

NEBRASKA SOIL AND WATER
CONSERVATION COMMISSION
PUBLICATION NUMBER 2



LOAN COPY #5

This report is for loan purposes only.
If taken from planning division library,
please check out with librarian.

Nebraska's
State Water Plan
Progress Report

JAN. 1, 1967 to JAN. 1, 1969

JANUARY 1969

STATE OF NEBRASKA

Norbert T. Tiemann, Governor

Nebraska Soil and Water Conservation Commission
Warren D. Fairchild, *Executive Secretary*

Commission Members
J. R. Pringle, *Chairman*

Dempsey McNiel	Robert M. Bell
Emmett Lee	Robert W. Bell
Milton Fricke	Earl Luff
E. F. Frolik	Vince Dreeszen
Dan S. Jones, Jr.	Wes Herboldsheimer
Elmer Juracek	Wendell Lauber
John Adams	

Commission Advisors

Don Thompson—*Office of the Governor*
Charles Cocks—*Corps of Engineers*
T. A. Filipi—*Nebraska Department of Health*
Paul Harley—*Department of Interior*
Marvin Neurenberger—*Nebraska Department of Roads*
Keith Myers—*Department of Agriculture*
M. O. Steen—*Nebraska Game & Parks Commission*

Report Prepared By The Planning Division

James Owen, Chief, *Planning Division*
Ralph Waddington, Head, *Comprehensive Planning Section*
Gayle Starr, *Economist, Comprehensive Planning Section*

Coordination & Development—R. D. Kennedy
Info. & Ed.
Section
Organization & Layout—Milton G. Moravek
Info. & Ed. Section
Illustrations—Felix D. Sommers, Soil
Conservation Service
Lincoln, Nebraska

PROGRAMS:

SOIL & WATER CONSERVATION
WATERSHED PROTECTION
FLOOD CONTROL
RIVER BASIN INVESTIGATIONS
FLOOD PLAIN STUDIES
STATE WATER PLAN



State Senator Jerome Warner
Speaker, Nebraska Legislature
State Capitol Building
Lincoln, Nebraska

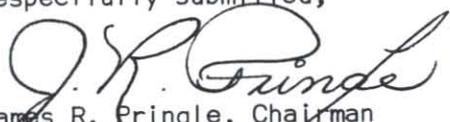
Dear Speaker Warner:

Transmitted herewith is the Progress Report of the Nebraska Soil and Water Conservation Commission concerning the State Water Plan. Legislative Resolution Number 5 of the 1967 Session directed preparation of an extensive State Water Plan by June 1971, and requested this progress report be submitted to the Legislature during the current session.

The Commission has attempted to present a factual accounting of time and effort expended thus far in preparation of the State Water Plan. In addition, recommendations drawn from the experience of the first two years are presented for legislative consideration.

I urge the Legislature to give consideration to the recommendations made and take positive action regarding the future course of water resources planning in Nebraska.

Respectfully submitted,


James R. Pringle, Chairman
Nebraska Soil and Water
Conservation Commission

JRP:HJO:smh

COMMISSION MEMBERS

JOHN ADAMS - BOB BELL - ROBERT BELL - VINCE DREESZEN - MILTON H. FRICKE - E. F. FROLIK - WESLEY HERBOLDSHEIMER - DAN S. JONES, JR. -
ELMER JURACEK - WENDELL LAUBER - EMMETT LEE - EARL LUFF - DEMPSEY MCNIEL - J. R. PRINGLE. ADVISORS: CHARLIE COCKS - T. A. FILIPI -
PAUL HARLEY - KEITH MYERS - MARVIN NURENBERGER - MEL STEEN - DON THOMPSON.

TABLE OF CONTENTS

History.....	1
Description of the State Water Plan.....	5
The Organization of Participants.....	7
The Review Procedure	9
Progress on Developing the Plan	
The Framework Study	10
The Basin Plans	11
The Status Summary.....	14
The Special Recommendations	14
General Comments.....	16
Problems.....	17
Recommendations for Planning.....	19
Proposed Water Resources Planning After 1971.....	21

This resolution clearly called for a program of study more intensive than had ever before been attempted in Nebraska.



The need for a comprehensive State Water Plan in Nebraska became apparent in the early 1960's. Nebraska's agricultural economy, spurred by one of the most rapid developments of irrigation in the nation, was beginning to experience serious water problems. In some areas ground water levels were declining, while in others, land once in production was becoming waterlogged and the products of erosion choked the streams. Proposed irrigation projects in central and western Nebraska became a potential threat to the municipal and industrial water needs of the more densely populated east. The rapid growth of the larger cities throughout the state brought about by the increasing rural to urban population shift caused problems of water supply and pollution. An increasing concern was being expressed concerning pollution of our streams from such agricultural activities as livestock feeding and the use of fertilizers, insecticides, herbicides, and other chemicals. Floods, always a principal economic loss in Nebraska continued to plague the state, with the more prominent floods of the period occurring in the Papio Valley in 1964 and 1965 and in the Mid-Platte area in 1967 and 1968.





In anticipated cooperation with the Federal Water Resources Planning Act, the 1965 Legislature made a biennial appropriation of \$94,000 for the Soil and Water Conservation Commission to develop a water resources planning staff. The Commission assembled a small planning staff during the following year. The Legislature, on January 18, 1967, unanimously endorsed Legislative Resolution Number 5. This resolution outlined a specific directive on which to base Nebraska's State Water Plan. Resolution No. 5 stated:

WHEREAS, the water supplies of Nebraska are not so located of such a quantity to satisfy all present and future needs; and

WHEREAS, the state has a responsibility to guide the development of resources so that maximum benefits accrue to the citizens of the state; and

WHEREAS, the orderly development and utilization of water and land resources of Nebraska is essential to the fullest utilization of these resources and the economic development of the state; and

WHEREAS, such orderly development can only be realized by implementation of a comprehensive water and related land plan; and

WHEREAS, no such plan now exists.

NOW, THEREFORE, BE IT RESOLVED BY THE MEMBERS OF THE NEBRASKA LEGISLATURE IN SEVENTY-SEVENTH SESSION ASSEMBLED:

- That the Nebraska Soil and Water Conservation Commission is directed to analyze the soil and water resources of the state and to prepare a comprehensive water and related land plan for the State of Nebraska, such framework plan to be completed no later than June 30, 1971, and to be known as the State Water Plan.
- That this State Water Plan, in addition to an evaluation of the land and water resources, will also include an examination of legal, social and economic factors which are associated with resource development.
- That a progress report on such plan be submitted to the Legislature during the regular session in 1969 and the final report be submitted to the Legislature promptly upon its completion.

This resolution clearly called for a program of study more intensive than had ever before been attempted in Nebraska. Planning was not only to consider the physical potential for development, but to explore the opportunities for legal and institutional improvement as well. The Resolution was broad and compliance with it would obviously involve the majority of the Commission's planning staff and planning funds.

In view of the magnitude of the commitment, the Commission prepared a memorandum to the Legislature titled, "A Design for Nebraska's State Water Plan." The purpose of this memorandum was to broadly describe the nature of studies by which the Commission would comply with the Legislature's request. This memorandum was presented to the Legislature on June 6, 1967, and was accepted without dissent. In accepting this memorandum, the Legislature put into motion a study which was to involve hundreds of people ranging from the cabinet level Federal Water Resources Council through the ranks of State and Federal agencies to the individual citizen.

The Federal Water Resources Council encouraged the development of a State Water Plan.



In the period since adoption of the proposed program: The Nebraska Soil and Water Conservation Commission has established policies for development of the State Water Plan;



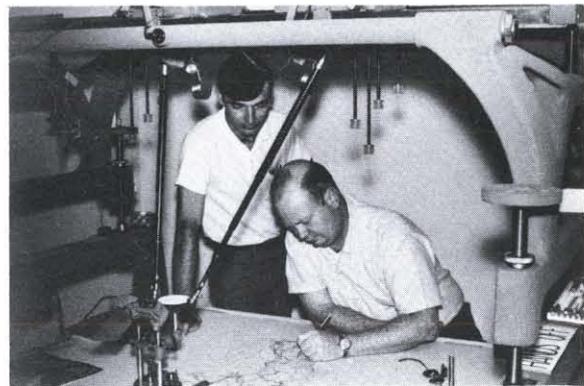
A staff of technical specialists has been employed, officed, and equipped;



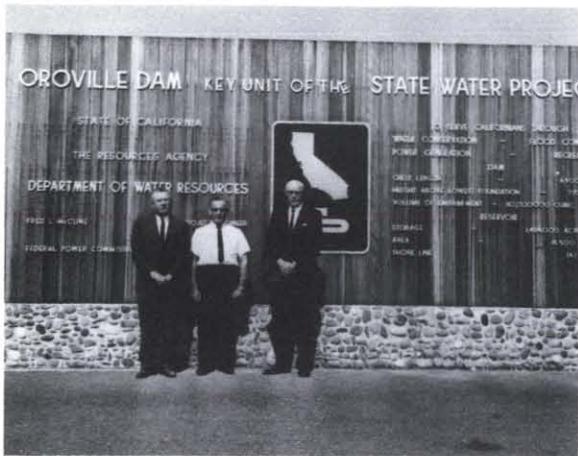
A library of water resources reports, guides and other information has been assembled;



A mapping program has begun;



Efforts to maintain coordination have resulted in meetings: with the Legislature's Water Study Committee,



with local Leaders,



with Federal Agencies,



with Special Interests,



with State Agencies,



and with John Q. Citizen.



for the success of the plan depends first and foremost on public sentiment.

DESCRIPTION OF THE STATE WATER PLAN



The "Design for Nebraska's State Water Plan" as proposed by the Commission and accepted by the Legislature, set out four principal planning areas.

FRAMEWORK PLAN

The first section and central feature of the Plan is to be a framework for guiding the general development of the land and water resources of Nebraska. This section will be the Commission's official reply to Legislative Resolution #5 directing the preparation of a Framework Plan to be presented to the Nebraska Legislature no later than June 30, 1971. To prevent early obsolescence, the Framework

Plan will avoid describing details of projects and concentrate on the broader aspects of planning. Specific purposes of the Framework Plan are to:

- Determine the goals to be achieved by water resources² development in Nebraska.
- Determine the interrelations between the major river basins of Nebraska including preliminary investigations of statewide water usage schemes.
- Determine the nature and priority of more detailed studies required.
- Prepare a sound foundation of factual data concerning Nebraska's resource problems and resource capabilities on which to base future legislation, regulation, planning and development.

Basin Reports

The second section proposed as a part of the State Water Plan will be a series of comprehensive river basin planning reports. In contrast to the Framework Plan, these reports are intended to propose more detailed plans for the development of individual river basins. The objectives of these reports are to:

² Water resources as used in this report includes both water resources and the related land resources.

- Extend the detail of the inventory of water resources problems and needs beyond that which is appropriate in the statewide Framework Plan.
- Examine present developments and proposed projects and formulate a specific water resources development plan for each major river basin which will most nearly meet, within the basin's resources, the needs of the foreseeable future.
- Recommend particular steps or courses of action to federal, state and local agencies which will accelerate implementation of the Plan.

STATUS SUMMARY

The third section of the proposed Plan will be a summary of water resources development in Nebraska. Developments to be described include all the significant projects built from the early days of statehood to those only now making news on the front pages of papers from Omaha to Scottsbluff. The Summary will include not only the projects built and proposed but also catalog the myriad of institutions formed to promote, construct and operate them.

Too often man has passed by and left the road unmarked. Recording current history seems to grow easier each day, but yesterday's history is fast fading. The value in preserving much of that history is unknown and will so remain for the judgment of a future Nebraska. Provision of a historical record is not the only purpose for preparation of the Status Summary. Other purposes include:

- Organization of information on sponsoring organizations and financing arrangements for evaluation of the merit of each and the discovery of any hidden impediments to progress which may exist.
- Description, for easy reference by legislators and local leaders, of the steps remaining

before construction of proposed projects to enable effective communication with the right person at the right time.

SPECIAL RECOMMENDATIONS

The fourth section of the proposed Plan, sure to become the most widely discussed portion of the State Water Plan, will be a series of specialized studies of some of the most important and controversial issues concerning water in Nebraska. In fulfillment of the Legislature's request, these studies will combine physical, legal, economic and social considerations to recommend action on the complex legislative and administrative problems faced by the Legislature, the Governor and subdivisions of state government. The recommendations, backed by extensive research efforts, are to be presented concisely and clearly to enable decision based on fact rather than on opinion, hearsay, emotion or the desires of limited special interests.

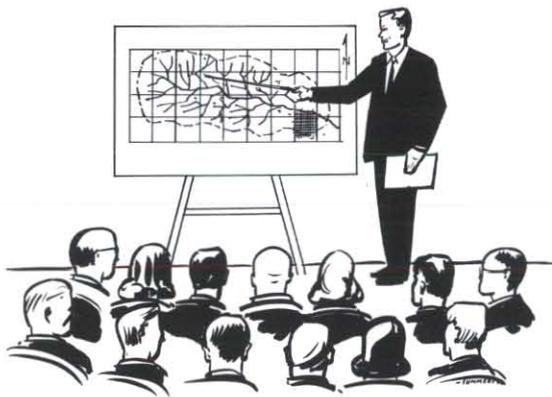
While the subject matter of the Special Recommendations varies, the goals are the same and provide a common bond between the studies. Guidelines for the preparation and adoption of recommendations include:

- Citizen participation in government should be encouraged through provision of responsible, viable subdivisions of government.
- The investment quality of programs and projects competing for funding must be determined by facts uninfluenced by popular misconceptions or partisan interests.
- Costs of programs and projects should be assigned proportionate to the benefits received.
- The general welfare of the citizens of Nebraska is the overriding consideration in any decision.

THE ORGANIZATION OF PARTICIPANTS

An organizational framework was developed to provide legislative, policy and technical guidance and assistance to the Commission and its staff.

- The Commission had only sufficient staff for leadership, coordination and work on specific areas of the State Water Planning Program. Considerable research, field work and data collection would have to be done by others.



To attempt to meet these problems, an organizational framework was developed to provide legislative, policy and technical guidance and assistance to the Commission and its staff.

Figure I shows the general organization of the committees developed. In most cases, the committees are chaired by Commission staff members and in all cases the final endorsement of parts of the Water Plan lies with the Commission. The purpose was not to dominate but rather to maintain the final responsibility with the one accountable group as assigned by the Legislature.

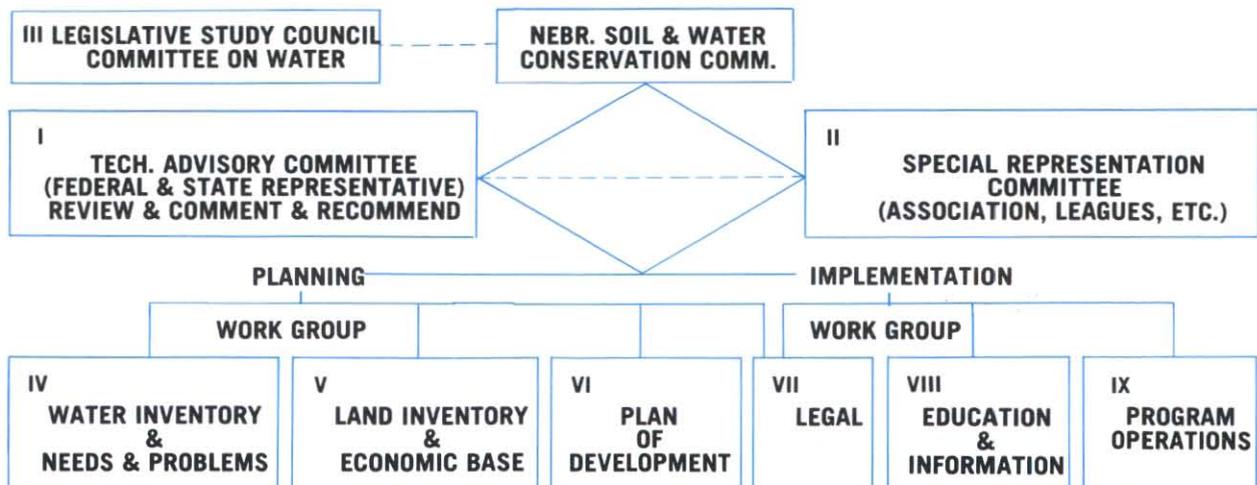
Embarking on the development of the Plan, four things became readily apparent:

- While the Commission could adequately represent and protect the public interest, a vehicle was necessary to carry the Plan to the general populace.
- A forum was needed for the discussion of special interests and the effecting of necessary compromises.
- Liaison with the Legislature was a must if plans were to be implemented.

The Technical Advisory Committee, made up primarily of State and Federal Agency representatives, provided technical guidance, information concerning federal and state laws, regulations and policies and coordinated agency participation. Agencies represented on this committee are shown on Table I, "Key to Participants". The Technical Advisory Committee devotes extensive time to detailed technical reviews of State Water Plan materials and brings an accumulated wealth of experience in technical and administrative direction of planning to the Commission table.

STATE WATER PLAN

FIGURE I



The Special Representative Committee is made up of leaders of established statewide organizations having a particular interest in water resources development. The Committee serves a two-fold purpose by evaluating State Water Plan materials in accordance with the policies and programs of the organizations they represent and in disseminating information to the general membership of their organizations. The membership of this Committee is shown in Table I.

The Legislature's Interim Study Committee sponsored a series of hearings across the state to encourage local expression concerning state water planning. In addition, the Committee, and especially the Chairman, is available for consultation as problems arise. The counsel and assistance of this Committee has been most valuable. The Committee membership is shown in Table I.

Material to be reviewed by the various committees is prepared by a series of work groups chaired in most cases by Commission staff members. The membership of these work groups is shown in Table I.

Work groups meet as frequently as dictated by the work at hand while the Technical Advisory and Special Representative Committees normally meet every six weeks to review work accomplished between meetings. Meetings of the Technical Advisory Committee and Special Representative Committee are held just prior to each scheduled meeting of the Nebraska Soil and Water Conservation Commission. This schedule assures availability of recommendations and counsel from these two committees prior to action by the Commission on each element of the State Water Plan.

TABLE I **KEY TO PARTICIPANTS**

I
 NEBR. SOIL & WATER CONS. COMM.
 U. S. DEPT. OF AGRICULTURE
 U. S. DEPT. OF DEFENSE
 U. S. DEPT. OF INTERIOR
 NEBR. DEPT. OF ECONOMIC DEVELOPMENT
 NEBR. DEPT. OF HEALTH
 NEBR. DEPT. OF ROADS
 NEBR. DEPT. OF WATER RESOURCES
 NEBR. GAME & PARKS COMM.
 U. OF N. CONS. SURVEY DIV.
 NEBR. STATE IRRIGATION
 AND RECLAMATION ASSN.
 U. OF N. AG. EXTENSION SERV.
 U. OF N. COLLEGE OF AGRICULTURE
 U. OF N. BUREAU OF BUSINESS RESEARCH
 U. OF N. AGR. EXPERIMENT STATION
 U. OF N. COLLEGE OF ENGINEERING
 OFFICE OF THE GOVERNOR

II
 NEBR. SOIL & WATER CONS. COMM.
 NEBR. LEAGUE OF MUNICIPALITIES
 NEBR. LEAGUE OF WOMEN VOTERS
 NEBR. RECLAMATION ASSN.
 NEBR. STATE IRRIGATION ASSN.
 NEBR. ASSN. OF COMMERCE & INDUSTRY
 NEBR. ASSN. OF S.W.C.D.'S
 NEBR. FARM BUREAU FEDERATION
 FARMERS UNION OF NEBR.
 NEBR. STATE GRANGE
 NEBR. PETROLEUM COUNCIL
 NEBR. PRESS ASSN.
 NEBR. RURAL ELEC. ASSN.
 AMERICAN WATER WORKS ASSN.
 NEBR. POWER INDUSTRIES COMMITTEE
 NEBR. ASSN. OF COUNTRY OFFICIALS
 NEBR. WELL DRILLERS ASSN.

III
 SENATOR MAURICE A. KREMER
 SENATOR GEORGE SYAS
 SENATOR ARNOLD RUHNKE
 SENATOR C. F. (PAT) MOULTON
 SENATOR HERB NORE
 SENATOR RUDOLF C. KOKES
 SENATOR GLENN VIEHMEYER

IV
 NEBR. SOIL & WATER CONS. COMM.
 U. S. DEPT. OF AGRICULTURE
 U. S. DEPT. OF DEFENSE

U. S. DEPT. OF INTERIOR
 NEBR. GAME & PARKS COMM.
 NEBR. DEPT. OF HEALTH
 NEBR. DEPT. OF WATER RESOURCES
 U. OF N. COLLEGE OF AGRICULTURE
 U. OF N. CONS. & SURVEY DIV.

V
 NEBR. SOIL & WATER CONS. COMM.
 U. S. DEPT. OF AGRICULTURE
 U. S. DEPT. OF INTERIOR
 U. S. DEPT. OF DEFENSE
 NEBR. GAME & PARKS COMM.
 NEBR. DEPT. OF ROADS
 NEBR. DEPT. OF WATER RESOURCES
 U. OF N. CONS. SURVEY DIV.
 U. OF N. BUREAU OF BUSINESS RESEARCH
 NEBR. DEPT. OF ECONOMIC DEVELOPMENT
 NEBR. DEPT. OF HEALTH
 U. OF N. AGRONOMY DEPARTMENT

VI
 NEBR. SOIL & WATER CONS. COMM.
 U. S. DEPT. OF AGRICULTURE
 U. S. DEPT. OF DEFENSE
 U. S. DEPT. OF INTERIOR
 NEBR. GAME & PARKS COMM.
 NEBR. DEPT. OF HEALTH
 NEBR. DEPT. OF ROADS
 NEBR. DEPT. OF WATER RESOURCES
 U. OF N. COLLEGE OF AGRICULTURE
 U. OF N. CONS. SURVEY DIV.
 U. OF N. COLLEGE OF ENGINEERING

VII
 NEBR. SOIL & WATER CONS. COMM.
 U. OF N. COLLEGE OF LAW
 NEBRASKA BAR ASSN.

VIII
 U. OF N. EXTENSION SERVICE
 BUREAU OF RECLAMATION
 NEBR. GAME & PARKS COMM.
 SOIL CONSERVATION SERVICE
 U. S. DEPT. OF DEFENSE
 OMAHA WORLD HERALD
 LINCOLN SUNDAY JOURNAL & STAR
 EDUCATIONAL T.V.
 NEBR. SOIL & WATER CONS. COMM.

IX
 NEBR. SOIL & WATER CONS. COMM.

THE REVIEW PROCEDURE

No report is presented to the Commission for adoption as a part of the plan until it has received approval by the reviewing committees.

To insure uniformity, a formal procedure for the review of reports was adopted. The flow chart, (See Figure 2) indicates the extensive review given all parts of the Plan. As shown on Figure 2, each of the principal Committees and the Commission can return proposed reports to the other Committees for further consideration or modification.

The Reviewing committees do not have the responsibility to approve or disapprove, but rather only to make recommendations to the Commission. In general, no report is presented to the Commission for their action as a part of the Plan until consensus has been reached by the reviewing Committees.

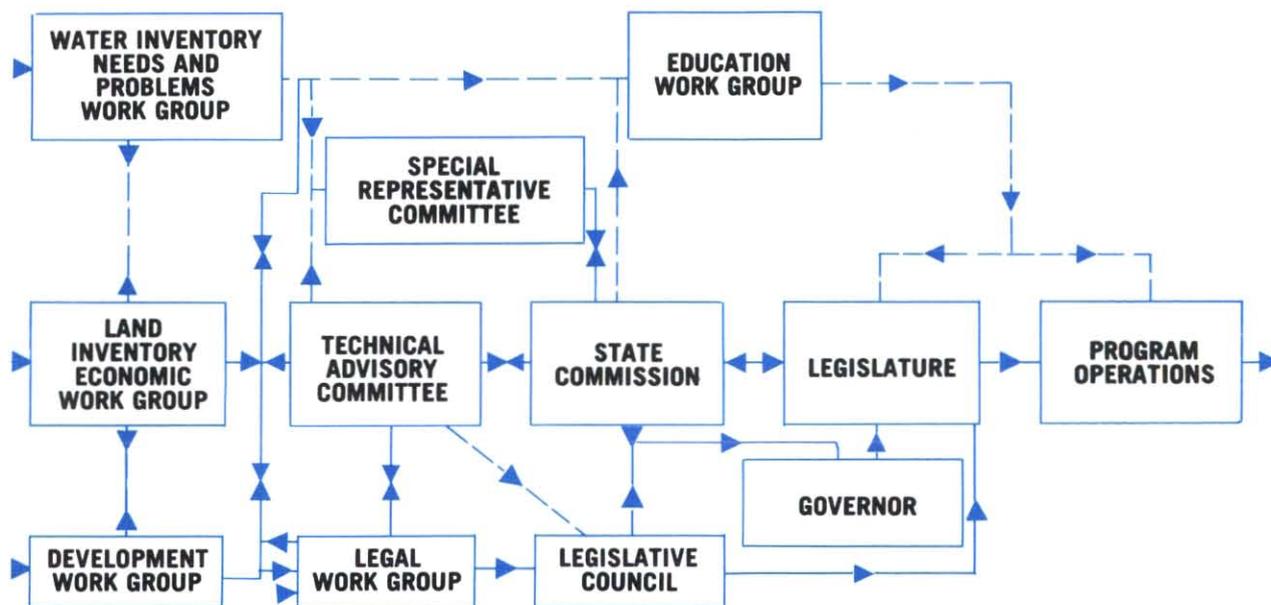
Special Recommendations, new program proposals or legislation receive reviews in addition to those given factual reports containing the summation and analysis of data. All state and federal agencies which would be affected are requested to review and comment on such proposals as are representatives of selected local agencies and nationally recognized authorities in the particular field.

The wide review given the State Water Plan and the incorporation of comments and suggestions from a wide variety of experts has resulted in national recognition of the planning reports prepared to date for their conciseness, quality and timeliness.



STATE WATER PLAN INFORMATION FLOW CHART

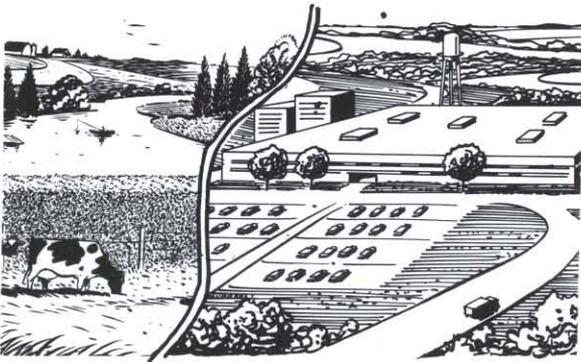
FIGURE 2



PROGRESS ON DEVELOPING THE PLAN

The framework plan will be broad and leaves to the future the description of such specifics as might be required.

Final editions of the first four volumes are scheduled to be available in late 1970.



The Framework Plan

DESCRIPTION

The Framework Plan portion of the State Water Plan as proposed by the Commission to the Legislature was *"to provide a broad guide to the best uses of water and land resources to meet current and anticipated needs."* The development of this portion of the Plan is to be based on three general considerations:

- The timely development and management of water resources as essential aids to the economic development and growth of the state.
- The preservation of water resources in appropriate instances to insure that they will be available when needed.
- The general welfare of the people of the State as the overriding determinant in formulating the Framework.

Before planning could begin, it was necessary to collect, in an organized manner, existing knowledge of Nebraska's resources. The Framework Plan will contain five separate volumes. The first four will deal with the re-

sources available and the needs to be fulfilled, while the last will present the general plan of water development for the state including the general nature, extent and timing of recommended development.

Recognizing that the purpose of the Plan is to meet the needs of an unknown future, the Framework Plan will be broad and leaves to the future the description of such specifics as will be required. The problem is to provide definite guidance for future development and still not foreclose alternatives.

Since planning is a continual process, the bulk of time and funds available in the 1967-69 biennium were used to assemble the volumes of basic data which would provide the foundation for present planning and relieve future planning of much of this task. It is expected that these basic data will require only review and updating to serve as a basis for planning in the next decade.

Outlines for the Framework Volumes have been developed by the work groups and reviewed through the procedure described in the preceding chapter. After adoption by the Commission, the collection, organization and interpretation of data included within the outlines was assigned to various state and federal agencies.

SCHEDULE

A stringent schedule was imposed for the preparation of the first four Framework Volumes to insure their completion in an orderly sequence and to allow adequate time for their review prior to preparation of the fifth volume, The Plan of Development. Review drafts of the first four volumes are to be completed by March, May, July and September of 1969. Pending requests for additional information, preparation of the last volume, The Plan of Development, is expected to generate a need for additional information within each of the subject areas covered in the first four volumes. This added input will be prepared as the need arises. Final editions of the first four volumes are scheduled to be available in late 1970. Publication of the final volume of the Framework Plan is targeted for April 1971, two months prior to the completion date requested by the Legislature. Figure 3, is a line diagram

showing the schedule and progress for the State Water Plan as of January 1, 1969.

PROGRESS TO DATE

To date, outlines for all volumes of the Framework Plan have been developed, reviewed and adopted by the Commission. They are reproduced as Part A of the Appendix³ to this report and also show individual agency assignments for participation.

The first volume, relating to Nebraska's land resources, has been prepared, reviewed and approved by the work group. Volume 2, an Inventory of Water Resources, is being prepared and will be reviewed prior to Commission

consideration. Portions of the third Volume, Problems and Needs, have been prepared. The Economic Base Study, Volume 4, is in the initial draft stage. Figure 3 illustrates the current status of the Framework Plan compared to the projected schedule.

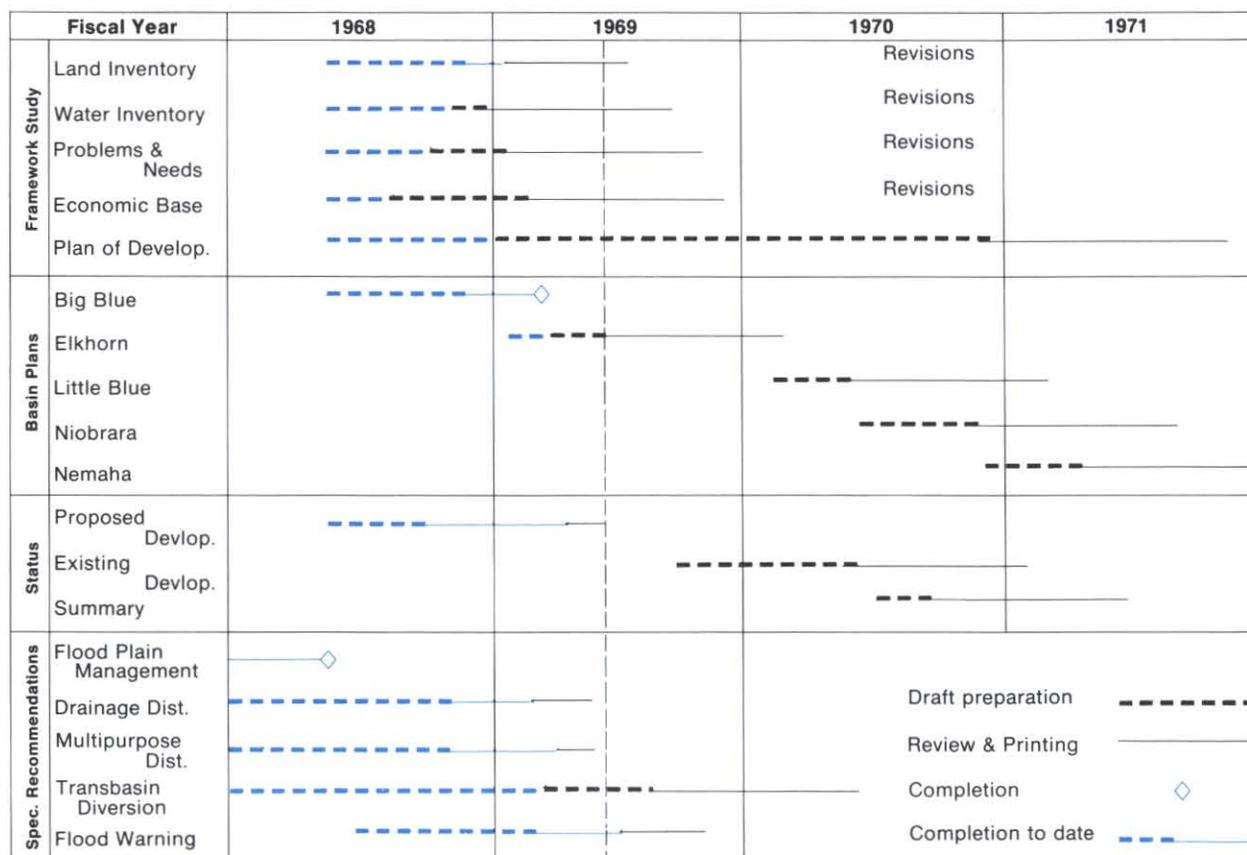
THE REMAINING WORK

Major work remaining includes the analysis of the collected information in the four volumes under way and preparation of the proposed Plan of Development. Completion of the latter item may result in requests for additions to the inventory reports.

³Nebraska Soil & Water Conservation Commission, Appendix to the State Water Plan Progress Report, State Water Plan Publication Number 2A, Lincoln, Nebraska, 1969.

THE 1967 SCHEDULE FOR STATE WATER PLANNING AND PROGRESS AS OF JAN. 1969

FIGURE 3



Jan. 1, 1969

The Basin Reports

DESCRIPTION

The Basin Report portion of the State Water Plan which was proposed in the publication, "A Design for Nebraska's State Water Plan", is to consist of: (1) studies of individual river basins made in the degree necessary to identify potential projects; (2) indicate the agency or agencies responsible for planning and installing the measures; (3) estimate the project cost and benefits; (4) suggest the order of development; (5) show the relationship of the project to the State's Framework Plan; and, (6) recommend action to accelerate resource development. This portion of the Plan will bring into sharper focus the details of water resources development generally described in the Framework Plan.

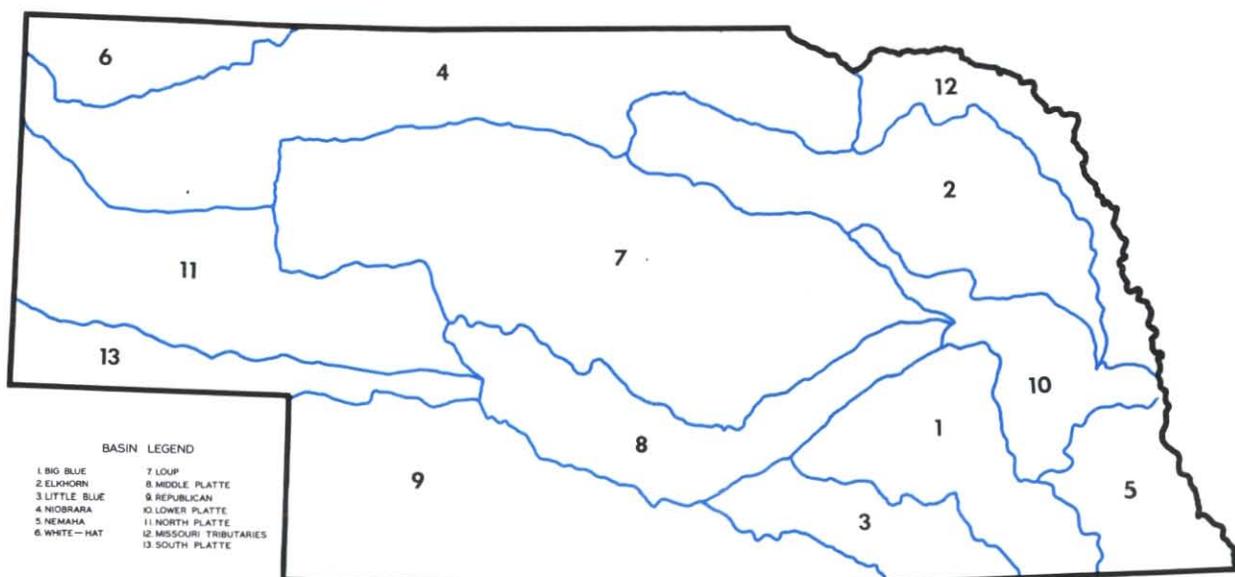
The State of Nebraska was divided into thirteen major river basins as shown on Figure 4. Rather detailed outlines of the items to be covered in the reports were prepared. These

outlines were reviewed with participating agencies and their concurrence received prior to approval by the Commission. Subsequent to this, specific requests for particular items of information were made to various state and federal agencies. A time schedule was established for the submission of this information.

The scheduling for the preparation of these Basin Reports stretches through 1975. It is anticipated that the first few reports will require about a year for preparation with an acceleration in time possible in subsequent reports due to additional experience and information available from the Framework Plan. Recommendations made as a result of the Basin Reports will be sufficiently specific to point out the value of particular water resources developments and to serve as a basis for both immediate and long-range action. It was the decision of the Commission that recommendations included in the Basin Reports shall be directly related to the basin being studied. State-wide recommendations will be included in the Framework Plan or the section dealing with Special Recommendations.

FIGURE 4

NEBRASKA RIVER BASINS



SCHEDULE

The schedule for the Basin Reports is shown below:

STATE WATER PLAN Section 2—Basin Plans		
Volume 1	Big Blue	September, 1968
Volume 2	Elkhorn	September, 1969
Volume 3	Little Blue	September, 1970
Volume 4	Niobrara	February, 1971
Volume 5	Nemaha	July, 1971
Volume 6	White	1972
Volume 7	Loup	1972
Volume 8	Middle Platte	1973
Volume 9	Republican	1974
Volume 10	Lower Platte	1975
Volume 11	North Platte	1975
Volume 12	Mo. Tribs.	1975
Volume 13	South Platte	1975

PROGRESS TO DATE

A cooperative program for the comprehensive basin planning reports has been developed, reviewed and adopted by the Commission. The program specifies the role of the Commission as coordinator and the assistance requested of the various cooperating state and federal agencies. Part B of the Appendix to this report contains the outline of this program.

The Big Blue Basin Report, (State Water Plan Publication #201) was the first report of this series. It was presented to the local sponsor in September 1968. An abbreviated version of this report (Extension Circular 68-779) has been published by the University of Nebraska Agricultural Extension Service and is being distributed for mass public information.

Volume 2, a report on the land and water resources of the Elkhorn River Basin, is in the initial stages of preparation. A working outline has been developed. Staff personnel are assembling basic data and analyzing the informa-

tion submitted by participating agencies. It is anticipated that this report will be completed by September of 1969.

Cooperating agencies are in the process of developing information for other basin reports. Commission staff personnel are working with officials of cooperating agencies in an effort to obtain the required information and to eliminate unnecessary work or duplication.

THE REMAINING WORK

With only one volume of the proposed thirteen completed, the remaining twelve are scheduled for completion by the end of 1975. Some work has been accomplished on the remaining twelve basins. Specific items of basic data are available through the continuing programs of data collection carried on by cooperating agencies. However, a large amount of the required information is unavailable. A major effort will be necessary to complete the remaining twelve volumes on schedule.

The Status Summary

DESCRIPTION

The Status Summary portion of the State Water Plan will contain a summary of existing and proposed water resources projects. This section will be limited to those plans and projects as developed by the U.S. Bureau of Reclamation, U. S. Army Corps of Engineers, and U.S. Soil Conservation Service. The Status Summary will be prepared in the detail necessary to adequately define the plan of development, identify the primary beneficiaries, estimate the costs of construction and operation and appraise the ability of the sponsors to meet the legal and financial responsibilities. If there is sufficient interest, information in this section could be expanded at a later date to include plans and projects other than those developed by the three major federal construction agencies.

Three separate volumes of the Status Summary will be prepared. The first volume will present summaries of proposed water resources development in Nebraska; the second will describe the existing water resources development; and the third will summarize proposed and existing water resources development in a volume suitable for mass distribution to the general public. Outlines for this portion of the State Water Plan are reproduced as Part C of the Appendix.

SCHEDULE

Scheduled completion dates for the three volumes of the Status Summary are:

Volume I—Proposed Development—January, 1969

Volume II—Existing Development—August, 1970

Volume III—Water Resources Development—December, 1970

PROGRESS TO DATE

The first volume of the Status Summary is virtually completed. This volume is expected to be published by March 1969. Preparation of Volume 2 and Volume 3 has not begun.

REMAINING WORK

With the first volume nearing completion, the remaining work involves the preparation and publication of volumes 2 and 3. Volume 2 will require considerable staff time to collect facts on Nebraska's early projects and to update information concerning the various sponsoring organizations of these projects.

Special Recommendations

DESCRIPTION

This part of the State Water Plan provides a basis for the development of recommendations for action on specific items. These recommendations for action by the Legislature, Governor, and various units of government deal with the conservation, development, management and utilization of the state's water resources. It is intended that this portion of the State Water Plan remain flexible. Recommendations on specific work items will be developed as the need arises and fully coordinated with other facets of the Plan. A list of possible topics was prepared and submitted to the Legislature in June 1967, with the awareness that it would be necessary to add and delete items as the general concepts of the Plan are formulated.

Preparation of these recommendations necessitates the study of the legal, engineering, economic, and other technical aspects of the item being considered. The development of each recommendation requires considerable consultation and review with experts in that particular field, in addition to the broad array of plan participants as noted in Chapter Three.

SCHEDULE

The following list includes topics for study as approved by the Commission. Completion dates shown are for those on which significant progress has been made.

Flood Prevention and Flood Damage Reduction	January, 1967
Drainage District Simplification	1969
Modernization of Local Resource Districts	1969
Flood Warning	1969
Classification and Definition of Water	
Legal Considerations in Planning	
Transbasin Diversion	
Preference of Use	
Marketability of Water Rights	
Ground Water Management and Regulation	
Use of Missouri River Flow	
Channel Rectification	
County Authorities	
State Sponsorship of Water Projects	
Land Use Regulation	

PROGRESS TO DATE

Volume one, "Flood Prevention and Flood Damage Reduction," was completed in January of 1967 and presented to Governor Norbert T. Tiemann and the 1967 session of the Nebraska Legislature. The passage of L.B. 893 (1967 session) implemented the recommendations of this volume and calls for a state-wide program of flood plain management. The Commission, on April 25, 1968, adopted rules regulations for this program. To date, this agency has received twelve applications for flood plain studies from municipalities and counties. The Commission has moved ahead in coordinating the state's effort in this area with the programs of the federal government and the local communities. Cooperation and participation by local units of government in this field has been excellent.

Volume two, dealing with the simplification of the drainage district laws, has been prepared and is expected to be published and available to the Legislature during the 1969 session.

Volume three, dealing with the reorganization of local natural resource districts, has received a considerable amount of study by the Commission and staff. Since this recommendation will have considerable effect on many local units of government, the Commis-

sion has made a concerted effort to involve many of the concerned districts and organizations in this study. Guidance has been actively solicited and received from these groups. An extensive educational program has been carried out. This work item has generated extensive discussions and debates. General consensus appears to support a program calling for the formation of multi-purpose natural resource districts. The Interim Legislative Council Study Committee on Ground and Surface Water, in their report to the Nebraska Legislature, has recommended reorganization of local natural resource districts in line with this study. The Commission will soon publish and present this recommendation for the consideration of the 1969 session of the Nebraska State Legislature.

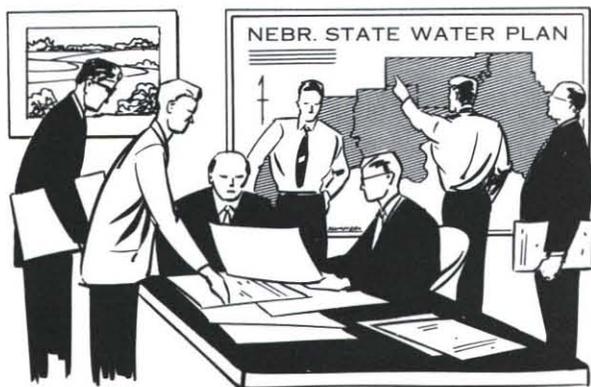
A fourth recommendation concerning the establishment of a flood warning system has been developed and is also expected to be available for legislative consideration this year. The preparation of this recommendation has involved coordination and consultation with several state and federal agencies involved in the areas of flood warning, flood forecasting, civil defense, and emergency planning.

The legal study on transbasin diversion of water has begun. However, the study of other technical aspects of this recommendation must await further development of the Framework Plan.

THE REMAINING WORK

The completion and Commission action on recommendations relating to drainage districts, multi-purpose districts and flood warning are expected prior to the adjournment of the 1969 legislative session. Immediate emphasis on future recommendations is expected to be directed toward the following topics; legal considerations in planning, transbasin diversion, preference of use, ground water management and use, and state sponsorship of water projects. However, as mentioned previously, other topics may be dealt with as the need for action becomes apparent.

GENERAL COMMENTS



technical nature and review specific work items. These work groups are indicated in Figure 1. The three planning work groups have been active in the development and review of information for the Framework Plan. These work groups are for the most part composed of representatives of the cooperating state and federal agencies. The three implementation work groups have not been as active because the planning has not progressed, to the stage of implementation, except in the case of the Big Blue Basin Study. The legal work group is a committee selected by the State Bar Association to review legal considerations in the various aspects of the Plan and they have provided useful assistance in this area. The education work group is chaired by the Agricultural Extension Service of the University of Nebraska. This group is composed of representatives of the news media as well as some state agencies. This group has developed some educational material and is working with those directly involved in the planning effort to develop and make available various educational and informational materials. The Operations Work Group has been formed but has not had an opportunity for significant progress.

SCHEDULE

At the outset of the planning effort, a rather optimistic schedule for the development of the Plan was envisioned. Time required for this detailed and intricate planning was underestimated. Staff availability for development of the Plan and assistance available from cooperating agencies was overestimated. All of the agencies, including the Commission, have had problems with funding and recruitment of personnel. Other assigned responsibilities have also shortened the staff time available for the development of the State Water Plan.

ORGANIZATION

Chapter three mentioned the formation of six work groups to work with problems of a

INFORMATION AND EDUCATION

The Commission has made an effort to develop public awareness of the need for a State Water Plan and to acquaint the public with problems related to the development of this Plan. A slide presentation describing the State Water Plan (originally prepared for a series of Legislative council Hearings) was developed by the Commission and has been shown on numerous occasions throughout the state, (and the nation). The concept of a State Water Plan has met with a good reception. The need for information and education will increase as more specific recommendations of the Plan become available and people become more directly interested in the possibilities presented by a State Water Plan. The Commission welcomes the leadership of the Extension Service in this field. We recognize the magnitude of this responsibility that has been assigned to that agency.

COORDINATION

The coordination effort with local, state and federal agencies and the various units of government has been a major task. This has been a very time-consuming but rewarding effort. The assistance received by the Commission has been most encouraging and all concerned parties have cooperated to the best of their abilities and resources.

FUNDING

The Commission effort has been partially funded through federal sources. Title III of the 1965 Water Resources Planning Act provides for matching federal funds to state agencies involved in water resources planning. These grants are administered by the Water Resources Council. The assistance and cooperation received from the Council has been extremely helpful. Federal funding of this program has not reached the authorized level. As a consequence, federal dollar for dollar matching of state planning funds has not materialized. With the implementation of the Comprehensive State Planning Program through the Department of Economic Development, an effort will be made to secure a 701 Grant (U.S. Housing and Urban Development) to accelerate the State Water Planning

Program. To date, state funding of this program has been generally at a level as requested by the Commission, for which the Commission is most grateful.

NEW PROGRAMS

One of the most encouraging aspects of planning is the results accomplished from the efforts expended. To date the major accomplishment has been the initial establishment of an effective flood plain management program in Nebraska as made possible by the passage of L.B. 893 (1967 session). Two potential programs are being considered for our state as a result of this flood plain program. One involves the establishment of a pilot flood insurance program in Nebraska as authorized by P.L. 90-448. The Salt Valley Watershed in the Lincoln area, the Papillion Creek Watershed in the Omaha area, and the Grand Island area are areas being considered for pilot programs. The second development involves study of the economic aspects of land use on flood plains. This study would be undertaken by the University of Chicago under a federal grant program. The University of Chicago has recommended that Lincoln be chosen as the study site. The Salt Valley Watershed, the City of Lincoln, and the Commission have endorsed the study and agreed to give assistance.

PROBLEMS



PRINCIPAL PROBLEMS

The principal problems encountered thus far in the development of the State Water Plan involves the availability of funds and staffing.

Difficulties have stemmed from the fact that with the short time schedule set by the Legislature, no time was allowed for participating agencies to request the funds and staff necessary to properly carry out assigned responsibilities. Contributions made by assisting agencies were, in general, at the expense of their regular programs. As a consequence, not all cooperating agencies were able to fully carry out assigned responsibilities. Within this funding limitation, there has been whole-hearted cooperation from participating agencies. In view of the sizable amount of work to be accomplished, the four-year schedule established for the completion of the Plan was apparently somewhat optimistic. Still, significant portions of the job have been accomplished and we are very hopeful that much of the work will be completed by 1971.

The water resources planning field has in the past been a rather limited area. There is a shortage of experienced personnel and competition for this personnel has become real keen. Most of the cooperating state and federal agencies, including the Commission, have experienced problems in the recruitment of qualified personnel. Because of this situation, several agencies have experienced vacancies which have been difficult to fill. They have been forced to leave positions vacant or fill them at a higher than anticipated salary.

SECONDARY PROBLEMS

Secondary problems involve timing, coordination, public support, and implementation.

Timing. One problem involves the timing of the Special Recommendations in relation to the physical information available from other parts of the State Water Plan. In some instances, these recommendations depend upon the data available from the Basin Reports or the Framework Plan. Until this data becomes available, it is impossible to move forward with the preparation of a specific recommendation.

Coordination. Another problem involves the over-all coordination required in the State Water Planning Program. The total program is designed to include all known agencies, organizations, and individuals who have technical competence, responsibility or interest in this field. It is the philosophy of the Commis-

sion that the involvement of all available talent will result in greater public acceptance of the State Water Plan. However, this involvement is most time consuming. Due to the nature of this cooperative planning effort being used to develop both the Framework Plan and the Basin Reports, the timing and availability of information has a considerable effect on whether or not the scheduled completion dates can be met. If a major portion of the needed information is not available on schedule, a certain amount of "slippage" in the completion date will occur.

Not necessarily a problem—but more of an opportunity, is the fact that this state water planning activity is the first major effort in Nebraska to consider water resources as they relate to the entire state—both rural and urban. Historically, water resources planning and development in Nebraska has focused upon rural areas. The Nebraska Soil and Water Conservation Commission welcomes the opportunity of working with municipal and agricultural representatives in this endeavor. This program affords rural and urban interests an opportunity to cooperate together for the benefit of all.

Public Support. An apparent problem is the unconcerned attitude of many of our citizens toward the present and increasing water resource problems of the state. To those who have studied Nebraska's economy, a sizeable supply of suitable quality water, available at an economical price, is a necessity if the state's agricultural and industrial economy is to grow and develop. Stimulating statewide recognition of the resource development needs of agriculture on which the entire state so heavily depends is expected to be a significant problem. It is for this reason that Legislative Resolution No. 4 (1967 session), which directs the University of Nebraska and its departments to carry out an accelerated education program in this field, is so important. As Abraham Lincoln observed, "*Without public sentiment, nothing can succeed; with it, nothing can fail.*" Public sentiment must be aroused as to the need to invest in the resources from which we have taken so much and invested so little.

Implementation. At the present time, grass roots sponsorship of basin studies has been by watershed planning boards and informal basin organizations. Both of these groups lack adequate financing and authorities. Because of these deficiencies, these organizations have had difficulty in keeping local interests in-

formed about the basin planning program and in carrying out their responsibility of counseling with the Commission and other water resource agencies. These deficiencies are very apparent in the Blue River Basin Report. This report contains 70 recommendations—many that should be carried out locally. Presently, there isn't a logical local organization which can adequately sponsor programs as envisioned in this or subsequent Basin Reports. Hopefully, this shortcoming will be remedied through recommendations which will be forthcoming from the special work item study, "Multi-Purpose Districts".

In the field of natural resources, we often think of the implementation process as involving the construction of physical works of improvements. However, we expect that the recommendations of the State Water Plan will not be limited to the proposed construction of water resources structures. This Plan will include other proposals; such as, new legislation, methods of financing, and management programs. The implementation of these various recommendations of differing types will require a great deal of thought and effort. In some cases, they will necessitate compromise by various interests.

RECOMMENDATIONS FOR PLANNING



BUDGETING AND SCHEDULING

During the first months of 1968, the Commission began the coordination effort described in the early chapters of this report. Assistance was requested from numerous state and federal agencies in preparing parts of the State Water Plan dealing with their areas of specialization.

One problem, persistent and serious, has been apparent throughout the entire study period. While the assistance of these various state and federal agencies is desirable and necessary for the development of a sound Plan, state agencies in particular have been unable to fully participate due to a lack of staff and funding. Federal agencies have been somewhat similarly hampered. This difficulty has come about due to the brief period between the decision of "what to do" and the time set for completion of the Plan.

As indicated in the discussion of problems, it is now apparent that all of the work items proposed for study will not be completed by 1971. The Commission has decided to alter the planning schedule so that those items having the highest priority will be completed by 1971 and the remaining work will be accomplished as time permits.

The Framework Plan has been given the highest priority and will be completed by 1971. The Basin Reports will be prepared in the sequence scheduled and it is anticipated that the first four will be completed by 1971.

Only the first volume of the Status Summary will be complete by 1971. Work on the remaining two volumes will be accomplished as time permits. The emphasis of effort on the Special Recommendations will be shifted to those study items which seem to have the most urgency.

State agencies must anticipate budget requests approximately one year prior to the beginning of a biennium, thus requiring an estimate of work to be done three years in the future. Federal agencies, in the same fashion, operate on a six-year fiscal program. In order for state and federal agencies to anticipate requests for assistance in the development of the State Water Plan in the immediate post 1971 period, the Commission will have to proceed as soon as possible in determining the particulars of work to be undertaken during that period and formulating specific requests to cooperators for required assistance.

COORDINATION

The problem of coordinating the efforts of the various state and federal agencies involved in the development of the State Water Plan is one that will need to be handled by the Commission. The Commission staff will need to concentrate their efforts primarily on the following three aspects:

- The contributions requested should be clearly spelled out as to the type of information, detail of information, area of coverage, and specific criteria to be used.
- The Commission staff should work closely with each agency to insure that there are no misunderstandings as to the specific requests and that there is as little wasted effort and duplication as possible.
- The Commission should make available to the agencies as soon as possible the future intentions of the Commission in the planning effort. With this information available, the agencies will be better able to make plans to meet their responsibilities.

One of the recommendations of the Management Analysis Study Committee (Little Hoover Commission) was that the State Water Plan be closely coordinated with the Comprehensive State Planning Program as being prepared by the Department of Economic Development. The various aspects of the State

Water Plan will have to be compatible and be incorporated into this total Comprehensive State Planning Program. Coordination and cooperation to date with officials within the Department of Economic Development has been very good. However, this is one area of endeavor that will need to be more fully explored before the Framework Plan is completed in 1971.

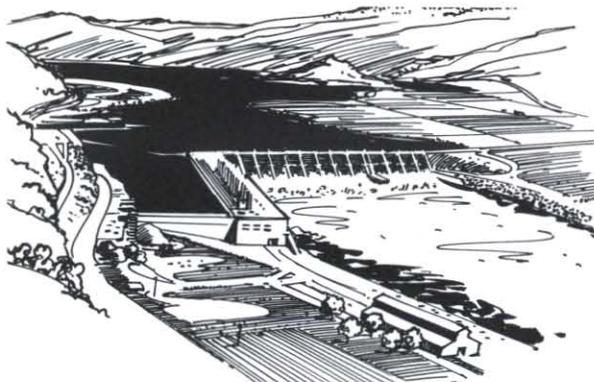
IMPLEMENTATION

In order that the Commission will be able to follow through on the planning process, specific attention must be devoted to the implementation of the Plan. While it is true that actual implementation cannot take place until at least certain parts of the Plan are completed, the process of implementation should begin early in the planning process so that the plans can be carried out with a minimum delay. The Commission has laid the groundwork for implementation by working closely with local units of government, local and statewide organizations, and by carrying out an informational program to permit the public to become aware of the State Water Planning effort. Despite the progress the Commission has made in this area, further work needs to be done.

PUBLIC SUPPORT

Legislative Resolution No. 4, (1967 session) directed the University of Nebraska, and its various departments, to carry on an extensive educational program in the area of water resources development. The University has embarked on this program and is doing a very commendable job; however, it will be necessary for the University to receive further financial assistance and assistance in the educational effort from the various state and federal agencies. The Commission will need to work closely with the University in their informational and educational efforts in order to insure that the University is fully aware of the various aspects of the planning program. Only through a very thorough and comprehensive information and education program can the public be adequately informed. It is the desire of the Commission that the public will have every opportunity to become fully aware of the various facets of the State Water Plan. In this way, judgments reached and decisions rendered will be based on facts and substantiated information.

PROPOSED WATER RESOURCES PLANNING AFTER 1971



The objective of this chapter is to propose a means of avoiding in the post 1971 period the problems which we are now facing, by suggesting a course of planning and requesting legislative concurrence at a time early enough to allow individual agency preparation for participation. Such preparation, through coordinated staffing and budgeting, will be a great aid in future development of the State Water Plan.

The state water planning effort after 1971 should fall essentially into the same four principal divisions as are being followed today in the preparation of the State Water Plan. The work proposed in post 1971 water resources planning is described in the following recommendations along with the relation between work already done and work proposed.

FRAMEWORK PLAN

The first Framework Plan is based extensively on basic data available from past studies and from the Missouri River Basin Study. The first plan is, of course, being done without benefit of legislative expression on the extensive water oriented legislative program which has been and will be stimulated by the Plan itself. A sound, general Framework Plan should be evolved which could fully reflect action in the 1969 and 1971 legislatures. Therefore, it is recommended:

1. To proceed on the basis of information gained in the first plan concerning the availability of data and remaining information gaps; to further refine the economic base study, the inventory of land, the inventory of water resources; and, to update that part of the Framework Plan dealing with water resources oriented needs and problems.

2. Based on legislative and public reception of Volume 5, the Plan of Development, redraft and revise that part of the Plan to reflect appropriate comments which are received.

3. Incorporate, where appropriate, the results of the final Missouri Basin Study Report (available in 1970) and the Bureau of Reclamation's Nebraska Basin Units Study (available in 1971).

BASIN REPORTS

Nebraska river basins in a planning sense, fall into two general categories. Some, such as the White and North and South Platte Basins, due either to topography or the location of significant water supplies, seem to offer limited opportunity for participation in a statewide water balancing scheme unless water importation becomes available through an interstate program. To this extent they are somewhat unrelated to the statewide Framework Plan. Other basins, such as the Niobrara, Elkhorn, Middle and Lower Platte, Republican, and the Blue Basins, may offer considerable opportunity in the future for the balancing of water supplies and needs by diverting unused water from areas of surplus to areas of shortage. Because of this, the individual Basin Reports must be closely coordinated with the statewide Framework Plan. The Basin Reports being currently developed simultaneously with the Framework Plan will not reflect these interbasin relationships. Therefore, it is recommended that:

4. The preparation of Basin Reports for those basins whose development is closely related, should be changed to

reflect relationships determined feasible by the Framework Plan. Specific changes should include recognition of such relationship and provide for feasible interbasin water transfers and solutions to area problems not confined to one river basin. The sequence of revision of completed Reports and the preparation of future Basin Reports would be based on their relationship and the findings of the statewide Framework Plan.

5. A plan of development for those basins limited by resource or location from participating in any statewide water balancing scheme should be prepared as previously scheduled.

STATUS SUMMARY

The Status Summary prepared during the first planning period by its nature requires periodic updating. It is recommended that:

6. The Status Summary be completed and updated biennially in order that the Legislature will have available current information for its consideration.

SPECIAL RECOMMENDATIONS

The Special Recommendations portion of the State Water Plan should continue to deal with the many remaining topics of vital im-

portance to Nebraska's resource development. In particular, it is recommended that:

7. Future recommendations should study ways of accelerating implementation of the planning work done to date.

8. An interim study committee on water should be appointed by the Legislature to select particular topics for study which would be of greatest interest and value to the Legislature.

SUMMARY

The guidance of the Legislature as to the post 1971 planning work by accepting or making alternate recommendations of studies will be of great assistance in allowing the Commission to proceed with future planning in an orderly fashion. The Commission's early start will in turn assist the state and federal agencies who are cooperating in the development of this Plan so as they can properly budget both time and manpower required in carrying out their responsibilities.

SPECIFIC LEGISLATIVE DIRECTION, EITHER ENDORSING RECOMMENDATIONS CONTAINED HEREIN OR SETTING OUT OTHER PLANNING GOALS, IS REQUESTED BY THE NEBRASKA SOIL AND WATER CONSERVATION COMMISSION.