCES

by a proposed resource use or development to available projections of national, regional, State, and local requirements and objectives. From a national point of view, the analysis shall include, within practical limits, a comparison of the proposed resource use and development with alternative means available for providing similar goods and services to the area and other areas and an indication of its relationship, if any, to specific considerations of national security.

B. Multiple-purpose planning

Planning for the use and development of water and related land resources shall be on a fully comprehensive basis so as to consider—

(1) The needs and possibilities for all significant resource uses and purposes of development, including, but not limited to domestic, municipal, agricultural, and industrial uses of water; water quality control; navigation in relation to the Nation's transportation system; hydroelectric power; flood protection control or prevention; land and beach stabilization; drainage, including salinity control; watershed protection and management; forest and mineral production; grazing and cropland improvement; outdoor recreation, as well as sport and commercial fish and wildlife protection and enhancement; preservation of unique areas of natural beauty, historical and scientific interest; and

(2) All relevant means (including nonstructural as well as structural measures) singly, in combination, or in alternative combinations reflecting different basic choice patterns for providing such uses and purposes.

C. River basin planning

River basins are usually the most appropriate geographical units for planning the use and development of water and related land resources in a way that will realize fully the advantage of multiple use, reconcile competitive uses through choice of the best combination of uses, coordinate mutual responsibilities of different agencies and levels of government and other interests concerned with resource use. Planning use of water and related land resources, therefore, shall be undertaken by river basins, groups of closely related river basins, or other regions, and shall take full cognizance of the relationships of all resources, including the interrelationship between surface and ground water resources. Despite this primary confinement to an area, the fact should be recognized that such planning also requires consideration of pertinent physical, economic, and social factors beyond the area.

D. Individual project planning

To the extent feasible, programs and projects shall be formulated as part of a comprehensive plan for a river basin or other area, and the report proposing development shall indicate the relationship to the comprehensive plan. When a program or project has been formulated independently and not as part of a comprehensive plan, the report shall indicate, to the extent practicable, the relationship of the program or project to the probable later developments needed or to be undertaken in the basin and the reasons for proposing to proceed with the proposed program or project independently.
USE AND DEVELOPMENT OF WATER RESOURCES

E. Coordination within the Federal Government and with non-Federal interests

1. Federal planning shall be carried out on a coordinated basis from the earliest steps of investigation, survey, and planning through the entire planning and review process. When any Federal agency initiates an investigation or survey, it shall arrange for appropriate coordination and consideration of problems of mutual concern with other Federal agencies and with interested regional, State, and local public agencies and interests. When warranted, joint consideration of such problems shall be arranged. Full advantage is to be taken of all existing organizations and arrangements for coordination, such as river basin commissions, interagency committees, interstate bodies, and State and local agencies.

2. When plans for resource use or development affect the interests and responsibilities of other Federal agencies, the sponsoring agency shall, to the maximum extent practicable, consult with such agency or agencies in the field and at headquarters in conducting its investigation and preparing its report. When specific project proposals are contemplated, each affected agency shall be afforded an opportunity to participate in the investigations and surveys in an effort to develop fully coordinated proposals. Project reports shall include a statement of the extent of coordination achieved.

3. Before a report is submitted to the President and the Congress, each department or independent agency interested in the project and the concerned States shall be provided with copies of the proposed report, and given an opportunity to furnish a statement concerning the project proposal from the viewpoint of its interest and responsibility. Such statements shall be included in the reports submitted by a sponsoring agency. If such statements propose variations from the policies and standards specified herein, the reasons for each variation shall be stated. A sponsoring agency may submit a report without the views of any agency or State when a statement from that agency or State has not been received within 90 days after receipt of the project report or within such other period specified by law.

4. Planning by Federal agencies shall also be carried out in close cooperation with appropriate regional, State, or local planning and development and conservation agencies, to the end that regional, State, and local objectives may be accomplished to the greatest extent consistent with national objectives. When a proposed resource use or development affects the interest and responsibility of non-Federal public bodies, those bodies shall be furnished information necessary to permit them to evaluate the physical, economic, and social effects. Their views shall be sought, considered in preparation of reports and included in the final reports submitted to the President and the Congress or other approving authority.

F. Relation to existing law and executive orders

The policies, standards, and procedures set forth herein shall not be regarded as authorizing any deviation from general or specific requirements of law or Executive order. Whenever a plan or proposal varies from such policies, standards or procedures because of a requirement of existing law or Executive order, the variation shall be indicated, and reference made to the section of law or Executive order imposing such requirements.
USE AND DEVELOPMENT OF WATER RESOURCES

IV. REVIEW OF COMPREHENSIVE PLANS AND PROJECT PROPOSALS

With a view to arriving at general and specific independent judgments upon comprehensive plans, programs and project proposals, and parts thereof, as well as recommendations concerning such plans and proposals, review at all appropriate levels shall be based upon a thorough appraisal of planning reports and upon the following criteria:

(a) Compliance with the statement of purpose and scope, objectives of planning, and planning policies and procedures set forth herein.
(b) Compliance with law, legislative intent, and Executive policies and orders.
(c) Compliance with recognized technical standards.
(d) Compliance with standards for the formulation of plans and evaluation of tangible and intangible effects as set forth herein.

V. STANDARDS FOR FORMULATION AND EVALUATION OF PLANS

A. General setting, viewpoint, and procedures

1. Formulation of comprehensive and project plans, and evaluation of tangible and intangible effects shall reflect full consideration of, and adherence to the purpose and scope, objectives of planning, planning policies and procedures and criteria for review, as set forth herein.

2. Formulation and evaluation shall normally be based on the expectation of an expanding national economy in which increasing amounts of goods and services are likely to be required to meet the needs of a growing population, higher levels of living, international commitments, and continuing economic growth. Such an environment will necessitate relatively high and efficient levels of resource employment and a pattern of production in balance with the anticipated demand for goods and services.

3. Formulation and evaluation of plans or alternative plans shall be accomplished in such a way as to permit timely application of standards appropriate to conditions of: (a) Less than "full employment" nationally, and (b) chronic and persistent unemployment or underemployment in designated areas. Standards appropriate to (a) shall be those adopted at the time of existence of such condition and authorized by the President. Standards appropriate to condition (b) shall be used where an area has been so designated under the Area Redevelopment Act of 1961 (75 Stat. 47) or other authorized procedures relating to resource underemployment. In condition (b) project benefits shall be considered as increased by the value of the labor and other resources required for project construction, and expected to be used in project operation, project maintenance, and added area employment during the life of the project, to the extent that such labor and other resources would—in the absence of the project—be unutilized or underutilized. Such benefits should be clearly identified as redevelopment benefits for the purposes of cost allocation, cost-sharing procedures, and to indicate their significance for project justification.

4. A comprehensive public viewpoint shall be applied in the evaluation of project effects. Such a viewpoint includes consideration of all effects, beneficial and adverse, short range and long range, tangible
USE AND DEVELOPMENT OF WATER RESOURCES

and intangible, that may be expected to accrue to all persons and
groups within the zone of influence of the proposed resource use or
development. The adequacy of the coverage depends on how com-
pletely all effects can be traced and evaluated in comparable terms.

5. Full consideration shall be given to the opportunity and need
for outdoor recreational and fish and wildlife enhancement in com-
prehensive planning for water and related land use and development,
and project formulation and evaluation. Project plans shall include
provision for public acquisition of lands and rights-of-way adjacent
to proposed Federal or Federal-assisted water resource projects (ad-
tional to those needed for other uses and for public access) for ad-
ministration by Federal, State, or local public bodies, as appropriate,
to insure full ultimate realization of the outdoor recreational, fish and
wildlife, and related resource enhancement opportunities of the
project area. Plans shall indicate, in appropriate detail, all facilities
needed for full development of the recreation and fish and wildlife
potential, as well as specific indication of basic facilities required
initially for access, health, safety, fire prevention, and use of the area.

6. Full consideration shall also be given in survey, investigation,
and planning to the need for acquisition of lands necessary for all
purposes of water resource development in advance of construction,
so as to preserve these areas from encroachment by residential, com-
mercial, industrial, and other development. Proposals to this end
shall be set forth in special reports, or included in regular planning
reports, when deemed necessary. Measures proposed should repre-
sent the minimum necessary action consistent with the objective of
site preservation. Reliance should be placed, where feasible, on zon-
ing and other measures by non-Federal authorities to keep lands on
local tax rolls and control development until sites are needed for
project purposes. Such measures should also include provisions for
advance participation in construction or reconstruction of transpor-
tation facilities, when necessary, to avoid increased costs for relocation.

7. When there are major differences among technically possible
plans conceived as desirable on the basis of consideration of intangible
benefits and costs, in comparison with optimum plans based on
tangible benefits and costs, alternative combinations of projects within
a river basin or alternative projects, giving expression to these major
differences, shall be planned. Comparison of their economic and
financial costs shall be set forth in reports to provide a basis for
selection among the alternatives by reviewing authorities in the execu-
tive branch and by the Congress. Minor differences, with regard to
intangible considerations, shall be handled, to the extent practicable
and economically feasible, by adjustments in plans. Planning re-
ports shall clearly indicate alternatives, their consequences, and ad-
justments made to take account of these minor differences.

8. When secondary benefits are included in formulation and evalua-
tion of a project proposal, planning reports shall indicate—

(a) The amount of secondary benefits considered attributable
to the project from a national viewpoint. Such benefits, com-
bined with primary benefits, shall be included in the computation
of a benefit-cost ratio.

(b) Secondary benefits attributable to the project from a
regional, State, or local viewpoint. Such benefits shall also be
evaluated, when this procedure is considered pertinent, and an
additional benefit-cost ratio computed.
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(c) Presentations in planning reports shall include an explanation of the nature of each type of secondary benefit taken into account from either viewpoint and the methods used in the computation of each of their values. The implications, from the national viewpoint, of considering secondary benefits of the project from a regional, State, or local viewpoint shall be set forth.

B. Specific setting for area under consideration

1. Reports on proposed plans shall include an analysis of present and projected future economic conditions in the project area and the contribution that comprehensive or project development may be expected to make toward the alleviation of problems and the promotion of economic growth and well-being within the zone of influence. Economic projections will be made to provide a basis for appraisal of conditions to be expected with and without the plans under consideration, and an estimate of the contribution that comprehensive development may make to increased national income and welfare, and regional growth and stability. Such analyses will frequently require a general economic study of the area, a study of all of its resources, an assessment of their functional relationships, their development potentials, possible adverse effects, and the locational situation with reference to resources, markets, transportation, climate, and social factors. Analyses should indicate the significance of the locality and the region in producing increased goods and services to meet foreseeable needs.

2. These analyses should be as extensive and intensive as is appropriate to the scope of the project being planned. They should provide essential information for identifying both immediate and long-range needs in economic and social terms and these needs should be expressed in a form useful for program formulation. Presentations in reports should identify—

(a) The relationship between economic development needs and opportunities and potential water and related land resource use and development;

(b) The economic and social consequences of complete or partial failure to satisfy these needs; and

(c) The possible improvements in economic efficiency, alleviation of unemployment, stabilization of production and income, community well-being, and the quality of goods and services that will be forthcoming.

C. Standards for formulation of plans

1. All plans shall be formulated with due regard to all pertinent benefits and costs, both tangible and intangible. Benefits and costs shall be expressed in comparable quantitative economic terms to the fullest extent possible.

2. Comprehensive plans shall be formulated initially to include all units and purposes which satisfy these criteria in quantitative economic terms:

   (a) Tangible benefits exceed project economic costs.

   (b) Each separable unit or purpose provides benefits at least equal to its costs.

   (c) The scope of development is such as to provide the maximum net benefits.
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(d) There is no more economical means, evaluated on a comparable basis, of accomplishing the same purpose or purposes which would be precluded from development if the plan were undertaken. This limitation refers only to those alternative possibilities that would be physically displaced or economically precluded from development if the project is undertaken.

3. Net benefits are maximized when the scope of development is extended to the point where the benefits added by the last increment of scale (i.e., an increment of size of a unit, an individual purpose in a multiple-purpose plan or a unit in a comprehensive plan) are equal to the costs of adding that increment of scale. The increments to be considered in this way are the smallest increments on which there is a practical choice of omission from the plan.

4. Reports or plans shall indicate the scale of development that would result from application of the foregoing criteria considering tangible benefits and project economic costs expressed in comparable terms. This will provide a baseline from which the effect of considering intangibles can be judged.

5. Reports and plans shall also indicate the extent to which departures from that scale of development are proposed in order to take into account intangibles or other considerations warranting a modification in scale not reflected in the tangible benefits and project economic costs. For example, a higher degree of flood protection, particularly in urban areas, than is feasible on the basis of tangible benefits alone may be justified in consideration of the threat to lives, health, and general security posed by larger floods. Also, when long-range water needs are foreseeable only in general terms and where alternative means of meeting the needs are not available and inclusion of additional capacity initially can be accomplished at a significant savings over subsequent enlargement, such considerations may justify the additional cost required. Similarly, long-range power needs, in the light of generally expected economic growth of an area, may justify measures initially to insure later availability of the full power potential.

D. Definitions of benefits

1. Benefits: Increases or gains, net of associated or induced costs, in the value of goods and services which result from conditions with the project, as compared with conditions without the project. Benefits include tangibles and intangibles and may be classed as primary or secondary.

2. Tangible benefits: Those benefits that can be expressed in monetary terms based on or derived from actual or simulated market prices for the products or services, or, in the absence of such measures of benefits, the cost of the alternative means that would most likely be utilized to provide equivalent products or services. This latter standard affords a measure of the minimum value of such benefits or services to the users. When costs of alternatives are used as a measure of benefits, the costs should include the interest, taxes, insurance, and other cost elements that would actually be incurred by such alternative means rather than including only costs on a comparable basis to project costs as is required when applying the project formulation criteria under paragraph V–C–2(d).

3. Intangible benefits: Those benefits which, although recognized as having real value in satisfying human needs or desires, are not
fully measurable in monetary terms, or are incapable of such expression in formal analysis. Each type of benefit usually has a part which is readily measurable and may have a part which is not measurable or not readily measurable. The significance of this latter part shall be based upon informed judgment.

4. Primary benefits: The value of goods or services directly resulting from the project, less associated costs incurred in realization of the benefits and any induced costs not included in project costs.

5. Secondary benefits: The increase in the value of goods and services which indirectly result from the project under conditions expected with the project as compared to those without the project. Such increase shall be net of any economic nonproject costs that need be incurred to realize these secondary benefits.

E. Types of primary benefits and standards for their measurement

1. Domestic, municipal, and industrial water supply benefits: Improvements in quantity, dependability, quality, and physical convenience of water use. The amount water users should be willing to pay for such improvements in lieu of foregoing them affords an appropriate measure of this value. In practice, however, the measure of the benefit will be approximated by the cost of achieving the same results by the most likely alternative means that would be utilized in the absence of the project. Where such an alternative source is not available or would not be economically feasible, the benefits may be valued on such basis as the value of water to users or the average cost of raw water (for comparable units of dependable yield) from municipal or industrial water supply projects planned or recently constructed in the general region.

2. Irrigation benefits: The increase in the net income of agricultural production resulting from an increase in the moisture content of the soil through the application of water or reduction in damages from drought;

3. Water quality control benefits: The net contribution to public health, safety, economy, and effectiveness in use and enjoyment of water for all purposes which are subject to detriment or betterment by virtue of change in water quality. The net contribution may be evaluated in terms of avoidance of adverse effects which would accrue in the absence of water quality control, including such damages and restrictions as preclusion of economic activities, corrosion of fixed and floating plant, loss or downgrading of recreational opportunities, increased municipal and industrial water treatment costs, loss of industrial and agricultural production, impairment of health and welfare, damage to fish and wildlife, siltation, salinity intrusion, and degradation of the esthetics of enjoyment of unpolluted surface waters, or, conversely, in terms of the advantageous effects of water quality control with respect to such items. Effects such as these may be composited roughly into tangible and intangible categories, and used to evaluate water quality control activities. In situations where no adequate means can be devised to evaluate directly the economic effects of water quality improvement, the cost of achieving the same results by the most likely alternative may be used as an approximation of value.

4. Navigation benefits: The value of the services provided after allowance for the cost of the associated resources required to make the service available. For commodities that would move in the
absence of the project, the benefit is measured by the saving as a result of the project in the cost of providing the transportation service. For commodities that will move over the improved waterway but would not move by alternative means, the measure of the benefit is the value of the service to shippers; that is, the maximum cost they should be willing to incur for moving the various units of traffic involved. Navigation improvements may also provide benefits in other forms, such as reduction in losses due to hazardous or inadequate operating conditions and enhancement in land values from the placement of dredged spoil.

5. Electric power benefits: The value of power to the users is measured by the amount that they should be willing to pay for such power. The usual practice is to measure the benefit in terms of the cost of achieving the same result by the most likely alternative means that would exist in the absence of the project. In the absence of economically feasible alternative means, the value of the power to users may be measured by any savings in production costs, increase in value of product that would result from its use, or its net value to consumers.

6. Flood control and prevention benefits: Reduction in all forms of damage from inundation (including sedimentation) of property, disruption of business and other activity, hazards to health and security, and loss of life; and increase in the net return from higher use of property made possible as a result of lowering the flood hazard.

7. Land stabilization benefits: Benefits accruing to landowners and operators and the public resulting from the reduction in the loss of net income, or loss in value of land and improvements, through the prevention of loss or damage by all forms of soil erosion including sheet erosion, gullying, flood plain scouring, streambank cutting, and shore or beach erosion, or, conversely in terms of advantageous effects of land stabilization.

8. Drainage benefits: The increase in the net income from agricultural lands or increase in land values resulting from higher yields or lower production costs through reduction in the moisture content of the soil (exclusive of excessive moisture due to flooding), and the increase in the value of urban and industrial lands due to improvement in drainage conditions.

9. Recreation benefits: The value as a result of the project of net increases in the quantity and quality of boating, swimming, camping, picnicking, winter sports, hiking, horseback riding, sightseeing, and similar outdoor activities. (Fishing, hunting, and appreciation and preservation of fish and wildlife are included under par. V-B-10.) In the general absence of market prices, values for specific recreational activities may be derived or estimated on the basis of a simulated market giving weight to all pertinent considerations, including charges that recreationists should be willing to pay and to any actual charges being paid by users for comparable opportunities at other installations or on the basis of justifiable alternative costs. Benefits also include the intangible values of preserving areas of unique natural beauty and scenic, historical, and scientific interest.

10. Fish and wildlife benefits: The value as a result of the project of net increases in recreational, resource preservation, and commercial aspects of fish and wildlife. In the absence of market prices, the value of sport fishing, hunting, and other specific recreational forms of fish
and wildlife may be derived or established in the same manner as prescribed in paragraph V-E-9. Resource preservation includes the intangible value of improvement of habitat and environment for wildlife and the preservation of rare species. Benefits also result from the increase in market value of commercial fish and wildlife less the associated costs.

11. Other benefits: Justification of the recognition of any other benefits and of the standard used in their measurement shall be set forth in reports. Unless included under one or more of the above categories, reports should show the net economic effects of changes in transportation capability, or changes in productivity of forest, range, mineral, or other resources. A project's contribution toward meeting specific needs for servicing international treaties or for national defense may also be included.

**F. Definition of costs**

1. Project economic costs: The value of all goods and services (land, labor, and materials) used in constructing, operating, and maintaining a project or program, interest during construction, and all other identifiable expenses, losses, liabilities, and induced adverse effects connected therewith, whether in goods or services, whether tangible or intangible and whether or not compensation is involved. Project economic costs are the sum of installation costs; operation, maintenance, and replacement costs; and induced costs as defined below.

2. Installation costs: The value of goods and services necessary for the establishment of the project, including initial project construction; land, easements, rights-of-way, and water rights; capital outlays to relocate facilities or prevent damages; and all other expenditures for investigations and surveys, and designing, planning, and constructing a project after its authorization.

3. Operation, maintenance, and replacement costs: The value of goods and services needed to operate a constructed project and make repairs and replacements necessary to maintain the project in sound operating condition during its economic life.

4. Induced costs: All uncompensated adverse effects caused by the construction and operation of a program or project, whether tangible or intangible. These include estimated net increases, if any, in the cost of Government services directly resulting from the project and net adverse effects on the economy such as increased transportation costs. Induced costs may be accounted for either by addition to project economic costs or deduction from primary benefits.

5. Associated costs: The value of goods and services over and above those included in project costs needed to make the immediate products or services of the project available for use or sale. Associated costs are deducted from the value of goods and services resulting from a project to obtain primary benefits.

6. Taxes: Allowances in lieu of taxes or taxes foregone will not be included in project economic costs, except as required by law.

**G. Time considerations**

1. **Period of analysis.**—The economic evaluation of a project shall encompass the period of time over which the project will serve a useful purpose. Thus, the period of analysis should be the shorter of either the physical life or the economic life of the structure, facility, or im-
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provement. However, because of the difficulty in defining the more remote future conditions and the discount of long-deferred values, 100 years will normally be considered the upper limit of the period of analysis.

2. Discount rate.—The interest rate to be used in plan formulation and evaluation for discounting future benefits and computing costs, or otherwise converting benefits and costs to a common time basis shall be based upon the average rate of interest payable by the Treasury on interest-bearing marketable securities of the United States outstanding at the end of the fiscal year preceding such computation which, upon original issue, had terms to maturity of 15 years or more. Where the average rate so calculated is not a multiple of one-eighth of 1 percent, the rate of interest shall be the multiple of one-eighth of 1 percent next lower than such average rate.

This procedure shall be subject to adjustment when and if this is found desirable as a result of continuing analysis of all factors pertinent to selection of a discount rate for these purposes.

3. Price levels.—The prices used for project evaluation should reflect the exchange values expected to prevail at the time costs are incurred and benefits accrued. Estimates of initial project costs should be based on price relationships prevailing at the time of the analysis. Estimates of benefits and deferred costs should be made on the basis of projected normal price relationships expected with a stabilized general price level and under relatively full employment conditions for the economy. Pending development of mutually acceptable long-term price projections of this type, normalized current price relationships may be used in estimating deferred project effects. When benefits are measured in terms of the cost of an alternative, the prices should be those expected to prevail at the time such costs would have been incurred. Whenever project production is expected to influence prices significantly, the use of a price about midway between those expected with and without the project may be justified to reflect the public values involved. Appropriate price adjustments should be made where there is a limited foreseeable need or demand for the products or services to be provided by the project.

VI. RELATION TO COST ALLOCATION, REIMBURSEMENT AND COST-SHARING POLICIES, STANDARDS, AND PROCEDURES

Cost allocation, reimbursement and cost-sharing policies, standards, and procedures, as indicated in the section on "Purpose and Scope," above, are not generally included herein. Nevertheless, certain such matters of special importance in relation to the foregoing are included, as follows:

(a) All project purposes shall be treated comparably in cost allocation and each is entitled to its fair share of the advantages resulting from the multiple-purpose project or program. Project purposes to which costs may be allocated on a par with all other purposes, without restrictions regarding reimbursement or cost-sharing policies, shall include (but not be limited to) the following:

Domestic, municipal, or industrial water supply.
Irrigation.
Water quality control.
Navigation.
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Hydroelectric power.
Flood control and prevention.
Land and beach stabilization.
Drainage, including salinity control.
Outdoor recreation development.
Fish and wildlife development.
Other purposes, such as area redevelopment and the servicing of international treaties and national defense when specific, quantifiable benefits are provided for such purposes by a project or program.

(b) Allocated costs, determined in accordance with principles and procedures to be established subsequently, shall provide a basis for consideration of reimbursement and cost-sharing arrangements.

(c) The period of analysis and discount rate established herein for purposes of formulation and evaluation of comprehensive plans and project plans (sec. V-G-1 and 2) shall not be construed as establishing the payout period or rate of interest to be used in reimbursement and cost-sharing arrangements.

(d) Planning reports of each department shall include appropriate recommendations covering reimbursement and cost-sharing arrangements and provide a detailed explanation of the basis used in arriving at the recommendations in consideration of the laws and administrative provisions in effect at the time.
APPENDIX F

Proposal by Coordinated Planning Subcommittee
Providing for Creation of Task Force
MEMORANDUM TO: Members of the Columbia Basin Inter-Agency Committee

SUBJECT: Coordination of Basin Planning Proposal of the Executive Subcommittee

At its September meeting the Committee submitted to the Executive Subcommittee, for review and recommendations, proposals made for the establishment of coordinating committees to facilitate comprehensive river basin planning. This proposal was not new to the Executive Subcommittee. We have discussed it many times in the past.

You are, of course, all aware of the fact that there are some twenty Federal and at least as many State agencies in this region engaged in one aspect or another of basin planning for water resources development. Close coordination of their work is essential and receives continuous emphasis.

It is the responsibility of each Federal agency to fully coordinate its work with every other agency concerned. However, the Inter-Agency Committee was organized to, and can, facilitate such coordination. It is questionable whether any one agency can effectively and completely coordinate with the activities of all the other agencies without the help that we feel can be provided through the Inter-Agency Committee. The needs of the State agencies for such coordination is probably as great as that of the Federal agencies. Adoption of the proposal following should be useful to them.

The Executive Subcommittee recommends:

(1) That the function of the Subcommittee on Comprehensive Planning be broadened to include the coordination of planning for the Columbia Basin Inter-Agency Committee.

(2) That this Subcommittee be directed to establish a coordinating task force for each major river basin, or group of related basins, as the need is determined to assist the Planning Subcommittee in carrying out the above assignment. These groups would provide the basis for a full and continuing exchange of views during a study; advise and assist all participating agencies in regard to objectives, work assignments, budgets and schedules; assist in the resolution
of study problems as they arise; review progress being made, and report through the Subcommittee on Comprehensive Planning to the Inter-Agency Committee, periodically. Additional technical work groups will be established to work with the task force to coordinate specialty items such as fish and wildlife, power, recreation, and the like, as appropriate.

(3) That the membership of the Comprehensive Planning Subcommittee, which now consists of representatives of each State and Federal member of the Inter-Agency Committee, remain unchanged.

(4) That each task force also consist of a representative from each of the State or Federal agencies with an interest in the study, to be appointed by the State or Federal agency concerned. Although many of the States and Federal agencies have several participating services, there would be but one formal representative of that State or Federal agency on the task force, in order to limit it to a size that will permit effective functioning. This will not preclude active participation of additional representatives at the meetings. Of course, one representative may serve on several or all of the task forces.

(5) That where the study covers an area situated entirely within one State, that State's representative serve as chairman of the coordinating group (task force); that for inter-state studies the chairman be elected by the task force members.

There are a number of basin surveys now authorized and under way. There should be no delay in establishing the coordinating group for these basins. It is contemplated that the coordination necessary will be accomplished by these groups at the working level.

If the foregoing recommendations are approved, the activity of our Comprehensive Planning Subcommittee will be directed primarily toward the coordination of the planning efforts of our membership. Accordingly, it is recommended that the Subcommittee be renamed as the "Subcommittee for Coordinated Planning."

ROY W. SCHEUFELE
Executive Secretary