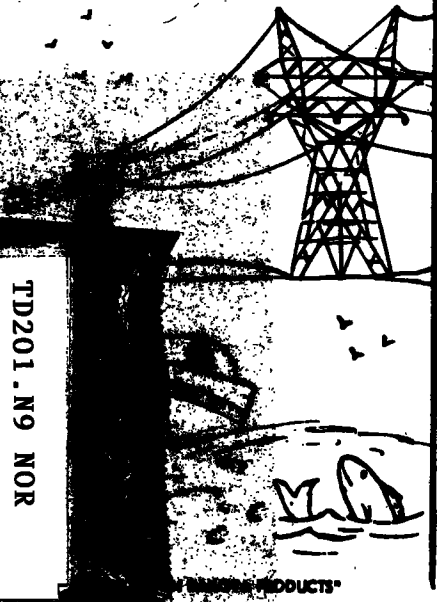
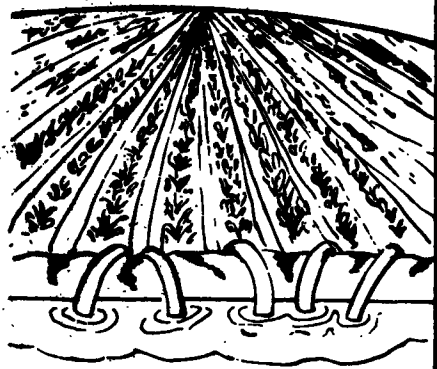
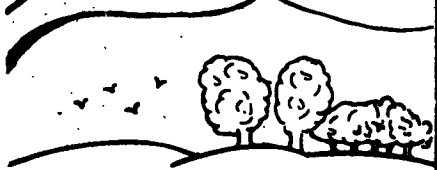
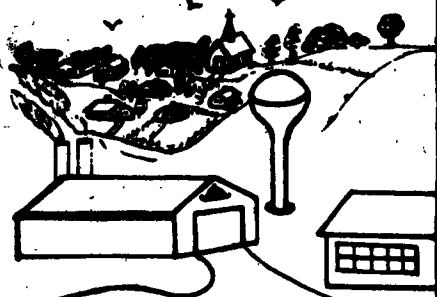


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NORTH DAKOTA STATE AGENCY



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Report of
NORTH DAKOTA STATE WATER CONSERVATION COMMISSION
1301 State Capitol
BISMARCK, NORTH DAKOTA

DESCRIPTION OF WORK PROGRAM

NORTH DAKOTA STATE WATER DEVELOPMENT PLAN

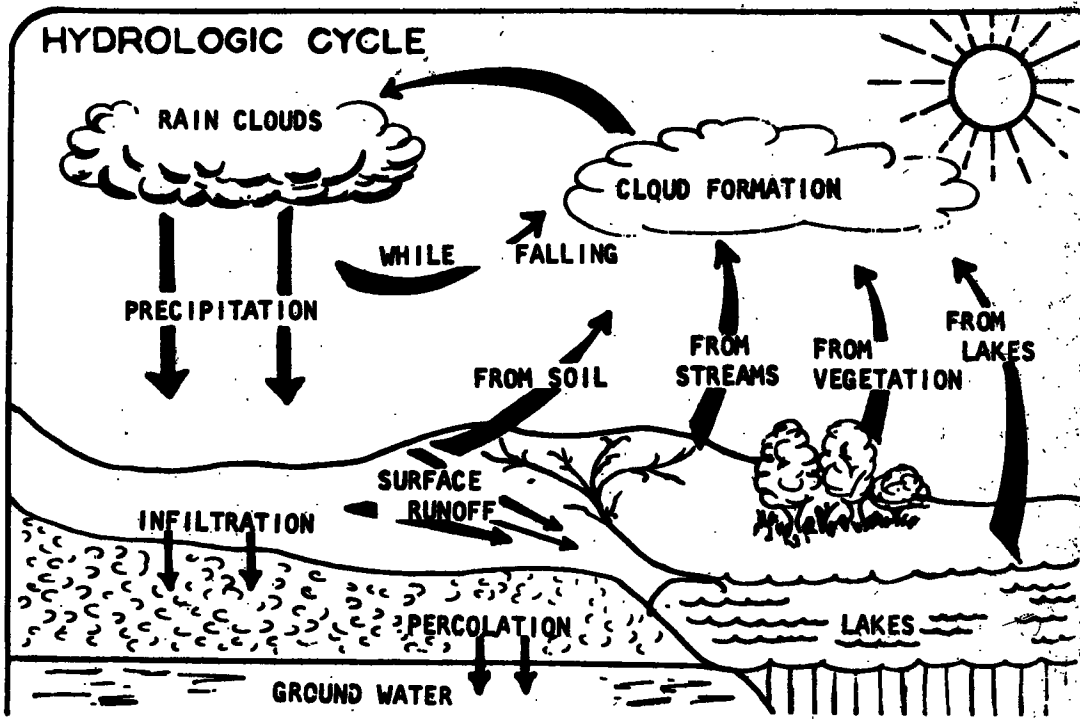
SWC PROJECT #322

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7-28-66

HYDROLOGIC CYCLE



STATE OF NORTH DAKOTA

HELGI JOHANNESON
ATTORNEY GENERAL

TELEPHONE
227 8000

BISMARCK, NORTH DAKOTA 58501

July 19, 1966

MAYBELLE GULLING
CHARLOTTE LOGAN
ELSIE J. JOHNSTON
SECRETARIES

DOROTHY R. KLEVE
BOOKKEEPER

W. G. BAKER
N. J. BARNETT
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ASSISTANTS

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Mr. Fred P. Brandt
Director
State Planning Commission
State Capitol
Bismarck, North Dakota

Dear Mr. Brandt: Re: Application for Federal Urban
Planning Grant--North Dakota State
Water Development Plan

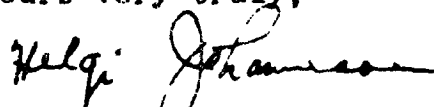
This is in reply to your letter of July 15, 1966, relative to a "statement of applicants legal counsel certifying to the accuracy and currency of legal documentation previously submitted" for an Urban Planning Assistance Grant Section 701 of the Federal Housing Act of 1954, as amended.

This is to affirm that the opinions issued previously by this office on this matter, the last of which was issued July 19, 1966, are still in force and effect and remain as valid opinions of this office.

We certify that the State Planning Agency has authority: to receive and expend federal funds and to provide or obtain and expend funds for planning assistance; to contract with the United States for the purposes of receiving and expending federal funds.

We further certify that the statutes empowering the State of North Dakota, through the State Planning Agency, to so function are found in Chapter 54-34.1 of the North Dakota Century Code, as amended.

Yours very truly,



Helgi Johanneson
Attorney General

HJ:L

Housing and Home Finance Agency URBAN RENEWAL ADMINISTRATION APPLICATION FOR URBAN PLANNING GRANT (Section 701 Program)	TO BE FILLED IN BY HHFA PROJECT NUMBER DATE RECEIVED
--	---

INSTRUCTIONS: Submit original in Binder No. 1, conformed copies in Binders No. 2 and 3.

A. TYPE OF APPLICANT PLANNING AGENCY OR OTHER PUBLIC BODY (Check only one)
 State Metropolitan Regional County Municipal Other
(Specify)

B. STATE IN WHICH PLANNING PROJECT IS LOCATED NORTH DAKOTA	C. CORRECT LEGAL NAME OF APPLICANT STATE OF NORTH DAKOTA ACTING BY AND THROUGH THE STATE PLANNING AGENCY
--	--

D. SUBMISSION
 Initial application Revision of previously approved application dated _____, 19____, for purpose of change in:
 Sharing of project cost Planning Area(s) Other (Explain)

E. TYPE OF PLANNING AREA (Check only one major box)

<input type="checkbox"/> Area with population less than 50,000: (Check one or both as appropriate) <input type="checkbox"/> Small cities, other municipalities, or counties <input type="checkbox"/> Groups of adjacent communities <input type="checkbox"/> County with pop. of 50,000 or more: (Check only one) <input type="checkbox"/> In SMSA <input type="checkbox"/> Not in SMSA <input type="checkbox"/> Urban region (with no city of 50,000 or more) <input type="checkbox"/> Metropolitan area (with city of 50,000 or more)	<input type="checkbox"/> Indian reservation not in a Redevelopment Area <input type="checkbox"/> Localities in a Redevelopment Area: (Check one or more as appropriate) <input type="checkbox"/> Cities or other municipalities <input type="checkbox"/> Counties <input type="checkbox"/> Groups of adjacent communities <input type="checkbox"/> Indian reservations <input type="checkbox"/> Disaster area <input type="checkbox"/> Federally impacted area: (Check only one) <input type="checkbox"/> Expanding installation <input type="checkbox"/> Reduced employment <input checked="" type="checkbox"/> State or interstate area
--	--

F. SHARING OF PROJECT COST	TOTAL AMOUNT	COMPLETE ONLY IF REVISION CHANGE IN PREVIOUSLY APPROVED AMOUNT (+ or -)
FEDERAL GRANT APPLIED FOR Not to exceed: <input checked="" type="checkbox"/> 2/3 <input type="checkbox"/> 3/4 of total project cost	\$ 42,733	() \$
NON-FEDERAL FUNDS TO BE PROVIDED	\$ 21,366	() \$
TOTAL ESTIMATED COST OF PROJECT	\$ 64,099	() \$

The Applicant hereby applies to the United States of America for the grant indicated in Block F above, under the provisions of Sections 701 and 703 of the Housing Act of 1954, as amended, to aid in defraying the cost of the project described in the documentation submitted in support of this application.

The Applicant represents that it has or will have available when needed sufficient funds to defray, with the requested grant, the cost of the project; that the data and information in support of and constituting part of this application for a grant are true, correct, and complete; that the filing of this application has been duly authorized; and that the undersigned officer (or officers) have been duly empowered (a) to file this application for and in behalf of the Applicant, (b) to provide such additional information and documents as may be required, and (c) otherwise to act as the authorized representative of the Applicant in connection with all matters pertaining to this application and any grant contract that may be executed pursuant to this application.

IN WITNESS WHEREOF, the Applicant has caused this application to be duly executed in its name by its undersigned officer (or officers) on this _____ day of _____, 19____, in _____, County of _____.

By _____
Signature of Authorized Officer

DIRECTOR OF STATE PLANNING AGENCY
Title of Authorized Officer

Legal Name of Applicant (i.e., the agency authorized to contract with the Federal Government)

DESCRIPTION OF WORK PROGRAM
NORTH DAKOTA STATE WATER DEVELOPMENT PLAN
SWC PROJECT #322

I. Preface.

- A. The Applicant:** State of North Dakota acting by and through the State Planning Agency, Fred P. Brandt, Director of State Planning Agency, 801 State Capitol, Bismarck, North Dakota 58501.
- B. The Planning Area:** The entire geographical area of the State of North Dakota, containing approximately 70,350 square miles and such additional land and water resources related thereto in and to which it has, or may have, any right or interest under the provisions of any interstate compact to which it is, or may become, a signatory, or under any international treaty of which it is, or may become, a beneficiary, particular reference and consideration being had to the following:
- 1. Interstate Compacts.**
 - a. Yellowstone River -** apportions the waters thereof among the States of Montana, North Dakota and Wyoming. Acts of June 2, 1949 (63 Stat. 152) and October 30, 1951 (65 Stat. 663).
 - b. Little Missouri River -** authorizes the apportionment of the waters thereof among the States of Montana, North Dakota and South Dakota. Act of June 13, 1940 (54 Stat. 382), as amended.
 - 2. International Treaty.**
 - a. International Joint Commission -** created by Treaty of January 11, 1909, proclaimed May 13, 1910, between the United States and Great Britain, pertaining to and affecting the use of the boundary waters along the common frontier of United States and Dominion of Canada.

11. Description of Planning Work.

A. A Federal grant is applied for to aid in the preliminary preparation, design and programming of a State Water Development Plan; an element of the State Development Plan.

1. The total cost of the work proposed for the two-year period is estimated at \$64,099, of which two-thirds or the sum of \$42,733 is requested as the Federal share.

2. Included among the project costs are:

- a. wages, salaries and consultative services;**
- b. travel;**
- c. reproduction and publication;**
- d. telephone tolls and charges;**
- e. office supplies; and**
- f. miscellaneous items chargeable to the project.**

B. The planning work proposed consists of the following:

1. Study existing information and preparing reports on current status of water and related resource development, use and planning in the State, including, without limitation:

- a. Water needs for domestic, municipal, agricultural, industrial and recreational purposes; fish and wildlife propagation and enhancement; and water quality control.**
- b. Interbasin and transbasin diversion and transportation of waters within the State. (Under subsection 1.d. of section 61-02-14 of North Dakota Century Code the North Dakota State Water Commission has the power and authority to "conserve and develop the waters within the natural watershed areas of the state and, subject to vested rights, to divert the waters within a watershed to another watershed area and the waters of any river, lake or stream into another river, lake or stream.")**
- c. Watershed and flood control for the protection of life and property; the conservation, development and use of all the water resources of the State; and estimation of present and future needs for flood and pollution control measures.**
- d. Reuse and reclamation of water in order to minimize water losses from all consumptive uses.**
- e. Reservoir evaporation and control and transpiration losses. (Average annual evaporation from a free water surface is now about 36 inches.)**

- f. Thermal pollution, which may become a problem, particularly in the Missouri River. (One 200,000 k.w. thermal electric generating plant is now in operation, another of about the same capacity is under construction, and a third plant of even greater capacity is being designed. All of them are or will be along the Missouri River in the same limited area, using river water for cooling and discharging into the river. The effect of such thermal discharge and pollution upon operation of the affected plants and upon aquatic life presents problems.)
- g. Underground storage of municipal and industrial water supplies, now practiced by a number of municipalities and being considered by several others. (Much additional study in this field is needed; e.g., cities such as: Edmore, Glenburn, Hunter, Minot, Portland, Tioga and Valley City.)
- h. Control of river flows, which in some areas have changed due to construction projects and are causing severe erosion and interference with water intake works. (Remedial measures must be found and provided.)
- i. Riverbank stabilization and protective works which are becoming increasingly necessary. (Farm, urban and recreational areas are threatened and damaged at a number of points in the State.)
- j. Ground Water surveys to locate subterranean water supplies (Case in point: some years back a fairly large utility plant proposed locating in a certain area if an adequate supply of water could be assured. The ground water potential in that area was not then known and the plant was lost to another State. Subsequently, but too late, a ground water survey discovered an aquifer at the site of first choice capable of providing many times the quantity of water required.)

III. Statement of Objectives.

- A. Explain and determine applications of the North Dakota State Water Resources Policy in connection with future water and related land development projects. (Section 61-01-26 of North Dakota Century Code, declares it to be the policy of the State that:
 - 1. The public health, safety and general welfare, including without limitation, enhancement of opportunities for social and economic growth and expansion, of all of the people of the state, depend in large measure upon optimum protection, management and wise utilization of all of the water and related land resources of the state;
 - 2. The well-being of all of the people of the state shall be the overriding determinant in considering the best use, or combination of uses, of water and related land resources;

3. Storage of the maximum water supplies shall be provided wherever and whenever deemed feasible and practicable;
4. Accruing benefits from these resources can best be achieved for the people of the state through the development, execution and periodic updating of comprehensive coordinated and well-balanced short- and long-term plans and programs for the conservation and development of such resources by the departments and agencies of the state having responsibilities therefor;
5. Adequate implementation of such plans and programs shall be provided by the state through cost-sharing and cooperative participation with appropriate federal and state departments and agencies and political subdivisions within the limitation of budgetary requirements and administrative capabilities;
6. Required assurances of state cooperation and for meeting the federal repayment obligations of the state in connection with federal-assisted state projects shall be provided by the appropriate state department or agency;
7. Required assurances of local cooperation and for meeting non-federal repayment obligations of local interests in connection with federal-assisted local projects may, at the request of political subdivisions or other local interests be provided by the appropriate state department or agency, provided, if for any reason it is deemed necessary by any department or agency of the state to expend state funds in order to fulfill any obligation of a political subdivision or other local interests in connection with the construction, operation or maintenance of any such project, the state shall have and may enforce a claim against the political subdivision or other local interests for such expenditures.)
8. For estimation of the magnitude of future resource needs and problems, together with general recommendations for their solution and the magnitude of costs involved;
9. Establishment of goals, objectives and priorities for meeting the State's water-oriented recreation needs;
10. Establishment of quality objectives for water resources, together with measures needed to achieve these objectives;
11. Estimation of present and future drainage needs;
12. Estimation of present and future snagging and clearing needs in the river basins;
13. Estimation of the project rehabilitation needs; and
14. For the survey of the legislative and administrative framework within which the State Water Development Plan will be developed and implemented.

B. Coordinate State Water Planning with over-all State Development Plan.

1. The State Water Development Plan will be coordinated with and shaped to implement the State Development Plan.
2. The plans will be periodically reviewed, updated and coordinated in order to best serve their purposes and objectives.

C. Coordinate State Water Development Policies with basin and other water plans.

1. The State Water Development Plan will be coordinated with any and all basin or regional plan or plans to which it is related.
2. Should any river basin commission or commissions be established to which the State may become a party, the plan will be coordinated therewith insofar as it affects North Dakota.

D. State Water Development Plan is to be projected to year 2000.

1. The approach to be taken is to:
 - a. Review present information and classify data by water use and by river basin;
 - b. Utilize the available resources of all Federal, state and local entities to accumulate pertinent data;
 - c. Analyze and evaluate the existing supply and projected demands to determine needs;
 - d. Prepare recommendations for programmed activities to investigate, construct and finance needed projects to year 2000.

IV. Drainage Basins Have Already Been Determined as follows: (Map, Appendix 1.)

A. Red River of the North Basin.

1. Location: The main stem of the Red River of the North is formed by the confluence of Otter Tail and Bois de Sioux Rivers at Wahpeton, North Dakota, and Breckenridge, Minnesota. It flows 400 river miles north to the international boundary between the United States and Dominion of Canada. The River constitutes the Minnesota-North Dakota boundary and drains 16,005 square miles in North Dakota. The average annual precipitation in the basin is 20.16 inches.
2. Its principal tributaries in North Dakota are:
 - a. Dakota Wild Rice River, having a drainage area of 2,085 square miles; and

- b. **Sheyenne River, having a drainage area of 6,043 square miles.**

B. Souris-Devils Lake Basin.

1. **Location: This basin consists of the noncontributing Devils and Stump Lakes area of 4,710 square miles and the Souris (Mouse) River drainage area of 9,321 square miles. The Souris River rises in the vicinity of Weyburn, Saskatchewan, Canada (mile 705.0) and flows in a southeasterly direction for about 217 miles where it enters the United States about midway between Northgate and Sherwood, North Dakota. It loops through northwestern North Dakota, returns to Canada and joins the Assiniboine River, which in turn enters the Red River of the North near Winnipeg. Of the stream's total length of 729 miles, about 358 miles are in North Dakota. The basin in North Dakota has an average annual precipitation of 15.55 inches.**
2. **Its principal subbasins in North Dakota are:**
 - a. **Des Lacs River, which rises just north of the international boundary; and**
 - b. **Wintering River.**

C. James River Basin.

1. **Location: The James River drains an area in North Dakota of 6,727 square miles, roughly 55 miles wide east-west, and 140 miles long north-south, in the western portion of southeastern North Dakota. The average annual precipitation in the basin is 17.82 inches.**
2. **Its principal tributaries in North Dakota are:**
 - a. **Pipestem Creek, a right bank stream, which joins the James River in the City of Jamestown, North Dakota; and**
 - b. **Maple Creek, another right bank tributary, which enters the James River in South Dakota.**

D. Missouri River Basin.

1. **Location: The main stem Missouri River is formed by the confluence of the Gallatin, Madison and Jefferson Rivers at Three Forks, in southwestern Montana. It enters North Dakota about 70 miles south of the northwest corner of the State. Its general course is southeastward in a winding channel through North Dakota, leaving the State at almost the exact center of the North Dakota-South Dakota state line. The total Missouri River drainage area in North Dakota, exclusive of the James River Basin, is 33,902 square miles, which has an average annual precipitation of 14.30 inches.**
2. **The principal western and southwestern tributaries of the Missouri River in North Dakota are:**

- a. Yellowstone River, having a drainage area of 748 square miles in the State;
 - b. Little Missouri River, having a drainage area of 4,746 square miles in the State;
 - c. Knife River, having a drainage area of 2,507 square miles;
 - d. Heart River, having a drainage area of 3,343 square miles;
 - e. Cannonball River, having a drainage area of 4,310 square miles; and
 - f. North Fork of Grand River, having a drainage area in North Dakota of approximately 894 square miles. This fork joins the Grand River in South Dakota, which in turn enters the Missouri River there.
3. The principal eastern and northeastern tributaries of the Missouri River in North Dakota are:
 - a. Little Muddy Creek, having a drainage area of 1,310 square miles;
 - b. Apple Creek, having a drainage area of 3,020 square miles; and
 - c. Beaver Creek, having a drainage area of 1,960 square miles.

V. Evaluate and Determine Extent of Beneficial Uses of Water.

A. Domestic and municipal use.

1. North Dakota law defines "domestic use" to mean the use of water by an individual, or by a family unit, or household, for personal needs and for household purposes, including, but not limited to heating, drinking, washing, sanitary and culinary uses; irrigation of land not exceeding one acre in area for noncommercial gardens, orchards, lawns, trees or shrubbery; and for household pets and domestic animals kept for household sustenance whether the water is supplied by the individual, a municipal government or by a privately-owned public utility or other agency.

B. Livestock use.

1. Under North Dakota law, "livestock use" is defined as the use of water for drinking purposes by herds, flocks or bands of domestic animals.

C. Irrigation and industrial uses.

1. The usual and most common definition of irrigation is "the artificial application of water to lands to meet supplemental or full water requirements of crops."
2. Industrial uses include processing, manufacturing and mining.

D. Fish, wildlife and outdoor recreational use.

1. Under state law "fish, wildlife and recreation" shall mean the use of water for the purposes of propagating and sustaining fish and wildlife resources and for the development and maintenance of water areas necessary for outdoor recreation activities.

E. Water quality control.

1. The State has ample laws for controlling pollution of river, lakes and streams. These laws and agency regulations conform to Federal pollution control acts and standards.

F. Navigation.

1. There is very little, if any, commercial navigation on the water of the State. Navigation is limited, almost entirely, to recreation.

G. Quantitative and qualitative standards.

1. Quantitatively, there is no statutory limitation prescribed for domestic, municipal, livestock or industrial use. There is, however, a limitation on the amount of water used for irrigation purposes.
2. The quality of water used for the various consumptive purposes must conform to the standards prescribed by the State laws. These conform to the standards, where applicable, of the U. S. Public Health Service.

H. Legislation affecting water use and appropriation of water.

1. The State has both constitutional and statutory acts covering almost all beneficial uses of its water resources. Among these are Section 210 of the Constitution and Title 61 of the Century Code.
2. In North Dakota the riparian doctrine has been repealed and rights to public waters can only be secured under the appropriative doctrine pursuant to laws and regulations administered by the State Engineer with the concurrence of the State Water Commission.

VI. Determine and Analyze Relationship of Water Uses to Economic, Social and Other Physical Considerations in Light of the following:

A. Economy role.

- 1. The principal economy of the State is agriculture. For the most part, the dependence thereon is dominated almost entirely by the production of wheat, a crop in surplus for the last 20 years.**
- 2. For over a generation opportunities for youth have been scarce. Small farmers have been forced to give way to larger operating units, and most of the small municipalities have shrunk as the growing cities have reached out for increased trade areas.**
- 3. Produce of ranches and farms is shipped out of the State for processing and in turn manufactured and processed goods are shipped in from other states.**
- 4. Industrial raw materials, aside from those produced on the farm, are lignite coal, petroleum, clay, sodium sulfate and common salt.**
- 5. Planned water management and programmed use would make possible putting the water resources to work for the most valuable purposes. Using these resources for manufacturing and processing the farm and ranch produce, industrial raw materials, enhancement and propagation of fish and wildlife, and for recreational opportunities would greatly buttress the economy.**

B. Social role (how various users react to quality and quantity).

- 1. To determine the effects upon users of the varying quality and quantity of water.**

C. Physical features.

- 1. Ecology: Almost all varieties of cereal, row, grass, and vegetable crops for food, feed and forage adapted to the Northern Great Plains, given adequate moisture, will produce abundantly in the State.**
- 2. Natural beauty: Although primarily a prairie state, North Dakota does not lack for variety and contrasts of scenery. Natural beauty abounds in many forms. The Red River Valley's floor-like pattern of checkerboard fields, shelterbelts and farm groves provide an amazing picture. In the drift prairie region, the rolling fertile plain is broken by low ridges of forested hills, shallow coulees and many lakes. The colorful Badlands of the Missouri River Basin are unsurpassed.**
- 3. Mapping: A shaded relief map of North Dakota has been developed by the United States Geological Survey.**

VII. Determine Existing and Programmed Supply of Water from the following:

A. Available basic data (review, analyze, summarize).

1. Review maps of the State and compile graphs, tables, and charts of its principal features and statistical information and of the description of its economy and people, including:

- a. Aerial photographs;**
- b. Topographic maps;**
- c. Geological maps; and**
- d. Soil area maps.**

2. Climatological data, including:

- a. Precipitation;**
- b. Temperature;**
- c. Winds; and**
- d. Evaporation and transpiration.**

3. Hydrologic data.

a. Compilation of streamflow records to include:

- (1) Quantity;**
- (2) Quality;**
- (3) Runoff;**
- (4) Extremes and averages;**
- (5) Flood characteristics and floods of record; and**
- (6) Flow frequencies.**

b. Ground water data.

(1) Ascertain geographic distribution of bedrock and glacial drift aquifers to determine:

- (a) Storage capacity in each basin;**
- (b) Identify known aquifers and their
 - (i) Storage coefficients;**
 - (ii) Transmission factors;**
 - (iii) Infiltration rates; and**
 - (iv) Water quality.****

4. Existing projects, showing:
 - a. Location.
 - (1) Basin and subbasin;
 - (2) Sec., twp., rge., county.
 - b. Storage (AF).
 - (1) Purpose - by use.
 - c. Physical data.
 - d. Map.
5. Programmed projects, showing:
 - a. Location.
 - (1) Basin and subbasin;
 - (2) Sec., twp., rge., county.
 - b. Storage (AF).
 - (1) Purpose - by use.
 - c. Physical data.
 - d. Map.
6. Enhancement and conservation of natural water supplies through:
 - a. Saline water conversion;
 - b. Waste water reclamation;
 - c. Evaporation suppression;
 - d. Phreatophyte control;
 - e. Watershed management;
 - f. Improved efficiencies of usage; and
 - g. Control of flowing wells.

B. Needs for additional data.

VIII. Determine Demand for Water - Present and Future on the Basis of the following:

A. Municipal and domestic.

1. Present use by basins;
2. Potential use by basins.
 - a. Map.

- B. Irrigation.**
 - 1. Present use by basins;
 - 2. Potential use by basins.
 - a. Map.
- C. Industrial.**
 - 1. Present use by basins;
 - 2. Potential use by basins.
 - a. Map.
- D. Recreation.**
 - 1. Present use by basins;
 - 2. Potential use by basins.
 - a. Map.
- E. Fish and wildlife.**
 - 1. Present use by basins.
 - 2. Potential use by basins.
 - a. Map.
- F. Quality water control.**
 - 1. Present use by basins;
 - 2. Potential use by basins.
 - a. Map.
- G. Navigation.**
 - 1. Present use by basins;
 - 2. Potential use by basins.
 - a. Map.
- H. Summary of water uses - A through G.**
 - 1. Present use by basins;
 - 2. Potential use by basins.
 - a. Map.

- IX. Determine Needs - Gap Between Supply of and Demand for Water as follows:
 - A. Delineate use by basins;
 - B. Indicate areas of excess supply;
 - C. Relate supply and demand to future population;
 - D. Relate supply and demand to future industrial activity;
 - E. Discuss competition and conflict for water resources;
 - F. Cite trans-basin diversion problems.

- X. Determine Sources of Revenue and Responsibilities for Development and/or Control of Water and Related Land Resources from the following:
 - A. State.
 - 1. Types of financing;
 - 2. Explanation of programs;
 - 3. Responsibilities.

 - B. County.
 - 1. Types of financing;
 - 2. Explanation of programs;
 - 3. Responsibilities.

 - C. Special district.
 - 1. Types of financing;
 - 2. Explanation of programs;
 - 3. Responsibilities.

 - D. Municipality.
 - 1. Types of financing;
 - 2. Explanation of programs;
 - 3. Responsibilities.

 - E. Federal.
 - 1. Types of financing;
 - 2. Explanation of programs;
 - 3. Responsibilities.

XI. Schedule Development as follows:

A. Long-range program.

1. Review plans of all entities;
2. Program developments.
 - a. By basins;
 - b. By entities (agency), (private, quasi-public, public);
 - c. By purposes.
 - (1) Map.
3. Review legislation and legislative needs.
 - a. Bank stabilization.

B. Six-year program.

1. Review plans of all entities;
2. Program developments.
 - a. By basins;
 - b. By entities (agency), (private, quasi-public, public);
 - c. By purposes.
 - (1) Map.
3. Review legislation and legislative needs.
 - a. Bank stabilization.

XII. Prepare State Water Plan as follows:

- A. Summarize data by basins.
- B. Evaluate relationship to State Development Plan.
- C. Make recommendations for legislation.
- D. Review, revise and refine existing state water policies.
- E. Supply maps and charts showing:
 1. Supply;
 2. Demand;
 3. Needs;

4. General Development Plan to year 2000.

a. Cost estimates;

b. Potential cost participation.

XIII. Prepare Reports as follows:

A. 500 copies, all background papers.

B. 2,500 copies of Chapter XII, State Water Plan.

TABULAR SUMMARY OF WORK PROGRAM

<u>Work Element</u>	<u>To be Performed by</u>	<u>Man days</u>	<u>Est. cost of services</u>
I. Preface	agency staff	1	\$ 37
II. Description of Planning Work	" "	10	410
III. Statement of Objectives	" "	10	410
IV. Drainage Basins	" "	15	615
V. Evaluate and Determine Extent of Beneficial Uses of Water	" "	15	615
VI. Determine and Analyze Relationship of Water Uses to Economic, Social and Other Physical Considerations	" "	30	1,230
VII. Determine Existing and Programmed Supply of Water	" "	281	11,521
VIII. Determine Demand for Water - Present and Future	" "	183	7,503
IX. Determine Needs - Gap Between Supply of and Demand for Water	" "	237	9,717
X. Determine Sources of Revenue and Responsibilities	" "	55	2,255
XI. Schedule Development	" "	175	7,175
XII. State Water Plan	" "	<u>259</u>	<u>11,159</u>
State Water Commission Services		<u>1,271</u>	<u>\$ 52,647 *</u>

* Totals line 4, Form H-6703.

RELATION OF WORK PROGRAM TO COMPREHENSIVE PLANNING PROGRAM

The State Water Development Plan, described above is to become an integral part of the comprehensive planning program of North Dakota which will include three primary functions; local planning assistance, the State Development Plan, and assistance to and coordination of the planning efforts of several State agencies.

Work is progressing and several applications for local planning assistance have been submitted to or approved by the Urban Renewal Administration. In addition, considerable effort is being made to prepare written materials, provide advisory services and maintain contact with local officials in respect to local planning under the auspices of Project P-4.

The objectives of the State Planning Agency in the development of a state-wide comprehensive planning program (Project P-6) are to: determine tentative long range goals and shorter range objectives of the state's development; develop means of coordinating planning programs relying on cooperation and assistance with other agencies; encourage consistency among the functional elements of the State Development Plan and their responsible agencies; determine input and output information requirements for the State Development Plan in terms of solving problems associated with goals and objectives; and outline in detail the proposed state-wide comprehensive and continuing planning program as well as the methods of keeping significant information up-to-date.

An initial State Outdoor Recreation Plan was submitted to the Bureau of Outdoor Recreation September 3, 1965. This document was prepared for the State Outdoor Recreation Agency, a permanent Agency of the State composed of the department heads of twelve State agencies.

This work set the cornerstone of the State's Comprehensive Planning Program as well as inaugurating a continuing guide for action in outdoor recreation development. An application to refine the Outdoor Recreation Plan element of the State Development Plan has been submitted to the Urban Renewal Administration. This effort in encouraging the full participation by the staff of federal, state and local agencies will be applied in every case, as it becomes feasible and voluntary on the part of the heads of departments of state government and others.

It is anticipated that close working relationships will be established with other State agencies during the course of the first phase of the Development Plan. It is expected that subsequent phases of the Development Plan, which relate specific functions into the emerging process, will justify overlapping phases of the plan (and concurrent 701 applications) for revisions to plans for historic sites, State parks and others, as well as this proposal for a Water Plan. The integration of these and other functional plans into the comprehensive State development planning process are largely dependent upon the success of this presently proposed application.

URBAN PLANNING 204

SCHEDULE FOR PREPARATION OF COMPREHENSIVE PLANNING PROGRAM

COMPREHENSIVE PLANNING: It is presently anticipated that the Comprehensive Development Plan of the State of North Dakota will require approximately five years to complete.

The first phase of the state-wide plan to be completed early in 1967 is described under the Section entitled Description of Work, UP 204.

It is anticipated that studies will be undertaken in Phase II and subsequent phases with respect to the pattern and intensity of land use and the provision of public facilities; co-ordination of all related plans of the departments or subdivisions of the state; and intergovernmental co-ordination of all related planning activities among the state and local governmental agencies concerned.

Later phases of the State Development Plan will also deal explicitly with long-range fiscal plans for development, programming of capital improvements and preparation of regulatory and administrative measures or models of such measures for possible local adoption in support of the above planning activities.

Much of the first phase of the State Development Plan will emphasize encouraging participation of legislative and administrative officials of the Federal and State Governments and developing implementing plans.

HOUSING AND HOME FINANCE AGENCY URBAN RENEWAL ADMINISTRATION URBAN PLANNING PROJECT BUDGET	NAME OF PLANNING AGENCY STATE OF NORTH DAKOTA ACTING BY AND THROUGH THE STATE PLANNING AGENCY PROJECT NUMBER (if known) _____ BUDGET NUMBER _____
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INSTRUCTIONS: Submit original and 5 copies in support of initial or amendatory Application for Urban Planning Grant. Submit original and 3 copies for revised budget not requiring submission of application.

DATES OF PREVIOUS BUDGET APPROVALS (Complete only if this is a revised budget) Budget No. 1, _____, 19____ Latest Approved Budget (No. _____), _____, 19____	PROJECT PERIOD NO. OF MONTHS Requested by Plng. Agency 24 Approved by HHFA _____
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LINE NO.	COST CLASSIFICATION	TO BE COMPLETED BY PLANNING AGENCY			TO BE COMPLETED BY HHFA
		USE ONLY FOR REVISED BUDGETS		INITIAL OR REVISED BUDGET REQUESTED	
		LATEST APPROVED BUDGET	ADJUSTMENT (+ or -)		
		(a)	(b)	(c)	(d)
1	SALARIES AND WAGES, PLANNING AGENCY'S PERSONNEL (Including all employee benefit contributions)	\$ 3,033	\$	\$	\$
2	SERVICES BY TECHNICAL CONSULTANTS	2,500			
3	SERVICES BY MUNICIPAL OR COUNTY PUBLIC AGENCIES				
4	SERVICES BY OTHER PUBLIC AGENCIES	52,647			
5	TRAVEL (Except travel included in lump-sum contracts under Item 2 above)	2,000			
6	REPRODUCTION AND PUBLICATION (Essential project reports and documents)	2,900			
7	OTHER EXPENSES - Subtotal (Specify)				
	a. Office Supplies, Miscellaneous, Eligible Costs	613			
	b.				
	c.				
8	SUBTOTAL	\$ 63,693	\$	\$	\$
9	PROJECT INSPECTION FEE	406			
10	TOTAL URBAN PLANNING PROJECT BUDGET (Line 8 plus 9)	\$ 64,099	\$	\$	\$

Approval of the Urban Planning Project Budget in the amounts and for the project period shown above is hereby requested.

_____ Date _____ Signature of Authorized Officer _____ Title _____

The Urban Planning Project Budget is hereby approved in the amounts and for the project period shown above. The project shall be completed by _____, 19____.

The Planning Agency may exceed any of the amounts in Lines 1 through 9 no more than 10 percent, PROVIDED such additional costs do not result in any change in the approved amount for Line 10.

The Planning Agency's staff or salaries as set forth in the Description of Work Program, Application Case No. Case UP 203, or in changes therein subsequently approved by HHFA, may not be increased without prior written approval of HHFA, except for automatic salary increases under either civil service regulations or other official general personnel policies adopted by or applicable to the Planning Agency.

Regional Director of Urban Renewal, Region _____
Date _____

North Dakota State Water Development Plan

SWC Project #322

COST ESTIMATE

<u>Form H-6703</u> <u>Line No.</u>	<u>Cost Classification</u>	<u>Initial Budget Requested</u>
1.	Salaries - Planning Agency's Personnel	\$ 3,033
2.	Services by Technical Consultants	2,500
4.	Services by State Water Commission - details attached	52,647
5.	Travel	2,000
6.	Reproduction and Publication	2,900
7.	Other Expenses - Indirect Costs (other than services by SWC)	<u>613</u>
8.	Subtotal	\$ 63,693
9.	Project Inspection Fee	<u>406</u>
10.	Total Urban Planning Project Budget	\$ <u>64,099</u>

Form H-6701: Application For Urban Planning Grant

F. Sharing of Project Cost:

1. Federal grant applied for	\$42,733
2. Non-federal funds to be provided	<u>21,366</u>
3. Total estimated cost of project	<u>\$64,099</u>

Staffing

<u>(1)</u> <u>Position (a)</u>	<u>(2)</u> <u>Annual Salary</u>	<u>(3)</u> <u>Daily Rate (b)</u>	<u>(4)</u> <u>%Time Assigned</u>	<u>(5)</u> <u>Working Days (c)</u>	<u>(6)</u> <u>Daily Rate (3) x Working Days (5)</u>
1. Chief Engr.	\$15,500	-	5	24	(d)
2. Asst. Secy.	10,800	\$48.20	20	98	\$4,723.60
3. Asst. State Engineer	12,600	56.00	10	49	2,744.00
4. Legal Counsel	11,000	-	5	24	(d)

(1) <u>Position (a)</u>	(2) <u>Annual Salary</u>	(3) <u>Daily Rate (b)</u>	(4) <u>%Time Assigned</u>	(5) <u>Working Days (c)</u>	(6) <u>Daily Rate (3) x Working Days (5)</u>
5. Planning Coordinator	\$9,600	\$43.00	10	49	\$ 2,107.00
6. Planner	8,100	36.50	95	466	17,009.00
7. Office Engr.	10,800	48.20	10	49	2,361.80
8. Hydrologist	9,600	43.00	15	73	3,139.00
9. Water Rights Engineer	7,800	35.20	10	49	1,724.80
10. Draftsman	6,000	27.30	30	147	4,013.10
11. Investigations Engineer	9,600	43.00	10	49	2,107.00
12. Construction Engineer	9,600	43.00	5	24	1,032.00
13. Ground-water Engineer	9,300	41.70	10	49	2,043.30
14. Ground-water Geologist	8,100	36.50	5	24	876.00
15. Ground-water Hydrologist	8,700	39.10	10	49	1,915.90
16. Project Engineer	9,600	43.00	5	24	1,032.00
17. Drainage Engineer	9,600	43.00	5	24	1,032.00
18. Indirect Costs (e)					<u>4,786.50</u>
				1271	\$ 52,647.00

(a) All positions are filled by State Water Commission employees. The Senior Planner - Economic Development Commission, will direct the Water Plan work as an element of the State Development Plan.

(b) Daily salary rate of Commission employees from a document used in the Commission's cost accounting system. The rate includes consideration for salary, social security taxes, medical insurance, retirement, holidays, and vacations.

(c) Working days are determined by applying the percentage in Column (4) to the average number of working days in a two year period, the time estimated to prepare the North Dakota State Water Development Plan.

(d) Direct costs for these positions are not included in the staffing costs since they are included in the "indirect costs" of the Commission in its project cost accounting system.

(e) Indirect costs are applied uniformly to all projects at the standard rate of 10% times direct force account costs and 5% times direct contract work costs. Indirect costs include all costs not readily chargeable directly to a specific project, such as:

1. Payroll costs including old age and survivor's insurance, workmen's compensation, sick leave, emergency leave and salaries not directly chargeable to a specified program or project;
2. Miscellaneous supplies, small tools and vehicle and equipment use;
3. Telephone and postage expenses;
4. Shop depreciation, maintenance and utilities.

(Reference: SWC memo dated: 10/1/65 - File C5-1.4)

Sources of Funds:

1. Contributor	<u>Cash</u>	<u>Services</u>
a. Applicant (EDC)	-	\$3,033
b. Municipal or county public agencies	-	-
c. Other public agencies (SWC)	-	18,333
d. Other	-	<u>-</u>
2. Total non-federal contribution		\$21,366
3. Federal grant requested		<u>42,733</u>
4. Total anticipated cash and services		\$64,099

NORTH DAKOTA STATE WATER COMMISSION ORGANIZATION CHART

16 June, 1966

