



Report of
NORTH DAKOTA STATE WATER COMMISSION
 State Office Building
BISMARCK, NORTH DAKOTA
 58501

JENSEN DAM AND RECREATION COMPLEX

GRAND FORKS COUNTY

SWC PROJECT #1502

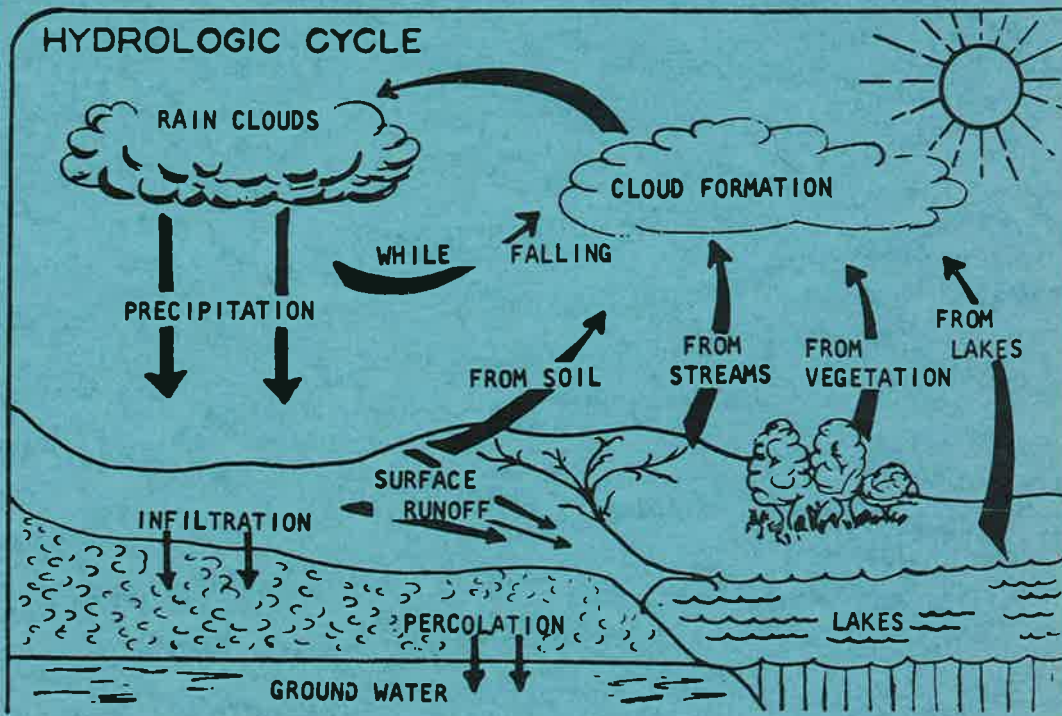
SORA PROJECT #18-25

Prepared in cooperation with

Grand Forks County Water Management District
 State Outdoor Recreation Agency

May 15, 1969

HYDROLOGIC CYCLE



NORTH DAKOTA STATE WATER COMMISSION

PROJECT REPORT

NAME: Jensen Dam and Recreation Complex, Cass County
PROJECT: SWC #1502 - SORA #18-25
SPONSOR: Grand Forks Water Management District
DATE: May 15, 1969

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North Dakota State Water Commission

State Office Building

(701) 224-2750

Bismarck, North Dakota 58501

May 15, 1969

Mr. John Greenslit, State Liaison Officer
State Outdoor Recreation Agency
State Office Building - 900 East Boulevard
Bismarck, North Dakota 58501

Re: Jensen Dam and Recreation Complex -
SWC Project No. 1502

Dear Mr. Greenslit:

Enclosed are seven (7) copies of a development proposal for the Jensen Dam and Recreation Complex in Grand Forks County. The proposal was prepared by the State Water Commission in cooperation with the Grand Forks County Water Management District, the project sponsors.

Please submit the proposal to the Bureau of Outdoor Recreation for a grant from the Land and Water Conservation Fund. We appreciate the cooperation of the State Outdoor Recreation Agency and others who assisted in the preparation of the report.

Sincerely yours,



Milo W. Hoisveen
Engineer-Secretary

MWH:ME:s1

encls.

cc: Grand Forks County Water Management District
Commissioner Dushinske

Governor William L. Guy
Chairman
Richard P. Gallagher
Vice Chairman - Mandan

Harold Hanson
New England
Russell Dushinske
Devils Lake

Henry J. Steinberger
Donnybrook
James R. Jungroth
Jamestown

Arne Dahl, Ex-Officio Member
Commissioner of Agriculture
Milo W. Hoisveen, Secretary
Chief Engineer and State Engineer

DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
PROJECT PROPOSAL - ACQUISITION

LEAVE BLANK FOR BOR USE ONLY

Date Received	Priority	Project Number
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Project Officer

Use this form for submission of individual projects for acquiring lands and waters or interests in lands and waters for public outdoor recreation purposes. If concurrent Development is being undertaken, check here

SECTION 1

1. State or Territory: North Dakota
2. Name and address of agency responsible for project: Grand Forks County Water Management District
c/o Mr. Art Thoraldson, Chairman, Grand Forks, North Dakota 58201
3. Project Title: Jensen Dam and Recreation Complex, Grand Forks County, SORA Project #18-25
4. Brief description of project

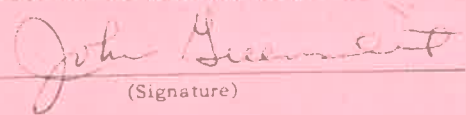
The Jensen Dam project is to be located on the English Coulee immediately north of Grand Forks. The project includes acquiring 83.63 acres of land through the Bureau of Outdoor Recreation program; constructing a channel dam creating a 31 acre reservoir with a capacity of 210 acre-feet and a maximum depth of 21.5 feet; installing recreation facilities for such activities as boating, fishing, swimming, picnicking, playing outdoor games and camping; and providing an underground power line. The project is designed to meet needs for water-based outdoor recreation facilities in Region VII as stipulated in the State Outdoor Recreation and State Water Resources plans. General area development and snagging and clearing the reservoir area is included in the plans to enhance the area's natural beauty.

5. Duration of project from 5/15/69 to 12/31/70
6. Federal assistance requested \$30,511.25
7. Recommended priority A

8. Name, Organization, and Title of individual having day-to-day responsibility for direction of project: Mr. Art Thoraldson, Chairman, Grand Forks County Water Management District, Grand Forks, North Dakota 58201
9. Name and Address to appear on check: Milo W. Hoisveen, State Fiscal Officer, State Office Building - 900 Boulevard, Bismarck, North Dakota 58501

10. TERMS AND CONDITIONS: In submitting this Project Proposal, the State hereby accepts the Terms and Conditions set forth in the BOR Grants-in-Aid Manual, which will be a part of the Project Agreement for any grant awarded under this proposal.

11. CERTIFICATION: As the official designated to represent the State and act for the State for purposes of the Land and Water Conservation Fund Act, I recommend that assistance be made available from the Fund, when monies are available, in accordance with the recommended priority. No financial assistance has been given or promised under any other Federal program or activity with regard to the proposed project. The State or public agency to be responsible for the proposed project has the ability and intention to finance its share of the costs of this project. The Applicant will not discriminate against any person on the basis of race, color, or national origin in the use of any property or facility acquired or developed pursuant to this proposal, and shall comply with the terms and intent of Title VI of the Civil Rights Act of 1964, P. L. 88-354 (1964), and of the regulations promulgated pursuant to such Act by the Secretary of the Interior and contained in 43 CFR 17.


(Signature)

John Greenlit
(Name)

May 15, 1969
(Date)

State Liaison Officer
(Title)

12. For State use
Distribution:
SORA (7)
Grand Forks County WMD
Commissioner Dushinske
SWC (10)

May 15, 1969

SECTION 11

1. Nature and Extent of Use - A. For entire area in which acquisitions are to be made:

Farmlands

B. For area to be acquired:

Farmlands

2. BOR Classification of area <u>III</u>	3. Check one <input checked="" type="checkbox"/> New Site <input type="checkbox"/> Addition to existing site	4. Location County <u>Grand Forks</u> Town <u>Grand Forks</u> Town population <u>5,000</u> Miles from Town <u>1</u>
5. Total acres to be acquired <u>83.63</u>	6. Cover, acres in A. Forest _____ B. Rock _____ C. Cutover _____ D. Swamp _____ E. Grass _____ F. Desert _____ G. Water _____	
7. Topography, acres in A. Flat <u>83.63</u> B. Hilly _____ C. Rolling _____ D. Mountainous _____	8. Waterfront, feet on A. Ocean _____ B. Lake _____ C. Stream _____	9. Roadfront, feet on A. Dirt _____ B. Gravel _____ C. Paved _____

10. PARCELS TO BE ACQUIRED

PARCEL NUMBER	ACRES	ESTIMATED VALUE	NUMBER OF BUILDINGS	ESTIMATED VALUE	METHOD OF ACQUISITION	APPROX. DATE OF ACQUISITION	TOTAL VALUE
1	15.23	11,422.50			Fee Simple	4-1-70	11,422.50
2	22.00	16,500.00			Fee Simple	4-1-70	16,500.00
3	40.00	30,000.00			Fee Simple	4-1-70	30,000.00
4	6.40	3,200.00			Fee Simple	4-1-70	3,200.00

FOR CONCURRENT ACQUISITION AND DEVELOPMENT PROJECT SUBMISSIONS			TOTAL ESTIMATED VALUE \$	
Total estimated acquisition value	<u>61,022.50</u>	Amount of Federal acquisition assistance requested	<u>30,511.25</u>	
Total estimated development costs	<u>296,900.00</u>	Source of remainder of funds	Grand Forks County Water Management District	
TOTAL	<u>357,922.50</u>	Grand Forks County Water Management District		
Total amount of Federal assistance requested		Grand Forks County Water Management District		
Source of remainder of funds	Grand Forks County Water Management District			
Grand Forks County Water Management District	Grand Forks County Water Management District			
State Water Commission	Grand Forks County Water Management District			

SECTION 111 - ATTACHMENTS

"No other Federal funds have been requested for this project."

Attach, by reference number, the following supplemental documents necessary to process this Acquisition Project Proposal:

A-660-1 *Project Justification*. A. Description of how the proposed project is in accord with the State outdoor recreation plan and would help meet priority needs identified in the plan. Indicate how the natural beauty of the area will be preserved. B. Indicate other organizations consulted during formulation of this proposal. C. Plans for Operations and Maintenance.

A-660-2 *Maps and Charts*. A. Simple plot plan or map showing the total area to be acquired and its relationship to the surrounding area. Annotate any plans for streets, highways, waterlines, sewers, etc. to be located on or near the involved area. (Key to show location within State, County, or city.) B. Description of any improvements on lands to be acquired. C. Description of all legal rights to be held by applicant and any other person or organization.

A-660-3 *Agreements*. A. Agreements or arrangements made with other organizations for participating in the project, or in later operation and maintenance of the completed project.

The items shown below need *not* be submitted with the project proposal. However, during the course of execution of an approved project, the applicant should be prepared to submit them to the Bureau for review, as follows:

A-660-4 Appraisal reports and other documentation of cost.

A-660-5 Satisfactory evidence of title (such as an opinion by the State Attorney General) for each parcel.

A-660-6 Five-year history of conveyances for each parcel listed in project proposal (name of parties involved, dates, interest conveyed and consideration).

Botsford & Rice

Mortgage Loans -- Investments -- Farms -- Farm Management -- Insurance

P. O. Box 88

TEL. 775-6851

205 RED RIVER NATIONAL BANK BLDG.

GRAND FORKS, NORTH DAKOTA 58201



March 27, 1969

Mr. Art Thoraldson, Chairman
Grand Forks County Water Management District
611 Campbell Drive
Grand Forks, North Dakota 58201

RE: Jensen Dam, SWC, Project # 1502
Grand Forks County, N. Dak.
Supplement to Appraisal Made December 12, 1968

Dear Mr. Thoraldson:

At your request, the writer has made an appraisal of the following described property for the purpose of estimating it's current market Value:

Lot Three (3) Section Twenty-eight (28) - - - - -	15.23 Acres
Lot Four (4) Section Twenty-eight (28) - - - - -	22.00 Acres
SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section Twenty-eight (28), all in Township 152, Range 50 - - -	40.00 Acres
Part of Lot Two (2) NW of English Coulee in Sec 28-152-50 - - - - -	6.40 Acres

The appraisal report, of which this letter is a part, is based on a personal inspection of the property for two reasons, Market Value as to Agriculture purposes and also for Market Value as to Industrial Development, and an analysis of the many factors believed to influence it's value. It describes the property appraised and sets forth many of the factors considered in arriving at the value estimates.

Based on this information contained herein and on file in the office of the appraiser, it is his opinion that the Market Value of the real estate as of this date is:

(1). Agriculture Purposes	
77.23 acres @ \$400.00 - - - - -	\$ 30,892.00
6.40 acres @ 50.00 - - - - -	320.00
Total Market Value as for Agriculture Purposes - - - - -	\$ 31,212.00
(2). Industrial Development Purpose	
77.23 acres @ \$750.00 - - - - -	\$ 57,822.50
6.40 acres @ 500.00 - - - - -	3,200.00
Total Market Value as for Industrial Development Purposes - - - - -	\$ 61,022.50

The writer appreciates the opportunity to serve you, and hope the the following information will be of considerable help to you.

Yours very truly,
Edwin N. Rice
Edwin N. Rice, Realtor
and Appraiser

A F F I D A V I T

STATE OF NORTH DAKOTA)
) ss
County of Grand Forks D

Edwin N. Rice being first duly sworn on his oath does testify: That he is of legal age, resident of Grand Forks, North Dakota for a period of Sixty-one (61) years and is engaged in the Farm Real Estate, Farm Management, Farm Mortgage Loan, Farm Property Appraisal and Real Property Investment Business in the States of North Dakota and Minnesota. Has had considerable experience in Farm Property Valuations in both States. That he has made a careful investigation of Farm Land Values and more particularly to the Market Value of the Farm Lands Described below in the County of Grand Forks, State of North Dakota; and based on this investigation, it is the true belief of the affiant that the Market Value of Said Real Estate on December 12, 1968 is as follows:

Lot Three (3) Section Twenty-eight (28),	15.23 acres
Lot Four (4) Section Twenty-eight (28),	22.00 acres
SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section Twenty-eight (28), all in Township 152, Range 50	<u>40.00 acres</u>
Total Acres - - - - -	77.23

Estimated Market Value for Agriculture purposes (Buildings included)
77.23 acres @ \$400.00 - - - - - \$ 30,892.00

Estimated Market Value for Industrial Development Purposes
(Buildings included)
77.23 acres @ \$750.00 - - - - - \$ 57,822.50

Part of Lot Two (2) Section Twenty-eight (28), Township 152, Range 50
(Approximately 6.40 acres North of English Coulee)
Estimated Market Value for Industrial Purpose only.
6.40 acres @ \$500.00 - - - - - \$ 3,200.00

Edwin N. Rice

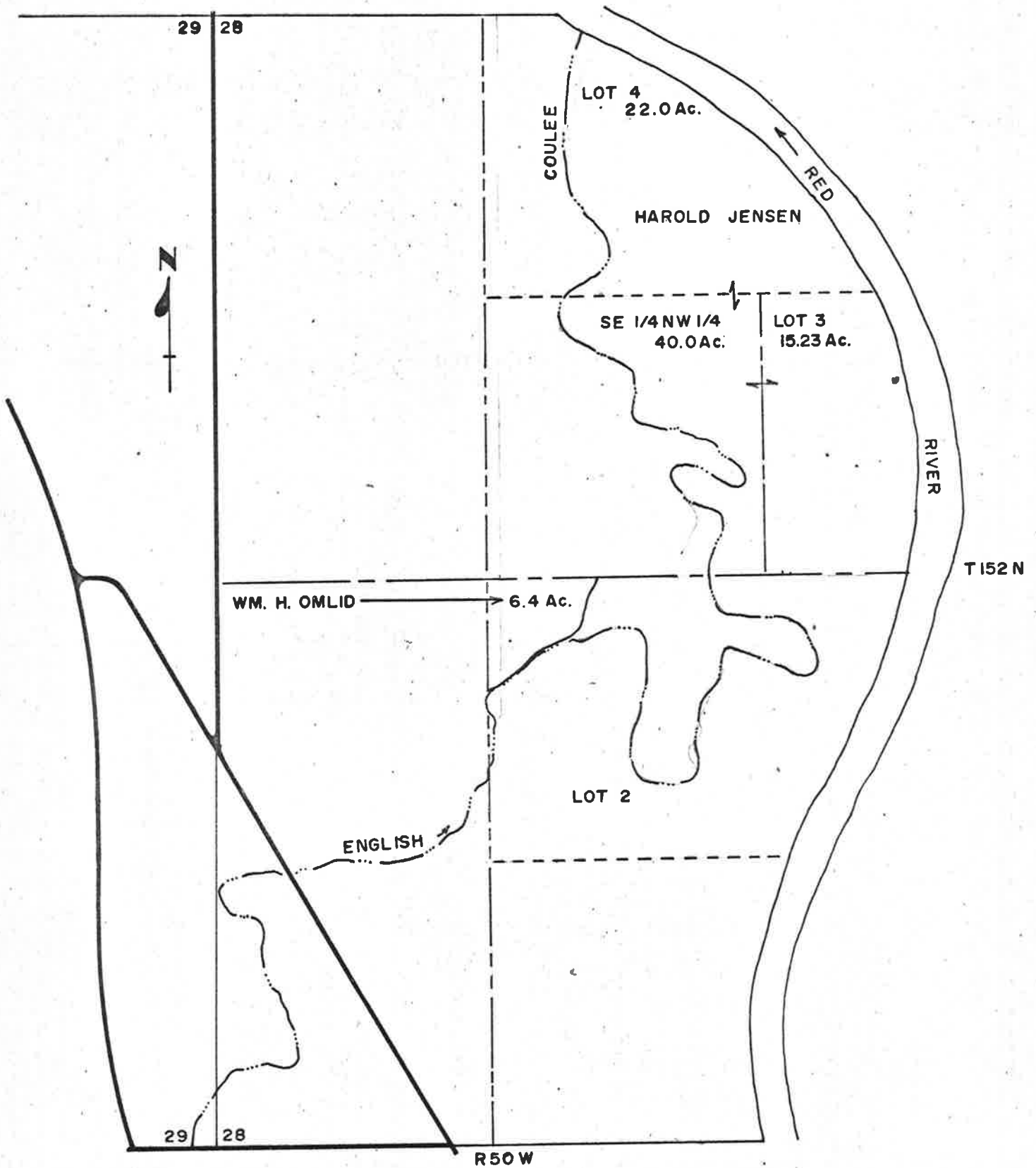
Subscribed and sworn to and before me this 12th. day of December, 1968.

Harry F. Rice

Notary Public, Grand Forks County, North Dakota

HARRY F. RICE
Notary Public, Grand Forks County, N. Dak.
My Commission Expires March 12, 1971

JENSEN DAM PROJ. 1502
OWNERSHIP MAP



DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
PROJECT PROPOSAL - DEVELOPMENT

LEAVE BLANK FOR BOR USE ONLY

Date Received	Priority	Project Number
---------------	----------	----------------

Project Officer

Use this form for submission of individual projects which will develop lands and waters to facilitate their use by the public for outdoor recreation. If concurrent Acquisition is being undertaken, check here

SECTION 1

1. State or Territory: North Dakota
2. Name and address of agency responsible for project: Grand Forks County Water Management District
c/o Mr. Art Thoraldson, Chairman, Grand Forks, North Dakota 58201

3. Project Title: Jensen Dam and Recreation Complex, Grand Forks County, SORA Project #18-25

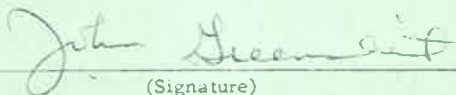
4. Brief description of project:
The Jensen Dam project is to be located on the English Coulee immediately north of Grand Forks. The project includes acquiring 83.63 acres of land through the Bureau of Outdoor Recreation program; constructing a channel dam, creating a 31 acre reservoir with a capacity of 210 acre-feet and a maximum depth of 21.5 feet; installing recreation facilities for such activities as boating, fishing, swimming, picnicking, playing outdoor games and camping; and providing an underground power line. The project is designed to meet needs for water-based outdoor recreation facilities in Region VII as stipulated in the State Outdoor Recreation and State Water Resources plans. General area development and snagging and clearing the reservoir area is included in the plans to enhance the area's natural beauty.

5. Duration of project: 5/15/69 to 12/31/71
6. Federal assistance requested: \$148,450.00
7. Recommended priority: A

8. Name, Organization, and Title of individual having day-to-day responsibility for direction of project: Mr. Art Thoraldson, Chairman, Grand Forks County Water Management District, Grand Forks, North Dakota 58201
9. Name and Address to appear on check: Milo W. Hoisveen, State Fiscal Officer, State Office Building - 900 Boulevard, Bismarck, North Dakota 58501

10. TERMS AND CONDITIONS: In submitting this Project Proposal, the State hereby accepts the Terms and Conditions set forth in the BOR Grants-in-Aid Manual, which will be a part of the Project Agreement for any grant awarded under this proposal.

11. CERTIFICATION: As the official designated to represent the State and act for the State for purposes of the Land and Water Conservation Fund Act, I recommend that assistance be made available from the Fund, when monies are available, in accordance with the recommended priority. No financial assistance has been given or promised under any other Federal program or activity with regard to the proposed project. The State or public agency to be responsible for the proposed project has the ability and intention to finance its share of the costs of this project. The Applicant will not discriminate against any person on the basis of race, color, or national origin in the use of any property or facility acquired or developed pursuant to this proposal, and shall comply with the terms and intent of Title VI of the Civil Rights Act of 1964, P. L. 88-354 (1964), and of the regulations promulgated pursuant to such Act by the Secretary of the Interior and contained in 43 CFR 17.


(Signature)

John Greenslit
(Name)

May 15, 1969
(Date)

State Liaison Officer
(Title)

12. For State use
Distribution:
SORA (7)
Grand Forks County WMD
Commissioner Dushinske
SWC (10)

May 15, 1969

SECTION 11 - TABULAR SUMMARY OF PROJECT ELEMENTS AND COSTS

Identify the phase or element of the Development Project suggested by the line items. Indicate additional breakdown of work elements necessary and desirable to allocate work assignments and costs.

	DATE OF		ESTIMATED COST	TOTAL ESTIMATED COST	
	BEGINNING	COMPLETION		Amount of Federal development assistance requested	\$
DEVELOP SITE PLANS & SPECIFICATIONS					\$ 296,900.00
A.				148,450.00	
B.					
DEVELOP CONSTRUCTION PLANS AND SPECIFICATIONS				FOR CONCURRENT ACQUISITION AND DEVELOPMENT PROJECT SUBMISSIONS	
A.				Total estimated acquisition value	\$ 61,022.50
B.				Total estimated development costs	\$ 296,900.00
PREPARE SITE				TOTAL	\$ 357,922.50
A.				Total amount of Federal assistance requested	\$ 178,961.25
B.				Source of remainder of funds	
UNDERTAKE CONSTRUCTION				Grand Forks County Water Management District State Water Commission	
A. Dam and	5/15/69	12/31/71	155,100.00	SIZE IN ACRES OF ENTIRE AREA OR PARK	SIZE IN ACRES OF AREA TO BE DEVELOPED UNDER THIS PROPOSAL
B. Recreation Fac.	5/15/69	12/31/71	141,800.00		
OTHER				Land	Water
A.					
B.				83.63	52.63 31.0

SECTION 111 - ATTACHMENTS

"No other Federal funds have been requested for this project."

Attach, by reference number, the following supplemental documents necessary to process this Development Project Proposal:

- D-660-1 *Project Plan and Justification.* A. Description of how the proposed project is in accord with the State outdoor recreation plan and would help meet priority needs identified in the plan. B. Summary of area, its nature and relation of development to the area. Indicate how the natural beauty of area will be enhanced. C. Descriptive outline of proposed accomplishments with funds requested. Indicate contemplated other uses of the area. D. List of names of organizations which will undertake the development and how this will be performed. E. Economic feasibility data, or other types of data to indicate extent and kind of use to be made of the completed area or facility. F. Plans for operations and maintenance.
- D-660-2 *Maps and Charts.* A. Simple site plans or maps showing total area, in addition to area to be developed. Annotate to show plans for, or existing streets, highways, waterlines, sewers, etc. to be located on or near the area. (Key to allow location within State, County, or city.) Indicate uses now made of the area by applicant or other agencies or individuals. B. Description of all legal rights to the area to be held by applicant and any other person or organization.
- D-660-3 *Agreements.* A. Agreements or arrangements made with other organizations for participating in project, including operation and maintenance of completed facility.

The terms shown below need *not* be submitted with the project proposal. However, during the course of execution of an approved project, the applicant should be prepared to submit them to the Bureau for review, as follows:

- D-660-4 *Plans.* A. Site plans, specifications and cost estimates. B. Construction plans, specifications and cost estimates. These *must* be submitted for review and approval before construction may proceed on a structure to cost in excess of \$100,000.
- D-660-5 *Contracts.* A. Copies of pertinent contracts, as specifically required by the Bureau of Outdoor Recreation.

NORTH DAKOTA STATE WATER COMMISSION

Acquisition and Development Project Justification Report

Jensen Dam and Recreation Complex, Grand Forks County

SWC Project #1502

SORA Project #18-25

May 15, 1969

A-D:660-1. PROJECT PLAN AND JUSTIFICATION

A. State Plan Accord

The Jensen Dam and Recreation Complex will provide outdoor recreation opportunities for boating, water skiing, fishing, picnicking, swimming and playing outdoor games and sports.

"Outdoor Recreation in North Dakota," the State Plan, (page 44, paragraphs 5, 7, 8 and 9) states: "Planning Region VII has generally adequate areas and facilities for playing outdoor games and sports, ice skating, outdoor cultural events and equestrian trails to meet needs of the residents as projected to 1980. There may be instances of local unmet needs.

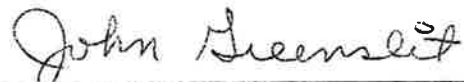
"Acquisition and development programs should generally be directed towards providing additional areas and facilities for fishing, boating, water skiing, swimming beaches and pools, camping, hunting, bicycle trails, picnicking, walking and hiking trails, scenic drives, sledding, tobogganing, and snow skiing. Action by all levels of government and by the private sector must be expanded if the growing future needs of the people are to be met.

"Water resources of the region are limited. The terrain of the Red River Valley is relatively flat and there is limited potential for suitable dam sites. The rich farming land is expensive and may provide greater economic return from agricultural

operations than it would from reservoir impoundments. Much of the demand for water oriented activities by residents of the region is now satisfied in the lake and resort areas close by in Minnesota.

Water oriented recreation developments in adjacent planning regions of North Dakota will play an ever increasing part in the future recreation needs for Planning Region VII, however, consideration should be given to development of feasible water projects within Planning Region VII."

The project is in accord with the state comprehensive outdoor recreation plan and will serve to meet priority needs identified in the plan. It is accorded Bureau of Outdoor Recreation priority designation "A",



John Greenslit
State Liaison Officer - Coordinator

B. Summary of Area

The proposed project is to be located immediately north of Grand Forks in Grand Forks County, North Dakota. Economic Region VII is known for its deficiency of adequate quality water-related outdoor recreation facilities.

The project setting, which is English Coulee with its tree-lined banks, will make a very attractive area for water-related outdoor recreation purposes. General layout of the project features contemplates enhancement of the area's appearance and add to its natural beauty. There are no flooding or pollution problems at the proposed reservoir and recreation area.

C. Outline of Project Features

A \$155,100 dam is planned which will create a 31 acre reservoir with an 108 square mile drainage area, 210 acre-feet capacity and 21.5 feet maximum depth. A detailed cost estimate, design and hydrology report are included with this proposal. The water has been allocated, by permit of the State Engineer, to recreation.

About 83.63 acres of land are to be acquired in fee for the reservoir and public use recreation areas adjacent to the reservoir. The estimated land cost is \$61,022.50. Appraisal reports are included with the proposal. The 83.63 acre area is primarily for intensive use and will be owned by the Grand Forks County Water Management District, project sponsor.

Recreation facilities are to be installed by the Grand Forks County Water Management District for public use activities such as fishing, boating, swimming, picnicking, and playing outdoor games. No charges are anticipated at the project for use of the area for recreational purposes. A detailed cost estimate for the recreation facilities phase of the project is included with this proposal.

In summary, the project phases, their costs and allocations are as follows:

<u>PROJECT PARTICIPANTS</u>	<u>LAND</u>	<u>DAM</u>	<u>FACILITIES</u>	<u>TOTAL</u>
Bureau of Outdoor Recreation	30,511.25	77,550.00	70,900.00	178,961.25
Grand Forks County WMD	30,511.25	38,775.00	70,900.00	140,186.25
State Water Commission	<u>-</u>	<u>38,775.00</u>	<u>-</u>	<u>38,775.00</u>
TOTALS	\$61,022.50	\$155,100.00	\$141,800.00	\$357,922.50

D. Organizations and Coordination

During the project formulation process numerous conferences were held among the participating agencies, landowners, and interested citizens. Coordination of each project phase will be continued among all interested entities as acquisition and development activities proceed.

Primary agencies and their responsibilities include:

1. Project Sponsor - Grand Forks County Water Management District
2. Grant Administration - State Outdoor Recreation Agency
3. Land Acquisition - Grand Forks County Water Management District
4. Dam Construction - North Dakota State Water Commission with contract forces
5. Recreation Facilities - Grand Forks County Water Management District and State Water Commission
6. Financing - Bureau of Outdoor Recreation, Grand Forks County Water Management District and State Water Commission

E. Economic Feasibility

The project will serve a 30 mile radius area with an estimated 80,000 population. Anticipated annual visitations are 40,000 with an assumed economic value of \$1.50 per visitation. Annual operation and maintenance costs are estimated at \$3,500 and depreciation (including land) at \$8,950 for total annual costs of \$12,450. Average annual net economic benefits are estimated at \$47,550.

Assuming the \$357,922.50 total costs allocated to outdoor recreation were invested and compounded at 4% for 40 years, the

estimated project life, we would have a product of \$1,718,393.31. With net annual benefits of \$47,550 over the project's 40 year life, we would receive \$1,902,000 in economic benefits indicating a benefit-cost ratio of 1.11 to 1.

A project economic feasibility report is included with this proposal (SORA Form 28).

F. Operation and Maintenance

The Grand Forks County Water Management District will operate and maintain the 83.63 acre project area with technical assistance from the North Dakota State Game and Fish Department and State Water Commission. The area will be open to the public at all times. Operation and maintenance funds are obtained from ad valorem taxes levied by the Grand Forks County Water Management District throughout the county which has a taxable valuation of \$46,362,248 (1967).

A-D:660-2. MAPS AND CHARTS

A. Included with this project proposal are the following maps and supporting data:

1. State map showing project #18-25 location
2. Design and Hydrology Report
3. Soils Investigation Report
4. Water Permit #1624 and SWC Form 110 -
"Permit for Construction of Dam"
5. SWC Map #7101-1502-39 "Topography and Test Borings"

A-D:660-3. AGREEMENTS

A. The following are included with this proposal:

1. Grand Forks County Board of Commissioners' Approval
2. Grand Forks County Water Management District Project Assurances and Civil Rights Act Assurances
3. Cost Participation Agreement among Grand Forks County Water Management District and State Water Commission

A-D:660-4. PLANS

A. Construction plans for the project are included as follows:

- | | |
|-----------------------|---|
| SWC Map #7150-1502-43 | "Recreation Area and Facilities" |
| SWC Map #7095-1502-40 | "Sections, Elevations and Plan View Spillway Structure" |
| SWC Map #6325-1502-32 | "Lower Coulee Damsite and Lower Coulee Spillway Site" |
| SWC Map #7096-1502-41 | "Profile and Details" |

Prepared by:

Matt Emerson

Matt Emerson, Assistant Secretary
North Dakota State Water Commission

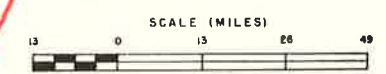
Distribution:

SORA (7)
Grand Forks County Water Management District
Commissioner Dushinske
SWC (10)

Map No. 8 - Preliminary North Dakota State Outdoor Recreation Plan



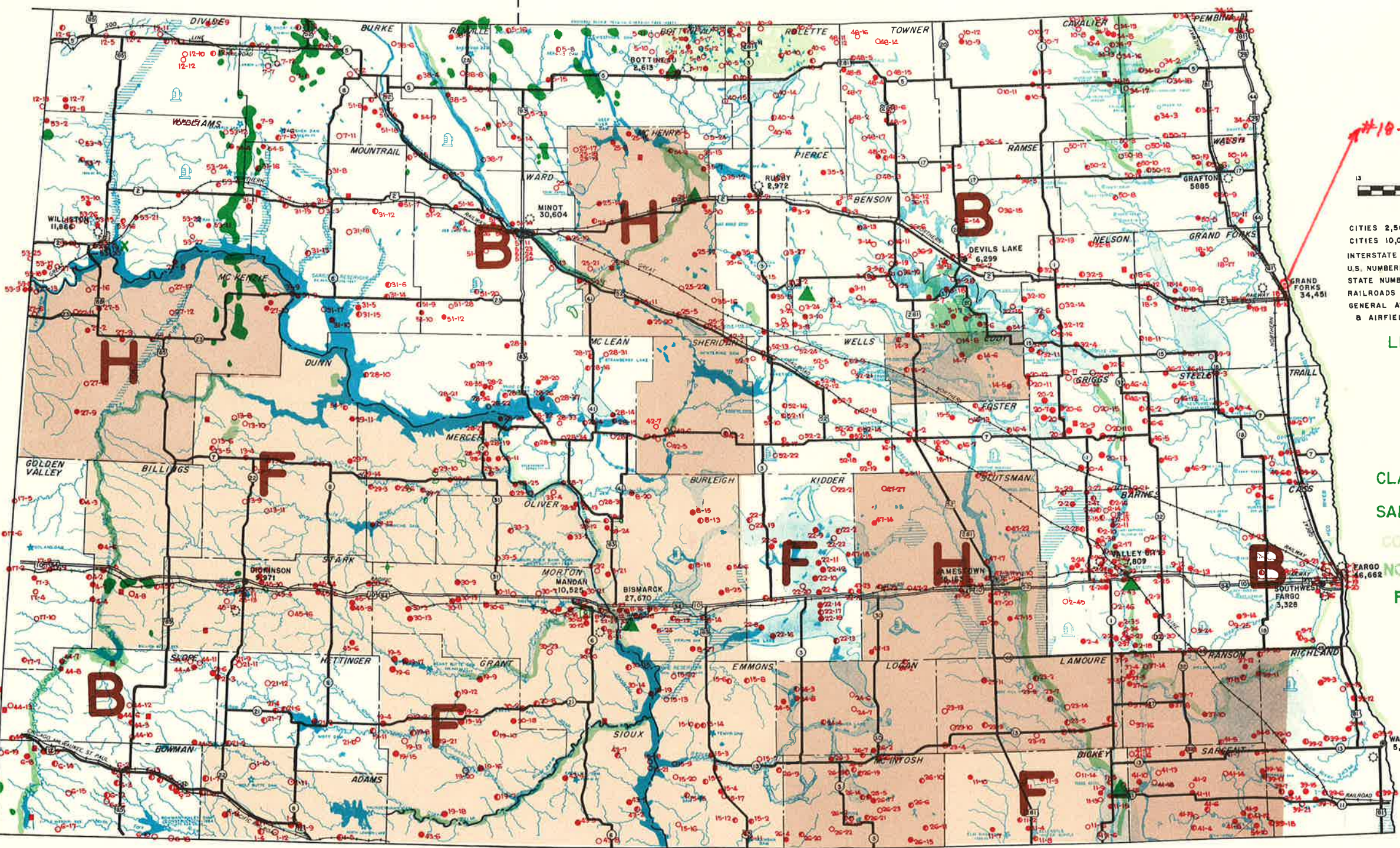
#18-25



- GENERAL LEGEND**
- CITIES 2,500 TO 9,999
 - CITIES 10,000 AND OVER
 - INTERSTATE ROUTES
 - U.S. NUMBERED ROUTES
 - STATE NUMBERED ROUTES
 - RAILROADS (MAIN LINES)
 - GENERAL AVIATION AIRPORTS
 - AIRFIELDS

- LIGHT WEIGHT AGGREGATE PIT (Mandan)
- OIL FIELDS
- LIGNITE MINES
- CLAY PITS (Hebron)
- SALT PLANT (Williston)
- COMMERCIAL FOREST
- NON-COMMERCIAL FOREST
- FOREST NURSERIES

- LEGEND**
- EXISTING RECREATION AREAS
 - POTENTIAL RECREATION AREAS
 - EXISTING & POTENTIAL RECREATION AREAS
 - POINTS OF GEOLOGIC INTEREST
 - EXISTING DAM
 - PROPOSED DAM
 - DAM TO BE RECONSTRUCTED
 - CANALS - GARRISON DIVERSION
 - COUNTY GROUNDWATER STUDY
 - COUNTY GROUNDWATER STUDY COMPLETED
 - SHADED AREAS (BLUE) GROUNDWATER AQUIFIER



- B.... PREDOMINANT CASH GRAIN FARMS
- F.... PREDOMINANT LIVESTOCK FARMS & RANCHES
- H.... GENERAL FARMS, NO PREDOMINANCE

Data Source: U.S. Census of Agriculture 1959, Vol. I, Part 18, North Dakota

BUY NORTH DAKOTA PRODUCTS

NORTH DAKOTA STATE WATER COMMISSION

OFFICE MEMO

MEMO TO: Milo W. Hoisveen, Chief Engineer
FROM: Delton D. Schulz, Office Engineer
SUBJECT: Jensen Dam - SWC Project No. 1502 - Design, Hydrology and Dam
Construction Cost Estimate Report
DATE: November 15, 1968

H Y D R O L O G Y

Jensen Dam is proposed to be located in Section 28, Township 152 North, Range 50 West in Grand Forks County. This location is near the mouth of English Coulee which drains into the Red River. The drainage area above the dam is 108.45 square miles, which is more than adequate to sustain the reservoir water surface level. The length of English Coulee from its headwaters to the dam site is 46 miles. The total fall within this distance is 332 feet.

In view of the project's proximity to Grand Forks, structures were designed to provide for a 100-year flood frequency. A rainfall of 100-year frequency on the area would approximate 3.8 inches falling in a 5.16 hours period. The computed design inflow hydrograph has a peak of 3,093 cubic feet per second and a total volume of 2,285 acre-feet, which is equal to a runoff depth of 0.395 inches from the contributing drainage area of 108.45 square miles. Computations developed for maximum flows and a graphical presentation of the hydrograph are attached. Also attached is the reservoir area capacity curve. Though the structures were designed hydraulically to provide for flood flows in excess of 100-year frequency, it is anticipated that backwaters of the Red River will control the water surface elevation during extreme flows. The structures had been designed adequately so as not to induce flooding of adjacent lands.

The average annual water yield of the drainage basin approximates 60 acre-feet per square mile. The total drainage area of 108.45 square miles would therefore yield 6,507 acre-feet per year to the reservoir. Evaporation and seepage losses for this area approximate 2.5 feet. Total annual reservoir losses therefore approximate 77.5 acre-feet.

D E S I G N

The spillway structure consists of double drop sheet piling structures off of the English Coulee channel proper. The reason for the double drop was due to the instability of soils in this area where differences in elevations in excess of 20 feet to 25 feet cause soils to shift or move. The reason for selection of sheet piling is due again to the unstable soils which have a tendency to bounce or move. Such soil reactions have caused cracks, etc. to occur in reinforced concrete. It is hoped that the sheet piling will provide greater latitude for such movement and still remain structurally sound. The water surface control elevation will be provided by the first structure near English Coulee and is to be established at elevation 805.0. At this elevation, a channel reservoir will be created covering an area of 31 acres with a capacity of 210 acre-feet. The overall width of the drop structures is 176 feet each, and rock riprap is to be provided upstream and downstream from both structures to minimize erosion. The downstream structure has been set at an elevation equal to the bottom of the Red River channel to preclude scouring. An earthen plug with 30 foot top, and a core at the base, to eliminate seepage, is to be placed in the English Coulee proper near the mouth of the coulee. Side slopes of the earthen plug are proposed to be 4:1 upstream and downstream and are to be rock riprapped in their entirety both upstream and downstream. Rock riprap is necessary on the downstream side, in this case, due to anticipated backwaters of the Red River. The 30 foot top width is provided in view of the anticipated access road to the proposed recreation area. The crest of the embankment is to be established at elevation 814.0.

FOLLOWING ARE PHYSICAL FEATURES OF THE DAM:

- A. Maximum Height of Dam Embankment - 30.5 Feet
- B. Maximum Depth of Reservoir at Control Elevation 805.0 - 21.5 Feet


- C. Reservoir Water Surface Area at Control Elevation 805.0 - 31 Acres
- D. Reservoir Capacity at Control Elevation 805.0 - 202 Acre-Feet
- E. Drainage Area Above the Dam - 108.45 Square Miles

C O S T E S T I M A T E F O R D A M C O N S T R U C T I O N

Based on cost for construction of previous projects by the State Water Commission, it is estimated that costs for construction of the dam solely are as follows:

1. Stripping - 2,000 CY @ 35 cents (Includes only earthfill area and roadway)	\$ 700.00
2. Excavation - 16,000 CY @ 45 cents (Includes all excavation in area of structure and the core trench for the earthen plug in the coulee proper. A portion of the excavation in the area of the structure will be used for construction of the dikes in the structures area, and the balance of excavated material is to be distributed in the general area of the structures of the disgression of the engineer in charge) (2,503 CY in dikes)	7,200.00
3. Earthfill, embankment and roadway - 9,000 CY @ 45 cents	4,050.00
4. Brace Pipe, Black - 4" - 14.98 lb./ft. 960 L.F. @ \$4.00	3,840.00
5. 4" Standard Pipe Tee (Weld) - 22 @ \$15.00	330.00
6. Structural Steel Sheet Piling (L.B. Foster, Sec. No. 1306 or equal) 10,200 Ft. ² @ \$6.00	61,200.00
7. American Standard Channel - 6 [13 - 616 L.F. @ \$4.00	2,464.00
8. Primer, Rust Inhibitive, Intermediate - 22,400 Ft. ² @ 4 cents	896.00
9. Paint, 594 Green, by Rust-Oleum (or equal) 24,864 Ft. ² @ 4 cents	994.56
10. Rock Riprap - 3,660 tons @ \$8.50	31,110.00
11. Gravel - 1,966 tons @ \$5.00	9,830.00
12. Corrugated Metal Pipe - 18 inch, 16 gage 54 L.F. @ \$10.00	540.00

13. Metal End Sections - 18 inch, 16 gage 2 each @ \$25.00	\$ 50.00
14. Extend 24" Corrugated Metal Pipe, 16 gage LUMP SUM	100.00
15. Metal End Section, 24", 16 gage 2 each @ \$30.00	60.00
16. Snagging and Clearing * 2.4 miles @ \$2,500.00	<u>6,000.00</u>
SUBTOTAL	\$129,364.56
Contingencies	5,635.44
Construction Inspection	6,000.00
Contract Administration	<u>14,100.00</u>
TOTAL	<u><u>\$155,100.00</u></u>



Delton D. Schulz
Office Engineer

DDS:ka

Dist.
MWH
AIG
DDS

ENGLISH COULEE - #1502

Drainage Area - 108.45 square miles
 Length of Channel - 46 miles
 Total Fall, 332 Feet - (1117.0 - 785.0)

$$T_c = \frac{2.47 L^{1.15}}{H^{0.385}} = \frac{2.47 \times 46^{1.15}}{332^{0.385}} = \frac{202}{9.4} = 21.5 \text{ Hours}$$

$$C = \frac{0.25}{T_c^{0.284}} = \frac{0.25}{21.5^{0.284}} = .104$$

$$\frac{P}{T_c} = \frac{P}{21.5} = 0.06 = 6\%; \quad P = .06 \times 21.5 = 1.29 \text{ Hours}$$

Use 4 periods, - duration = 4 x 1.29 = 5.16 Hours

100 Years - 5.16 Hours R F = 3.8 Inches

R. O. = 0.104 x 3.8 = 0.395 Inches

$$M = \frac{DA}{T_c} = \frac{108.45}{21.5} = 5.044$$

Period	1st	2nd	3rd	4th	Total
% Distribution	36	36	19	9	100
R. O.	.1422	.1422	.0750	.0356	0.395
D = M x R.O.	.717	.717	.378	.180	1.992

Maximum Discharge: 3,093 Cubic Feet per Second
 Volume: 2,285 Acre-Feet

ENGLISH COULEE - #1502

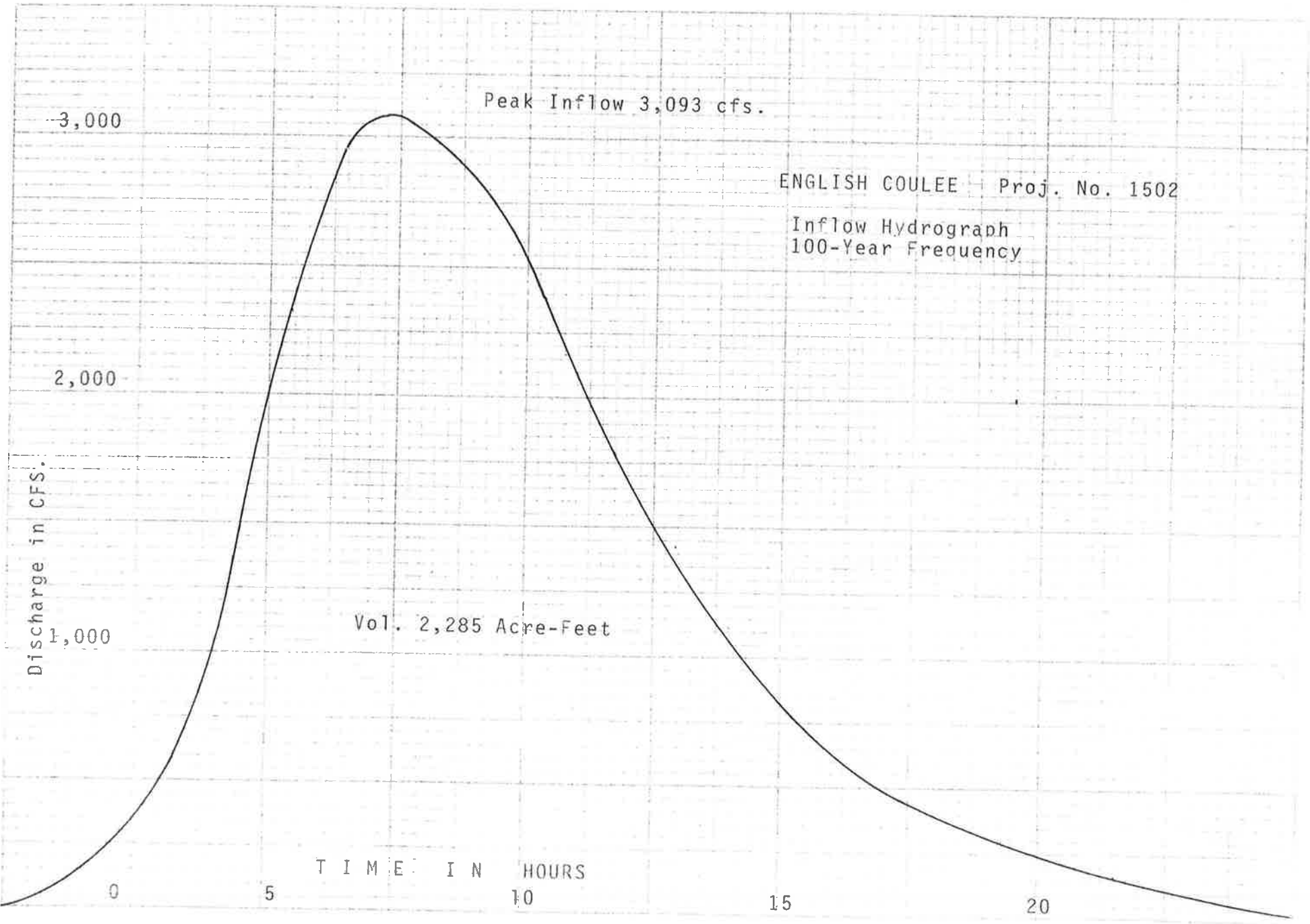
Time % T _c	Hrs.	1st Per. D= .717	2nd Per. D= .717	3rd Per. D= .378	4th Per. D= .180	Total cfs
0	0.	0	0=6	0=12	0=18	
5	1.075	67	4=10%	3=15%	2=20%	67
10	2.150	194	45			239
15	3.225	410	168	14		592
20	4.300	928	350	76	3	1357
25	5.375	1348	790	158	30	2326
30	6.450	1205	1324	354	65	2947
35	7.525	1045	1237	668	143	3093*
40	8.600	891	1077	669	296	2933
45	9.675	816	921	584	327	2648
50	10.750	607	773	502	286	2168
55	11.825	480	634	423	247	1784
60	12.900	366	505	348	209	1428
65	13.975	267	388	279	173	1107
70	15.050	184	286	216	139	825
75	16.125	138	199	161	109	607
80	17.200	123	143	113	82	461
85	18.275	104	128	79	58	369
90	19.350	81	108	68	40	297
95	20.425	53	86	59	33	231
100	21.500	21	59	48	29	158
105	22.575	1	28	34	24	87
110	23.650		2	18	18	38
115	24.725			3	10	13
120	25.800				2	2
124	(26.66)				0	0
						<u>25,755</u>

* Maximum Discharge: 3093 cfs

Time Intervals: .05 x 21.5 = 1.075 Hours

25,755 x 1.075 = 27,687 Hr. Sec. Ft. = 2288 Acre-Feet

108.45 sq. mi. x 53.33 x 0.395 inches R.O. = 2285 Acre-Feet (check)



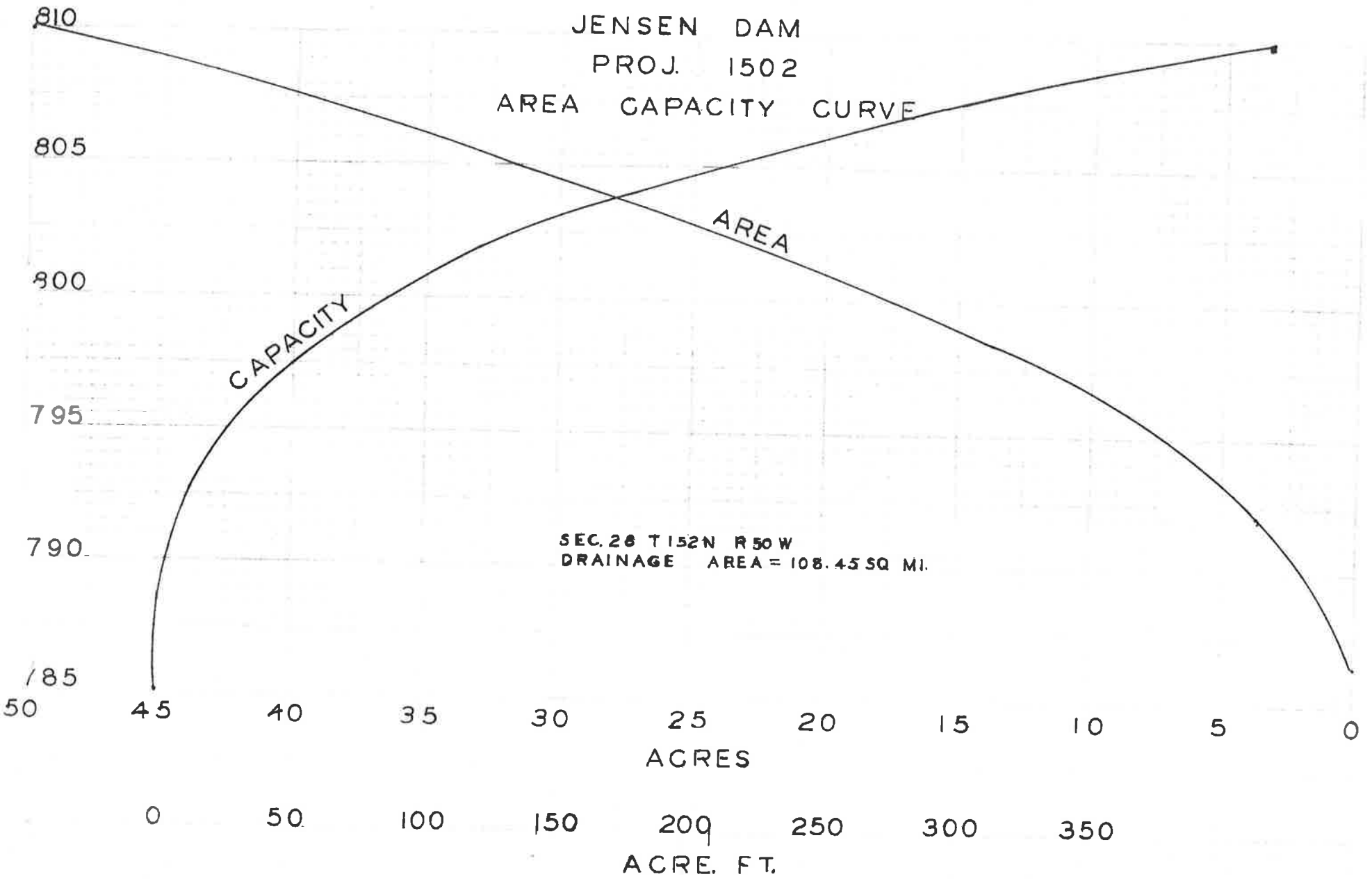
Peak Inflow 3,093 cfs.

ENGLISH COULEE Proj. No. 1502

Inflow Hydrograph
100-Year Frequency

Vol. 2,285 Acre-Feet

JENSEN DAM
PROJ. 1502
AREA CAPACITY CURVE



NORTH DAKOTA STATE WATER COMMISSION

COST ESTIMATE

Jensen Dam Recreation Area
SWC Project No. 1502

March 5, 1969

<u>ITEM</u>	<u>NUMBER</u>	<u>ESTIMATED UNIT COST</u>	<u>ESTIMATED TOTAL COST</u>
1. Picnic Area #1			
a. Table (Concrete)	20	200	4,000
b. Shelter	2	2,500	5,000
c. Community Shelter	1	4,500	4,500
d. Fireplace	10	150	1,500
e. Trash Receptacle	10	100	1,000
f. Comfort Station (Double)	2	5,000	10,000
g. Water Fountain	3	100	300
2. Picnic Area #2			
a. Tables (Concrete)	20	200	4,000
b. Shelter	2	2,500	5,000
c. Community Shelter	1	4,500	4,500
d. Fireplace	10	150	1,500
e. Trash Receptacle	10	100	1,000
f. Comfort Station (Double)	2	5,000	10,000
g. Water Fountain	3	100	300
3. Playground			
a. Big Slide	1	800	800
b. Swing (6 unit fiberglass pony)	1	800	800
c. Animal Spring Dome	8	100	800
d. Dome Whirl (Fiberglass)	1	850	850
e. Pony Whirl	1	500	500

<u>ITEM</u>	<u>NUMBER</u>	<u>ESTIMATED UNIT COST</u>	<u>ESTIMATED TOTAL COST</u>
3. Playground (Continued)			
f. Turtle (Fiberglass)	1	350	350
g. Jack and Jill Playhouse	1	950	950
h. Swing (3 unit)	1	350	350
i. Sandbox	2	50	100
4. Beach Area (Wading Only)			
a. Sand Blanket #1	2000 tons	2	4,000
b. Sand Blanket #2	2000 tons	2	4,000
c. Dressing House (Double)	1	4,500	4,500
d. Floatline	2	100	200
e. Landscaping	Lump Sum		2,000
5. Access Road and Parking Areas			
a. Motor Scraper	200 hours	25	5,000
b. Motor Patrol	50 hours	15	750
c. Road Gravel	1200 tons	2	2,400
d. Barriers	200	4	800
6. General Area Development			
a. Fencing	3 miles	1,800	5,400
b. Foot Path	5000 feet	1	5,000
c. Trees, Shrubs and Landscaping	Lump Sum		2,000
d. Signs	Lump Sum		1,500
e. Seeding	30 acres	50	1,500
f. Lights	10	150	1,500
g. Well	2	1,500	3,000
h. Plastic Pipe (1½" in place)	2000 feet	1	2,000

<u>ITEM</u>	<u>NUMBER</u>	<u>ESTIMATED UNIT COST</u>	<u>ESTIMATED TOTAL COST</u>
6. General Area Development (Cont.)			
i. Pump (3/4 H.P. Electric with 42 gallon tank)	2	500	1,000
j. Septic Tank System (4,000 gal. tank complete in place)	2	3,000 ea. Lump Sum	6,000
7. Ball Park			
a. Back Stop	1	750	750
8. Trailer and Tent Parking Area			
a. Motorized Scraper	30 hours	25	750
b. Motor Patrol	20 hours	15	300
c. Road Gravel	500 tons	2	1,000
d. Electric Hookup		Lump Sum	2,500
e. Holding Tank Dump Station		Lump Sum	<u>1,000</u>
	Subtotal		\$116,950
	Contingencies		5,850
	Construction Inspection		6,150
	Contract Administration		<u>12,850</u>
	TOTAL		<u>\$141,800</u>

KLS:s1

Distribution:

MWH
AKG
DDS
KK

NORTH DAKOTA STATE OUTDOOR RECREATION AGENCY
 Project Economic Feasibility Report
 Benefit-Cost Ratio

PROJECT NAME Jensen Dam and Recreation Complex

LOCATION-COUNTY Grand Forks

SORA # 18-25

I. BASIC DATA

A. Radius of Anticipated Use 30 miles
 B. Population Within Use Area 80,000
 C. Anticipated Annual Visitations 40,000
 D. Investment (include land) \$ 357,922.50
 E. Estimated Life of Facilities 40 years

II. ANNUAL COSTS

F. Operation and Maintenance \$ 3,500.00
 G. Depreciation ($D \div E$) \$ 8,950.00
 H. Total Annual Costs (F + G) \$ 12,450.00

III. ANNUAL BENEFITS

J. Assumed Value Per Visitation \$ 1.50
 K. Estimated Annual Benefits (J x C) \$ 60,000.00
 L. Average Net Benefits (K - H) \$ 47,550.00

IV. BENEFIT-COST RATIO

M. Factor for value of 1 compounded
 at 40 years @ 4 % = (factor) 4.80102063
 (Standard factor for 30 years @ 4%
 = 3.24339751)
 N. Product of Investment (D x M factor) \$ 1,718,393.31
 P. Total Benefits (L x E) \$ 1,902,000.00
 Q. Benefit-Cost Ratio (P ÷ N) xxx 1.11:1

To support D-660-1E Economic Feasibility

SWC Acct.
a. Proj. Participant

AGREEMENT
CONSTRUCTION OF WORKS

THIS AGREEMENT is entered into by and between:

(1) The North Dakota State Water Commission, hereinafter referred to as the Commission, acting by and through,
Milo W. Hoisveen, Secretary and Chief Engineer;

(2) The Grand Forks Co. Water Management/ District, hereinafter referred to as the District,
acting by and through Art Thoraldson, Chairman;

(3) The, hereinafter referred to as the,
acting by and through,;

(4) The, hereinafter referred to as the,
acting by and through,;

I. PROJECT, LOCATION AND PURPOSE

WHEREAS, the parties to this Agreement propose to construct the following:

Jensen Dam and Recreation Complex

hereinafter referred to as the Project, located Section 28, Township 152 North, Range 50 West

Grand Forks

County, North Dakota, the purpose of which is

to provide a multi-use water-based outdoor recreation facility for the general public.

NOW, THEREFORE, IT IS AGREED:

II. DRAWINGS AND SPECIFICATIONS

That the Project will be constructed in accordance with drawings and specifications of the

Commission

District

and

with drawings and specifications, State Water Commission maps, designated by No. 1502 and

(Describe)

standard recreation facility drawings No. 1376

are by this reference made
part of this Agreement to the same force and effect as if they were incorporated into the body of this Agreement.

III. COSTS AND ALLOCATIONS

That the estimated cost of the various Project elements and their allocation to the Project participants shall be
as follows:

A. Preliminary Engineering and Investigations - - - - - Total Estimate \$

- 1. North Dakota State Water Commission - - - - \$ _____ or _____ %
- 2. _____ \$ _____ or _____ %
- 3. _____ \$ _____ or _____ %
- 4. _____ \$ _____ or _____ %
- 5. _____ \$ _____ or _____ %

B. Land and/or Easement Acquisition - - - - - - - - - - - Total Estimate \$ 61,022.50

- 1. North Dakota State Water Commission - - - - \$ _____ or _____ %
- 2. District _____ \$ 30,511.25 or 50 %
- 3. Bureau of Outdoor Recreation _____ \$ 30,511.25 or 50 %
- 4. _____ \$ _____ or _____ %
- 5. _____ \$ _____ or _____ %

C. Construction of Main Works - - - - - - - - - - - Total Estimate \$155,100.00

- 1. North Dakota State Water Commission - - - - \$ 38,775.00 or 25 %
- 2. District _____ \$ 38,775.00 or 25 %
- 3. Bureau of Outdoor Recreation _____ \$ 77,550.00 or 50 %
- 4. _____ \$ _____ or _____ %
- 5. _____ \$ _____ or _____ %

D. Construction of Appurtenant Works (Recreation Facilities) - - - - - - - - - - - Total Estimate \$141,800.00

- 1. North Dakota State Water Commission - - - - \$ _____ or _____ %
- 2. District _____ \$ 70,900.00 or 50 %
- 3. Bureau of Outdoor Recreation _____ \$ 70,900.00 or 50 %
- 4. _____ \$ _____ or _____ %
- 5. _____ \$ _____ or _____ %

E. Other Items - - - - - - - - - - - Total Estimate \$ _____

- 1. North Dakota State Water Commission - - - - \$ _____ or _____ %
- 2. _____ \$ _____ or _____ %
- 3. _____ \$ _____ or _____ %
- 4. _____ \$ _____ or _____ %
- 5. _____ \$ _____ or _____ %

F. Total Project Costs and Allocations - - - - - - - - - - - \$357,922.50

- 1. North Dakota State Water Commission - - - - \$ 38,775.00 or 10.83 %

- 2. District \$ 140,186.25 or 39.17 %
- 3. Bureau of Outdoor Recreation \$ 178,961.25 or 50.0 %
- 4. _____ \$ _____ or _____ %
- 5. _____ \$ _____ or _____ %

That all parties shall provide the others with cost statements within 30 days after the Project's completion and settlements shall be made within 30 days of receipt of said statements.

IV. TITLE TO LANDS AND/OR EASEMENTS

That title to all lands and/or easements for the Project shall be purchased in the name of the _____

Grand Forks County Water Management District by the _____ District _____ and recorded in the County Register of Deeds office wherein the Project is situated.

V. OPERATION AND MAINTENANCE

That the _____ District _____ shall operate and maintain the Project

in accordance with rules and regulations prescribed by the _____ Commission _____.

VI. INDEMNIFICATION

That the _____ District _____ does hereby accept responsibility for,

and holds the Commission and the _____ N/A _____ harmless from, all claims and damages to public or private properties, rights, or persons arising out of the construction, operation, and maintenance of the Project. In the event a suit is initiated or judgment entered against the Commission or

_____ N/A _____ the _____ District _____ all indemnify them for any settlement arrived at or judgment satisfied.

VII. CHANGES IN RESPONSIBILITIES

That changes in any responsibilities of the parties hereto or conditions herein stated will not be effective or binding unless such changes or conditions are made in writing, signed by the parties concerned and attached hereto.

VIII. OTHER STIPULATIONS

Bureau of Outdoor Recreation participation is dependent upon approval by that agency. _____

IN WITNESS WHEREOF, the parties hereto have signed this Agreement the day and year indicated below.

WITNESS:

DATE:

NORTH DAKOTA STATE WATER COMMISSION

By: Milo W. Forsveen
Secretary and Chief Engineer

Lorne Heland

By: _____
Grand Forks Co. Water Management District

Vincent S. Reed

5/16/69

By: Art Thoraldson Chairman

By: _____

PROJECT ASSURANCES

(for use of SORA office only)

NORTH DAKOTA STATE OUTDOOR RECREATION AGENCY

SORA PROJECT NO. _____

STATE OFFICE BUILDING

DATE RECEIVED _____

BISMARCK, NORTH DAKOTA

PRIORITY _____

58501

1. APPLICANT Grand Forks County Water Management District AGENCY
c/o Art Thoralson, Chairman
Grand Forks, North Dakota ADDRESS
PROJECT LOCATED IN Grand Forks 58201 COUNTY

2. PROJECT IDENTIFICATION: TITLE Jensen Dam and Recreation Complex

LEGAL DESCRIPTION: _____ SEC. 28 TWP 152N RGE 50W

BRIEF PROJECT SUMMARY: Acquire 83.63 acres of land in fee; construct a dam creating a 210 acre-foot reservoir with a 31 acre surface area and 21.5 feet maximum depth; and install facilities for fishing, swimming, boating, picnicking and playing outdoor games

TO BE STARTED ON THE DATE OF APPROVAL, TO BE COMPLETED December 31, 19 71

FORMAL AGREEMENT HEREBY CERTIFIES THAT:

- A. No financial assistance has been given or promised under any other Federal program or activity with regard to this proposed project.
- B. The Applicant responsible for the proposed project has the ability and the intention to finance its share of the project.
- C. The Applicant accepts the obligation to comply with the applicable laws, rules and regulations in effect at the time of the award and to the further terms and conditions of the Bureau of Outdoor Recreation Manual in effect at the time of the award.
- D. Property acquired under this program will be placed in use as an outdoor recreation facility and will be retained for such use in perpetuity or otherwise as provided and agreed to in the project agreement. Prior approval of the North Dakota State Outdoor Recreation Agency will be obtained before any other disposal is made of such property.
- E. The Applicant has the intent and ability to finance the operation and maintenance of the facility being developed for so long as is required.
- F. No foreign uses of such property, other than those described in the proposal will be permitted unless approved in advance by the North Dakota State Outdoor Recreation Agency. In the event foreign use is made of such project the Applicant shall, within one year of such foreign use, reimburse the North Dakota State Outdoor Recreation Agency the cost of the project, less the amount of such cost paid by the Applicant.
- G. If for any reason it shall become necessary for any department or agency of the State of North Dakota to expend State funds in order to fulfill any obligations which the Applicant has agreed to perform in the construction and maintenance of this project, the Applicant shall, within a one year period, reimburse the State department or agency the amount of funds expended for such maintenance or operation.
- H. The Applicant understands that qualification of this project proposal by the North Dakota State Outdoor Recreation Agency does not in itself constitute an obligation or award of requested funds and does not guarantee that funds will necessarily be made available for the project.
- I. The Applicant will supply development specifications and detailed plans to the North Dakota State Outdoor Recreation Agency as requested to do so by the Executive Officer of the Agency.
- J. The Applicant has read and understands and hereby agrees to abide by all terms and conditions contained in the Project Agreement to be entered into between the Bureau of Outdoor Recreation and the State Outdoor Recreation Agency in the event this Project is approved by the Bureau of Outdoor Recreation and such Project Agreement is, by this reference, made a part of this Proposal to the same force and effect as if it were incorporated into the body of this Proposal.

Art Thoralson TITLE Chairman DATE May 15, 1969
 (Authorized Representative)
W. Vincent St. Road TITLE Secretary DATE May 15, 1969
 (Authorized Representative)
 _____ TITLE _____ DATE _____
 (Authorized Representative)

U.S. DEPARTMENT OF THE INTERIOR
ASSURANCE OF COMPLIANCE
(TITLE VI, CIVIL RIGHTS ACT OF 1964)

District

Grand Forks County Water Management (hereinafter called "Applicant-Recipient")
(Name of Applicant-Recipient)

HEREBY AGREES THAT IT will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Department of the Interior Regulation (43 CFR 17) issued pursuant to that title, to the end that, in accordance with Title VI of that Act and the Regulation, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant-Recipient receives financial assistance from Bureau of Outdoor Recreation and

Bureau or Office

Hereby Gives Assurance That It will immediately take any measures to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant-Recipient by Bureau of Outdoor Recreation, This assurance obligates the

Bureau or Office

Applicant-Recipient, or in the case of any transfer of such property, any transferee for the period during which the real property or structure is used for a purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance obligates the Applicant-Recipient for the period during which it retains ownership or possession of the property. In all other cases, this assurance obligates the Applicant-Recipient for the period during which the Federal financial assistance is extended to it by Bureau of Outdoor Recreation.

Bureau or Office

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts or other Federal financial assistance extended after the date hereof to the Applicant-Recipient by the bureau or office, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Applicant-Recipient recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall reserve the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant-Recipient, its successors, transferees, and assignees, and the person or persons whose signature appear below are authorized to sign this assurance on behalf of the Applicant-Recipient.

May 15, 1969
DATED

Grand Forks County Water
Management District

APPLICANT-RECIPIENT

Jensen Dam & Reservoir Complex

By *Al Thorsen*
(President, Chairman of Board or Comparable
authorized Official)

Box 1411 Grand Forks ND 58701
APPLICANT-RECIPIENT'S MAILING ADDRESS

- (5) $\frac{1}{4}$ Sec. $\frac{1}{4}$ Twp. Rge.
 B. If water is to be delivered from storage reservoir complete the following:
 and file NDSWC Form 110:

Location of dam..... $\frac{1}{4}$ $\frac{1}{4}$ Sec. 28 Twp. 152 Rge. 50.....
 Height embankment above stream bed..... 30.5..... Ft.
 Capacity of Reservoir..... 210..... acre-feet. Area of water surface..... 31..... acres.

- C. If water is to be obtained from well complete the following
 Proposed depth well..... Depth to top of Aquifer.....
 Proposed size well or well casing..... Depth to Bottom of Aquifer.....
 Has pump test been performed....., if so, by whom.....
 Computed capacity of well.....

4. Purpose..... RECREATIONAL.....

- A. If purpose is irrigation:
 Type of irrigation system..... Dates of use.....
 Estimate of time required for completion of system.....

5. Has the quality of water analysis been made?..... Class water C..... S.....
 Date Sample taken.....

6. Description of land to be irrigated (show lot numbers where applicable):

Sec.	Twp.	Rge.	NE $\frac{1}{4}$				NW $\frac{1}{4}$				SW $\frac{1}{4}$				SE $\frac{1}{4}$				Total
			NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	
Total number of acres to be irrigated																			

Located in..... Grand Forks..... County, North Dakota.
 Estimated quantity of water that will be returned to the approximate source from which diverted:.....

GRAND FORKS COUNTY WATER MANAGEMENT DISTRICT
 + By *Alfred Thorsen*
 (Applicant's Signature) Chairman

NOTE: Above application is merely a declaration of intention to create a water right, approval does not create such right. Water right will be created only if and when water is beneficially used, pursuant to conditions and stipulations specified by the State Engineer.

5. Will flows presently available to downstream riparian land owners be depleted? NO If so, to what extent?

6. Downstream landowners who might be deprived of use of water by construction of the dam are

7. Is the dam and impounded water on the owners land or does sponsoring entity have landowner's permission to construct Dam and Flood Land? yes
(Copies of all easements must be filed with application.)

8. For an enlargement of an existing dam, answer the following:

Why is enlargement necessary?

Year dam was constructed By what agency

Total yardage in existing dam

9. The dam will be built under the supervision of North Dakota State Water Commission and will conform to data and specifications given above and on the following attached sheets plans on file

(Name or Number of attached data sheet)

10. This dam will be operated in conformance to all state water laws and rules and regulations of the North Dakota State Water Commission.

11. Construction will begin on or before December 31, 1971, 19.....
and will be completed on or before December 31, 1972, 19.....

Date Submitted:

GRAND FORKS COUNTY WATER MANAGEMENT DISTRICT
+ Signed BY [Signature] Chairman
(Owner of land on which dam is located or legal Entity sponsoring project)

Address Box 1411
Grand Forks, N. Dak. 58201

STATE OF NORTH DAKOTA
COUNTY OF Grand Forks } ss

On this 8th day of March, 1969, before me a Notary Public personally appeared

Art Thorselson, known to me to be the same person who executed the foregoing application for a permit to construct or enlarge a dam or reservoir and acknowledged to me that he executed the same.

Distribution:

HENRY H. GALLOWAY

SWC Prj. No. Notary Public, Grand Forks County, N. D.
WMD My Commission Expires Feb. 20, 1970.
Co. Reg. of Deeds My Commission Expires Feb 20, 1970

The filing of this application and its approval in no way relieves the landowner from any responsibility or liability for damages from the construction, operation or failure of this structure. Concurrence by Water Management district not applicable where not established.

7 Signed: [Signature]
Chairman

Grand Forks County WMD

DISAPPROVAL

This is to certify that I have examined the foregoing application and hereby reject and disapprove the same for the following reasons:

.....
.....
.....

WITNESS my hand and seal this day of, 19.....

Signed:
Chief Engineer
North Dakota State Water Commission

Signed:
Chairman