

**MINUTES**

**North Dakota State Water Commission  
Bismarck, North Dakota**

**January 15, 1991**

The North Dakota State Water Commission held a meeting at the Radisson Inn, Bismarck, North Dakota, on January 15, 1991. Chairman, Lieutenant Governor Lloyd Omdahl, called the meeting to order at 8:30 AM, and requested State Engineer and Chief Engineer-Secretary, David Sprynczynatyk, to call the roll. The Chairman declared a quorum was present.

**MEMBERS PRESENT:**

Lieutenant Governor Lloyd Omdahl, Chairman  
Joyce Byerly, Member from Watford City  
Jacob Gust, Member from West Fargo  
Daniel Narlock, Member from Oslo, MN  
Jerome Spaeth, Member from Bismarck  
David Sprynczynatyk, State Engineer and Chief Engineer-Secretary, North Dakota State Water Commission, Bismarck

**MEMBERS ABSENT:**

Sarah Vogel, Commissioner, Department of Agriculture, Bismarck  
Lorry Kramer, Member from Minot  
William Lardy, Member from Dickinson  
Norman Rudel, Member from Fessenden

**OTHERS PRESENT:**

State Water Commission Staff Members  
Approximately 25 persons in attendance interested in agenda items

The attendance register is on file in the State Water Commission offices (filed with official copy of minutes).

The meeting was recorded to assist in compilation of the minutes.

**APPROVAL OF AGENDA**

There being no additional items for the agenda, the Chairman declared the agenda approved and requested Secretary Sprynczynatyk to present the agenda.

**CONSIDERATION OF MINUTES  
OF DECEMBER 3, 1990 MEETING -  
APPROVED**

The minutes of the December 3, 1990 meeting were approved by the following motion:

It was moved by Commissioner Byerly, seconded by Commissioner Gust, and unanimously carried, that the minutes of the December 3, 1990 meeting be approved as circulated.

**AGENCY FINANCIAL STATEMENT -  
1989-1991 APPROPRIATION STATUS**

Secretary Sprynczynatyk presented and discussed the Program Budget Expenditures and Programs/Projects Authorized, dated December 31, 1990.

**AGENCY FINANCIAL STATEMENT -  
1991-1993 BUDGET REQUEST STATUS**

On January 11, 1991, the Senate Appropriations Committee heard SB 2017, the State Water Commission appropriation request. Secretary Sprynczynatyk stated the Senate Appropriations Committee consists of 14 members, of which 7 are new legislators. He explained the procedure used in presenting the agency's testimony and said the questions asked by the Committee members were especially appropriate, relative to current water issues.

In discussion of the agency's appropriation request, it was the general consensus that the Commission members become more involved in the future, in the budget preparation process. It was requested that prior to a legislative session, sufficient time be allowed during a Commission meeting for discussion of the agency's appropriation request.

**STATE WATER MANAGEMENT  
PLAN UPDATE  
(SWC Project No. 322)**

Gene Krenz, Director, Planning and Education Division of the State Water Commission, reported on the citizen involvement aspect of the State Water Management Plan update process. The state has been divided into eight public involvement regions roughly approximating the state's major watersheds. A citizens advisory board is currently being selected for each public involvement region. The state's water resource districts, regional planning councils, and approximately 50 other groups and organizations are being asked to nominate people to service on the citizens advisory boards.

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Mr. Krenz reported that progress on the State Water Management Plan update has suffered a minor setback from the original plans in that the demographic and economic data to be used in developing projections was expected to come from the 1990 census. Mr. Krenz said the final census data will not be released until late in 1992, which is long after the State Water Plan update is scheduled for completion. The alternative source of data is a 1988 survey by North Dakota State University. Mr. Krenz said projections from this database are surprisingly accurate when compared to preliminary census data.

Mr. Krenz briefed the Commission members regarding negotiations for employing additional staff to update the State Water Management Plan.

**SOUTHWEST PIPELINE PROJECT -  
PROJECT CONSTRUCTION STATUS  
(SWC Project No. 1736)**

Tim Fay, Manager of the Southwest Pipeline Project, indicated construction contracts for the Southwest Pipeline Project are now inactive due to the weather, although work can proceed on the pump station buildings and interior equipment when needed. Mr. Fay said all of the contracts are on schedule. Scheduling of the painting of the steel tank at Richardton was one item which caused some concern last year, however, Mr. Fay said the tank is complete at present and it can be painted whenever weather conditions allow.

**SOUTHWEST PIPELINE PROJECT -  
FLUORIDE CONCENTRATIONS IN  
MUNICIPAL WATER SUPPLIES  
(SWC Project No. 1736)**

At the December 3, 1990 meeting the Commission members were informed that the communities of Dodge, Halliday, Gladstone and Mott were recently given "Notice of Violation" by the Environmental Protection Agency for the levels of fluoride in their water supplies. Some of these cities will eventually be served by the pipeline, however, they are expected by EPA to take some action sooner than the project can serve them under current expectations.

Tim Fay indicated communications with the communities under EPA orders to correct their fluoride problems is continuing. A letter was sent to EPA explaining the progress of the Southwest Pipeline Project and the intentions to serve these communities. Mr. Fay said it is hoped this explanation will help in convincing EPA that the pipeline will eventually be a satisfactory solution to the water quality problems in the region.

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**SOUTHWEST PIPELINE PROJECT -  
WATER TREATMENT DISCUSSION  
(SWC Project No. 1736)**

Tim Fay stated information and data is being compiled relative to alternatives for the water treatment facilities for the

Southwest Pipeline Project. The information will be presented to the Water Treatment Committee for consideration at a meeting scheduled January 31, 1991. Commissioners Spaeth, Rudel and Gust serve on the Water Treatment Committee. Mr. Fay said it will be necessary to make decisions in the near future relative to the water treatment facilities in order to satisfy the fluoride requirements of EPA.

**SOUTHWEST PIPELINE PROJECT -  
CONSIDERATION AND APPROVAL OF  
WHEELING AGREEMENT FOR  
DELIVERING ELECTRICAL POWER  
TO DODGE AND RICHARDTON  
PUMP STATIONS  
(SWC Project No. 1736)**

Tim Fay reported negotiations are currently in progress with West Plains Electric Cooperative on an agreement to wheel electrical power to the Dodge and Richardton pump stations. A draft agreement, similar in form to the agreement with

Oliver Mercer REC, which the Commission approved in 1990, has been recently provided by West Plains. Mr. Fay said it is essential to conclude this agreement in a timely fashion, since the power needs to be available this summer. While all of the terms of the agreement have not yet been concluded, the authority to execute this agreement needs to be in place when they are.

It was the recommendation of the State Engineer that the State Water Commission approve executing a wheeling agreement for delivering electrical power to the Dodge and Richardton pump stations.

It was agreed that prior to the State Engineer executing a wheeling agreement, the draft agreement be circulated to the Commission members for review.

It was moved by Commissioner Gust and seconded by Commissioner Narlock that the State Water Commission authorize the State Engineer to execute a wheeling agreement for the delivery of electrical power to the Dodge and Richardton pump stations. The draft agreement shall be circulated to the Commission members for review prior to execution of the agreement.

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Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

**GARRISON DIVERSION PROJECT -  
CONTINUED DISCUSSION ON  
FINANCING OPTIONS FOR MR&I  
WATER SUPPLY PROJECTS  
(SWC Project No. 237)**

Secretary Sprynczynatyk stated the need for a permanent program to continue MR&I and other developments after the end of the federal program.

Secretary Sprynczynatyk outlined the objectives of the financial plan as: 1) to continue providing service comparable to what is now available; 2) to allow sponsors to obtain project financial assistance from a single source with uniform obligations; and 3) to sustain itself as a continuing source of funding after the \$200 million federal program is exhausted.

A proposed concept to accomplish these objectives was explained by Secretary Sprynczynatyk, which involves the establishment of a grant-loan program using the federal MR&I money and the state money now used for these purposes. Secretary Sprynczynatyk said this money would be pooled in an operating account from which allocations would be made to projects. Part of each allocation, 65 percent, could be in the form of a grant and the remainder, 35 percent, could be as a loan. The repayments of the loans would be deposited into a permanent account which would grow with deposits and interest until the federal program ended. At that point, Secretary Sprynczynatyk said the earnings of the permanent fund would be used to sustain the program. In the first years of the program, the permanent fund could also be used as a vehicle to direct other state funds to special water resource development projects.

Secretary Sprynczynatyk said the granting of 65 percent of the federal MR&I money would allow more projects to receive funding than if the 75 percent federal cost sharing guidelines were followed. This would require using some of the state's over investment in the Southwest Pipeline Project as the additional non-federal cost sharing.

The actual performance of the program would be dependent on independent economic variables and management decisions. Secretary Sprynczynatyk said it is clear that a revolving program of this type could be successfully

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implemented and that it could successfully fund many of the water supply development needs that have been identified. Secretary Sprynczynatyk said modifications to existing legislation may be necessary to implement the 65-35 percent cost share feature.

Secretary Sprynczynatyk said this concept was presented to, and received support from the Executive Board of the Garrison Diversion Conservancy District.

It was suggested by the State Engineer that if the State Water Commission concurs with the concept presented, that the two-member committee, consisting of Commissioners Gust and Lardy who were appointed by Governor Sinner on October 26, 1988, for the purpose of developing a recommendation on a point priority system for providing MR&I funding, be reactivated. The Water Supply Committees from the State Water Commission and the Garrison Diversion Conservancy District would review the proposed concept and develop a recommendation for the State Water Commission and Garrison Diversion Conservancy District's consideration.

Robert Garske, Chairman of the Ramsey County Water Resource Board, expressed support of the concept, but indicated concern because it may place a substantial burden on funds in the Resources Trust Fund that are currently used for water projects by the Water Resource Districts.

Andrew Mork, Chairman of the Morton County Water Resource Board, discussed some of the projects underway in Morton County, and expressed strong support of the proposed MR&I financial plan.

Michael Dwyer, Executive Vice President of the North Dakota Water Users Association, stated the proposed concept has the water users support. Mr. Dwyer suggested that in addition to the two-member committees from the State Water Commission and the Garrison Diversion Conservancy District that two members be appointed from the water users groups.

**It was moved by Commissioner Byerly and seconded by Commissioner Narlock that the State Water Commission direct the State Engineer and staff to proceed to develop the proposed MR&I Financial Plan in the appropriate manner.**

**Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.**

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**GARRISON DIVERSION PROJECT -  
PROJECT UPDATE AND FISCAL  
YEAR 1991 BUDGET  
(SWC Project No. 237)**

At the December 3, 1990 meeting the Commission members were informed that Congress had appropriated \$35 million for the Garrison Diversion Project in its 1991 FY budget. The signing of the appropriation included a statement by the President addressing the Garrison Diversion Project, stating that the Administration had reviewed the project and only supports those portions of the project that are not related to the delivery of water for non-Indian irrigation. The statement also indicated the policy of the Administration is not to support any further irrigation development in the country that is subsidized by the Federal Government.

Secretary Sprynczynatyk stated representatives of the State of North Dakota met in Washington, DC in December with representatives of the Administration to discuss future funding and development of the project.

Secretary Sprynczynatyk briefed the Commission members on activities with the Garrison Diversion Conservancy District, including negotiations for the operation and maintenance of the system as it now exists and in the future.

Copies of the Garrison Diversion Unit Joint Technical Committee Report to the United States-Canada Consultative Group, November 1990, were distributed to the Commission members.

**GARRISON DIVERSION PROJECT -  
MR&I WATER SUPPLY PROGRAM UPDATE  
(SWC Project No. 237-3)**

Jeffrey Mattern, MR&I Water Supply Program Coordinator, reported there are 118 projects in the different phases of the MR&I Water Supply Program. This includes 46 projects in the initial application phase, 33 projects in the preliminary engineering phase, 23 in the feasibility phase, 3 in design and construction, 10 projects completed, and 3 applications have been withdrawn.

New applications were recently received from the Grand Prairie Estates Water Users and the City of Cando. Grand Prairie Estates involves a small subdivision approximately five miles north of Bismarck that is reliant on individual wells but would like to hookup with Burleigh County Rural Water.

The City of Cando is currently operating with a 30-year old system with a water quality that is very high in iron and magnesium content. The city is looking for

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assistance for additional wells or water treatment modifications. Mr. Mattern said this project appears to include mostly deferred maintenance items, such as rehabilitation of the water treatment plant.

Secretary Sprynczynatyk stated four specific requests will be presented at this meeting for the Commission's consideration for federal MR&I Water Supply Program funds. He said it is the recommendation of the State Engineer that the Commission consider action on these project requests based on the cost sharing guidelines previously adopted by the Water Commission and the Garrison Diversion Conservancy District, since these are projects that are underway or are continuing projects. If the State Water Commission and the Garrison Diversion Conservancy District approves the MR&I financial plan, as previously presented, future project requests for funds would be considered on a funding policy based on approximately a 65 percent grant and a 35 percent loan.

Commissioner Narlock indicated the Agassiz Rural Water Association has proceeded with its project without federal and state funding assistance, and requested that when federal MR&I Water Supply Program funds are considered for the project, the cost sharing policy of 75 percent federal and 25 percent non-federal be considered.

**GARRISON DIVERSION PROJECT -  
CONSIDERATION OF REQUEST FOR  
MR&I WATER SUPPLY PROGRAM FUNDS  
FOR MCLEAN-SHERIDAN RURAL  
WATER, PHASE II  
(SWC Project No. 1782)**

Jeffrey Mattern presented a request from the McLean-Sheridan Joint Water Resource Board for MR&I Water Supply Program funds for the construction of the rural water supply project.

Phase I is completed and serving several users in McLean and Sheridan Counties. The Board has requested MR&I funding assistance on the construction of Phase II, which will complete the project. Phase II will mainly serve the residents of Sheridan County, complete the booster station to the community of Denhoff, and serve the area around Martin in northeast Sheridan County. Completion of Phase II will bring the total estimated cost to \$9.38 million.

Mr. Mattern indicated the estimated cost to complete Phase II is \$3,460,000. A 75 percent federal grant would be \$2,595,000. This would bring the total federal grant approved to \$6,887,597 and cover feasibility, design and construction. In addition, the State Water Commission has provided a grant for the project of \$635,850. The current estimate is based on a construction bid price. The additional federal grant should allow the project to be completed in 1991.

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Mr. Mattern indicated the project is consistent with the requirements of the MR&I Water Supply Program. The project was considered and approved by the Garrison Diversion Conservancy District Board at its January 3, 1991 meeting.

It was the recommendation of the State Engineer that an additional grant of federal MR&I funds of 75 percent of the eligible costs, not to exceed \$2,595,000, be granted for the McLean-Sheridan Water Supply Project. Approval should be contingent upon the availability of funds.

Ivon Boe, Chairman of the McLean-Sheridan Joint Water Resource Board, commented on the project and urged the Commission's favorable action on their request for funding for Phase II.

It was moved by Commissioner Spaeth and seconded by Commissioner Byerly that the State Water Commission approve an additional grant of federal MR&I funds of 75 percent of the eligible costs, not to exceed \$2,595,000, for the McLean-Sheridan Water Supply Project, Phase II. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

**GARRISON DIVERSION PROJECT -  
CONSIDERATION OF REQUEST  
FOR MR&I WATER SUPPLY PROGRAM  
FUNDS FOR LANGDON RURAL WATER  
PROJECT, PHASE II, PART II  
(SWC Project No. 237-34)**

Jeffrey Mattern presented a request for the Commission's consideration for federal MR&I funds for the construction of the Langdon Rural Water Project Phase II, Part II. Part I is complete and serving several users in Cavalier, Ramsey and Walsh Counties. The users are waiting for funding assistance on the construction of Part II, which will complete the project. Part II will serve the area around Fairdale, Edinburg and Adams. Completion of Part II will bring the total estimated cost to \$3.45 million.

The total estimated cost to finish Phase II is \$1,620,000. A 75 percent federal grant would be \$1,215,000. This would bring the total federal grant approved to \$2,555,034 and have covered feasibility, design and construc-

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tion. The estimate to complete Phase II is based on a construction bid price. The additional federal grant should allow the project to be completed in 1991.

Mr. Mattern indicated the project is consistent with the requirements of the MR&I Water Supply Program and the project request was considered, and approved, by the Garrison Diversion Conservancy District Board at its January 3, 1991 meeting.

It was the recommendation of the State Engineer that the State Water Commission approve an additional grant of federal MR&I funds of 75 percent of the eligible costs, not to exceed \$1,215,000, for the Langdon Rural Water Supply Project, Phase II, Part II. This motion should be contingent upon the availability of funds.

Howard Roeder, President of the Langdon Rural Water Project, elaborated on the project, thanked the Commission for its past support, and urged favorable consideration of its request for MR&I funds for Phase II, Part II of the project.

It was moved by Commissioner Narlock and seconded by Commissioner Spaeth that the State Water Commission approve an additional grant of federal MR&I funds of 75 percent of the eligible costs, not to exceed \$1,215,000, for the Langdon Rural Water Project, Phase II, Part II. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

**GARRISON DIVERSION PROJECT -  
CONSIDERATION OF REQUEST  
FOR MR&I WATER SUPPLY PROGRAM  
FUNDS FOR RAMSEY COUNTY  
RURAL WATER PROJECT  
(SWC Project No. 237-5)**

Jeffrey Mattern indicated that through the cooperative effort of the Devils Lake Sioux Tribe, the Ramsey County Water Resource District, and the City of Devils Lake, a joint water supply project is being investigated. Mr. Mattern stated it has been estimated that cost savings could approach \$2 million by constructing a joint water supply project versus separate projects. Since previous studies

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have only been completed in the individual projects, a joint project investigation is required to finalize the project costs, components, and other details. The estimated cost of this joint project investigation report is \$25,147.

Mr. Mattern said the major items to be addressed are options for water supply, water treatment, transmission line, interaction between various entities, financial assessment for cost and benefit, and an implementation plan for a joint project to proceed, if agreed to. This joint project may also reduce operation and maintenance costs. Mr. Mattern stated the request for funding assistance from the three parties is for a grant from the federal MR&I Program, with the non-federal portion to be paid equally among the three entities. A 75 percent grant would be \$18,860, with a non-federal share to be \$6,287, with each party responsible for \$2,096. This report will provide some of the information needed for the preliminary design of the proposed water supply projects.

Mr. Mattern indicated this request was presented to, and approved, by the Garrison Diversion Conservancy District Board at its January 3, 1991 meeting.

It was the recommendation of the State Engineer that the State Water Commission approve 75 percent, not to exceed \$18,860, to the Ramsey County Water Resource District for the joint project evaluation report. Approval should be contingent upon the availability of funds.

It was moved by Commissioner Gust and seconded by Commissioner Byerly that the State Water Commission approve 75 percent, not to exceed \$18,860, to the Ramsey County Water Resource District for the joint project evaluation. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

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**GARRISON DIVERSION PROJECT -  
CONSIDERATION OF FEDERAL  
MR&I PROGRAM FUNDS FOR  
SOUTHWEST PIPELINE PROJECT  
(SWC Project No. 1736)**

requires \$2 million from federal MR&I Fiscal Year 1991 funds to ensure delivery of water to Dickinson in 1991. This money will be required to install telemetry and control equipment and to cover some of the start-up and testing costs.

Secretary Sprynczynatyk stated the goal of providing raw water to Dickinson in 1991 is on schedule and major construction has shut down for the season.

The Southwest Pipeline Project

It was the recommendation of the State Engineer that the State Water Commission approve \$2 million from Fiscal Year 1991 federal MR&I funds for the Southwest Pipeline Project. This request was considered by, and approved, by the Garrison Diversion Conservancy District Board at its January 3, 1991 meeting.

It was moved by Commissioner Byerly and seconded by Commissioner Narlock that the State Water Commission approve \$2 million from Fiscal Year 1991 federal MR&I Water Supply Program funds for the Southwest Pipeline Project. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

**GARRISON DIVERSION PROJECT -  
NORTHWEST AREA WATER SUPPLY  
INTEGRATION STUDY UPDATE  
(SWC Project No. 237-4)**

water systems, the Advisory Board, the Garrison Conservancy District.

Jeffrey Mattern stated the Northwest Area Water Supply Integration report has been completed and distributed to the communities with central

the State Water Commission and

Copies were distributed of proposed legislation, which would create a Northwest Area Water Supply Advisory Committee to work with the State Water Commission on development of an integrated water supply project.

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**CONSIDERATION OF ALLOCATION OF  
1991-1993 RESOURCES TRUST FUND**

At the December 3, 1990 meeting the State Water Commission, acting under the Resources Trust Fund authority, recommended several projects, and a report was prepared describing the projects and recommended funding level. Secretary Sprynczynatyk said this report was based on an earlier estimate of \$9.9 million of revenues to the Resources Trust Fund.

On December 6, 1990, the Executive Budget recommendation was released that included projected carryover funds and higher oil prices in the estimate of revenues to the Resources Trust Fund. As a result, Secretary Sprynczynatyk said the Executive Recommendation includes \$14.9 million of projected revenues. He said this requires the State Water Commission to modify its earlier report by approving an allocation of the \$14.9 million of revenues.

Secretary Sprynczynatyk presented, for the Commission's consideration, the following State Engineer's request for funding from the Resources Trust Fund for the 1991-1993 biennium. The Resources Trust Fund report is attached hereto as APPENDIX "A":

|                                    |        |
|------------------------------------|--------|
| Contract Fund                      |        |
| General Projects                   | \$ 1.8 |
| Hydrologic Investigations          | 0.5    |
| Devils Lake Feasibility Study      | 0.8    |
| Souris River Flood Control         | 1.8    |
| Garrison MR&I Water Supply Program | 4.0    |
| Maple River Dam                    | 1.0    |
| Northwest Area Water Supply Study  | 0.2    |
| Southwest Pipeline Project         | 2.5 *  |
| State Water Commission Operations  | 2.3    |
|                                    | <hr/>  |
|                                    | \$14.9 |

\* Includes \$1.5 million of anticipated carryover

It was moved by Commissioner Byerly and seconded by Commissioner Gust that the State Water Commission approve the recommendation of the State Engineer for funding from the Resources Trust Fund for the 1991-1993 biennium.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

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**RESOURCES TRUST FUND -  
RECONSIDERATION OF DECEMBER  
6, 1990 MOTION DIRECTING  
STATE ENGINEER TO ARRANGE  
FOR ATTORNEY GENERAL'S  
OPINION REGARDING THE USE OF  
RESOURCES TRUST FUNDS FOR  
SWC ADMINISTRATION**

at the June 12, 1990 primary election, may be used for operational expenses of the State Water Commission.

At the December 3, 1990 meeting the State Water Commission directed the State Engineer to arrange for an Attorney General's opinion on whether money from the Resources Trust Fund, established pursuant to 1989 House Concurrent Resolution No. 3022, as approved by the voters

following the meeting, a request was drafted for the Attorney General's opinion. In discussions with the Governor's office regarding this matter, it was agreed that since the North Dakota Water Users Association and the North Dakota Water Resource Districts Association had raised the issue that they be asked to request the Attorney General's opinion. Secretary Sprynczynatyk said this was presented to the groups and they decided not to seek an Attorney General's opinion at this time so that more flexibility could be maintained in the future.

Secretary Sprynczynatyk stated at the agency's budget hearing, the Senate Appropriations Committee requested an estimate be prepared identifying the direct and indirect costs associated with the agency operations and water development. He said staff is preparing the estimate at this time.

It was the recommendation of the State Engineer that the State Water Commission reconsider its action of December 3, 1990 directing the State Engineer to arrange for an Attorney General's opinion.

**It was moved by Commissioner Narlock and seconded by Commissioner Gust that the State Water Commission reconsider its action of December 3, 1990 directing the State Engineer to arrange for an Attorney General's opinion on whether money from the Resources Trust Fund may be used for operational expenses of the State Water Commission.**

**Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. declared the motion unanimously carried.**

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It was moved by Commissioner Narlock and seconded by Commissioner Gust that the State Water Commission table action on its direction to the State Engineer to arrange for an Attorney General's opinion on whether money from the Resources Trust Fund may be used for operational expenses of the State Water Commission.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

CONSIDERATION OF REQUEST  
FROM GRAND FORKS COUNTY  
WATER RESOURCE DISTRICT  
FOR COST SHARING ON GRAND  
FORKS COUNTY DRAIN NO. 52  
(SWC Project No. 1280)

A request received from the Grand Forks County Water Resource District was presented for the Commission's consideration to cost share in the construction of Grand Forks County Drain No. 52.

Cary Backstrand, Chief of the Regulatory Section of the State Water Commission, presented the project background. This drain is a newly established assessment drain located along County Highway 33 west of the City of Manvel. The drain is approximately six miles in length and outlets into the Turtle River. The total watershed is approximately 21 1/2 square miles, which includes the Stewart Lake complex that serves as a major water storage area for the upper reaches of the watershed. The drain was designed using SCS "M" curve criteria resulting in a design flow at the outlet of 306 cubic feet per second. The bottom width varies from 12 to 16 feet, with 4:1 side slopes on the cropland side of the drain and 6:1 along the south side of Highway 33. The Board has applied for and received a drainage permit.

The total estimated project cost is \$205,065, of which \$163,915 is eligible for 40 percent cost sharing, which amounts to \$65,566. Total engineering costs are estimated at \$30,000 and are included in the eligible costs.

It was the recommendation of the State Engineer that the State Water Commission approve cost sharing in 40 percent of the eligible costs, not to exceed \$65,566, contingent upon the availability of funds.

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John Sweeney, Grand Forks County Water Resource Board, commented on the project and indicated 93 percent of the affected people of the area voted in favor of the drainage project. Mr. Sweeney requested the Commission's favorable consideration of the cost sharing request.

It was moved by Commissioner Narlock and seconded by Commissioner Gust that the State Water Commission approve cost sharing in 40 percent of the eligible costs, not to exceed \$65,566 from the Contract Fund, for the construction of the Grand Forks County Drain No. 52. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

CONSIDERATION OF REQUEST  
FROM SOUTHEAST CASS COUNTY  
WATER RESOURCE DISTRICT FOR  
COST SHARING FROM CONTRACT  
FUND FOR WILD RICE RIVER  
SNAGGING AND CLEARING PROJECT  
(SWC Project No. 1842-1)

A request received from the Southeast Cass Water Resource District was presented for the Commission's consideration to cost share in a snagging and clearing project along the Wild Rice River.

Cary Backstrand stated the project involves snagging and clearing six river miles. The cost estimate indicates construction costs of \$25,500 and engineering costs of \$3,000, for a total project cost of \$28,500. Mr. Backstrand said all costs are eligible for a 25 percent cost sharing, which would amount to \$7,125. Engineering and inspection will be done by State Water Commission staff and those costs will be considered part of the State Water Commission's share. The amount required from the Contract Fund would be \$4,125.

It was the recommendation of the State Engineer that the State Water Commission cost share in 25 percent of eligible costs, not to exceed \$4,125 from the Contract Fund, contingent upon the availability of funds.

Fred Selberg, Chairman of the Southeast Cass Water Resource Board, stated snagging and clearing of the Wild Rice River has been completed in Richland County and this project being considered is located in Cass County. Mr.

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Selberg said this project has been requested by the property owners. He requested favorable consideration from the Commission for cost sharing.

It was moved by Commissioner Byerly and seconded by Commissioner Narlock that the State Water Commission approve cost sharing in 25 percent of the eligible costs, not to exceed \$4,125 from the Contract Fund, for snagging and clearing of the Wild Rice River in Cass County. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

**CONSIDERATION OF REQUEST  
TO TRANSFER FUNDS FROM  
CONTRACT FUND TO SATISFY  
STATE'S COST SHARE OF  
CORPS OF ENGINEERS SECTION  
22 FUNDING FOR FY 1991  
(SWC Project No. 1730)**

Cary Backstrand explained the Federal Water Resources Development Act of 1990 authorizes the Corps of Engineers to establish fees to recover 50 percent of the cost of providing Section 22 planning assistance to states. The fees are to be

phased in by recovering about 10 percent in Fiscal Year 1991, 30 percent in Fiscal Year 1992 and 50 percent each succeeding year. The federal funds allocation for North Dakota for Fiscal Year 1991 is \$96,000. The state's cost share is \$10,700, or approximately 10 percent of the total of \$106,700.

Mr. Backstrand explained that the Section 22 program provides North Dakota with the experience, technical expertise, and investigative resources of the Corps of Engineers. The current drought has demonstrated the importance of North Dakota's water resources to its residents, as well as to the state's future development and growth. Current items the Corps is assisting with includes the development of a computer program to facilitate integrated water management planning on the Mouse River and a continuing effort to develop flood control measures in the Red River Valley.

It was the recommendation of the State Engineer that the State Water Commission approve the transfer of up to \$10,700 from the Contract Fund for the purpose of satisfying the state's cost share of Section 22 funding for Fiscal Year 1991, contingent upon the availability of funds.

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It was moved by Commissioner Byerly and seconded by Commissioner Narlock that the State Water Commission approve the transfer of up to \$10,700 from the Contract Fund for the purpose of satisfying the state's cost share of Section 22 funding for Fiscal Year 1991. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

**CONTINUED DISCUSSION  
RELATIVE TO VOLUNTARY  
URBAN DEVELOPMENT WATER  
MANAGEMENT PROGRAM  
(SWC Project No. 1849)**

At the October 1, 1990 meeting, the State Water Commission passed Resolution No. 90-10-440, recognizing that water plays an important role in the economic development of North Dakota cities and the goals and aspirations of each North Dakota city are best understood by the citizens and elected officials of that city.

Milton Lindvig, Director, Water Appropriation Division of the State Water Commission, stated that Resolution No. 90-10-440 directed the Commission staff to review and study a voluntary program that would allow participating cities to declare specific amounts of raw water and/or water plant output available for purposes which local governments consider of the highest public interest. This information would be made available to industrial prospects along with any other information normally provided to such prospects by the State Water Commission.

Mr. Lindvig indicated that the staff review and study called for in Resolution No. 90-10-440 has been made. Representatives from several communities, including Grand Forks, Minot and Bismarck, were contacted to determine interest in the concept. It was concluded from this review and study that a voluntary program, called the Urban Development Water Management Program, has merit in that the goal of wise and beneficial use of the state's water resources is achieved in part by incorporating information from diverse sources.

It was the recommendation of the State Engineer that a voluntary program, called the Voluntary Urban Development Water Management Program, be established. He explained that a municipality participating in this program may provide the State Water Commission office in Bismarck any

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information pertaining to the water-supply facilities deemed by local government officials as pertinent to the municipality's economic prosperity. This information would be utilized in responding to requests from industrial prospects for information on the availability of water in the area of that municipality. Secretary Sprynczynatyk said this voluntary program will not supersede any regulatory authority of the State Water Commission or the State Engineer as provided through state statute.

It was moved by Commissioner Gust and seconded by Commissioner Narlock that the State Water Commission approve the Voluntary Urban Development Water Management Program recommended by the State Engineer.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

**SOURIS RIVER FLOOD  
CONTROL PROJECT UPDATE  
(SWC Project No. 1408)**

Secretary Sprynczynatyk briefed the Commission members on the Souris River Flood Control Project. Relative to lawsuits pending in Canada, Secretary Sprynczynatyk stated the Judge has ruled in favor of proceeding with the project on a lawsuit brought about against the Province of Saskatchewan by two landowners living in the Alameda Dam site area. No decision has been made on the lawsuit brought about by the Federal Government against the Province of Saskatchewan regarding compliance with all federal environmental requirements.

Construction of the Rafferty Dam is continuing throughout the winter and is nearly complete. The Alameda Dam project is approximately ten percent complete.

Copies of the Water Management Plan, 1991, for the City of Minot were distributed for the Commission members information.

**DEVILS LAKE MANAGEMENT  
PROJECT UPDATE  
(SWC Project No. 1712)**

Secretary Sprynczynatyk stated Congress appropriated \$600,000 for the US Army Corps of Engineers to do a reconnaissance level study of an inlet and outlet for Devils Lake. This one-year study is a 100 percent federally-funded effort that will

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lead into a feasibility level study, if the reconnaissance study shows that there is at least one alternative that is justified to be pursued.

Dale Frink reported that in recent discussions with the Corps of Engineers, he has been advised of the possibility that the \$600,000 appropriation for Devils Lake may be decreased. Mr. Frink said he does not have the details at this time and that negotiations will continue with the Corps of Engineers and Senator Burdick's office.

**MISSOURI RIVER UPDATE  
(SWC Project No. 1392)**

Secretary Sprynczynatyk reported on the efforts of the upper basin states to draft pleadings seeking a declaratory judgement in the interpretation of the 1944 Flood Control Act. He said it is anticipated that the pleadings will be filed with Federal District Court the last week of January, 1991.

The Corps of Engineers is continuing Phase II of its in-depth review of the Master Manual for the operations of the Missouri River which will be completed in approximately two years.

**RED RIVER VALLEY MUNICIPAL  
WATER SUPPLY STUDY  
(SWC Project No. 1731)**

Copies of the Red River Valley Municipal Water Supply Study, prepared by the Governor's Water Supply Technical Committee for the North Dakota State Engineer and the Garrison Diversion Conservancy District, were distributed.

LeRoy Klapprodt, State Water Commission Planning and Education Division, indicated the purpose of the study was to estimate the future water supply needs of the major cities located in the Red River Valley and to determine the ability of existing water sources to meet those needs. Mr. Klapprodt reviewed the background of the study, and explained the findings and study conclusions.

In summarizing the study conclusions, Mr. Klapprodt explained that based on the population projections developed in the study and the 1988 per capita water use rate, the combined water requirements of Fargo, Moorhead, Grand Forks, East Grand Forks and West Fargo have the potential to grow from an estimated maximum daily demand of about 81 cubic feet per second in 1990 to an estimated 136 cubic feet per second by the year 2040 under the upper limit, robust growth scenario.

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Mr. Klapprodt stated per capita water use rates used to develop the projected demands in this study are based on municipal water use reported annually to the State Water Commission and the Minnesota Department of Natural Resources. These per capita water use rates can be reduced by implementing a program of water conservation measures.

Mr. Klapprodt stated the study indicates the capability of ground-water resources to provide additional water over and above what is being used today is very limited. According to people involved in economic development promotion, many of the industries that consider the region for expansion of their operations require water that is nearly constant in temperature and quality. Cities currently using ground-water resources may enhance their ability to attract new industries by switching to a surface water supply thus freeing up ground water for industrial use.

The analysis of the region's surface water supplies indicates that under existing circumstances, surface water cannot meet the Fargo/Moorhead of Grand Forks/East Grand Forks urban area needs during an extended drought.

Mr. Klapprodt stated that if the municipal water demands occur as projected for the Fargo/Moorhead urban area by the Corps of Engineers and by this study, there are options available to meet these needs. These options include authorized Garrison Diversion Unit Project flows, coordinated releases from Lake Ashtabula, Orwell Reservoir, Lake Traverse or construction of additional storage facilities. These projects can supply projected water needs during an extended drought period.

Construction of additional off-channel and in-channel storage reservoirs, the use of Lake Ashtabula for water supply and maintaining the existing level of ground-water use are options which can circumvent the anticipated municipal water supply deficits.

Mr. Klapprodt said in conclusion, supplemental water from the Garrison Diversion Project is a very attractive alternative for meeting the municipal water supply needs of Fargo, Grand Forks, Moorhead, East Grand Forks and West Fargo. This study document will prove to be a very useful tool for local, state and federal water resource managers in developing plans to meet the expected needs of the study area.

January 15, 1991

**LEGISLATIVE REPORT**

Secretary Sprynczynatyk provided a legislative report for the Commission members information. In discussion, concern was expressed by the Commission members regarding pre-filed legislation pertaining to the State Water Commission and to the State Engineer. Secretary Sprynczynatyk stated he would work with the Legislative Council in the future to show bills as introduced by the State Engineer when it relates to the authorities of the State Engineer. This would not leave the impression that the State Water Commission introduced the bills.

The Commission members requested that in the future, sufficient time be allowed during Commission meetings to discuss proposed legislation.

**CONSIDERATION AND APPROVAL  
OF RESOLUTION OF APPRECIATION  
FOR MATT EMERSON  
(SWC Resolution No. 91-1-441)**


Secretary Sprynczynatyk presented a draft Resolution of Appreciation to Matt Emerson for the Commission's consideration.

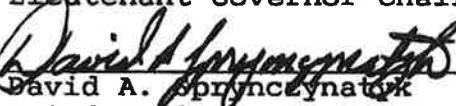
It was moved by Commissioner Gust and seconded by Commissioner Byerly that the State Water Commission approve Resolution No. 91-1-441, In Appreciation to Matt Emerson.

Commissioners Byerly, Gust, Narlock, Spaeth, and Chairman Omdahl voted aye. There were no nay votes. The Chairman declared the motion unanimously carried. See APPENDIX "B".

There being no further business to come before the State Water Commission, it was moved by Commissioner Spaeth, seconded by Commissioner Narlock, and unanimously carried, that the State Water Commission meeting adjourn at 11:40 AM.

SEAL

  
Lloyd W. Omdahl  
Lieutenant Governor-Chairman

  
David A. Sprynczynatyk  
Chief Engineer-Secretary

January 15, 1991

NORTH DAKOTA STATE WATER COMMISSION

REGISTER

ATTENDANCE AT State Water Commission

DATE January 15, 1991 PLACE Bismarck, ND

PROJECT NO. \_\_\_\_\_

| Your Name           | Your Address  | Who do you Represent?<br>(Or Occupation)  |
|---------------------|---------------|---|
| Gene Krenz          | Bismarck      | Water Commission                          |
| Darrell Houn Bockle | Jamestown     | McDon-Sheridan Joint Water Resource Board |
| Felicia Felix       | Newtown       | MRT-1 Water Project H. Berthold           |
| Wayne Simon         | Hampden       | Ramsey County Water District              |
| Ken Jun Ruff        | MANDAN        | ND Dept. of Ag.                           |
| Jeffrey Mattern     | BISMARCK      | ND SWC                                    |
| MERLE L. HUMMER     | DEVIL LAKE    | RAMSEY COUNTY WRO                         |
| RONALD FRENCH       | GRAND FORKS   | KBM, INC.                                 |
| Art Selberg         | HARWOOD ND    | S/E Cass W.R.D.                           |
| John Swenson        | Manvel ND     | Grand Forks County Water Resource         |
| Gary Reder          | Devil Lake ND | Langdon Rural Water                       |
| Lester Johnson      | Osnebeck ND   | Langdon Rural Water                       |
| Henry Strodt        | Hampden N.D.  | Langdon Rural Water                       |
| Alvin D. Lamb       | Langdon N.D.  | Langdon Rural Water                       |
| Bruce F. McLellan   | Bismarck      | BN/BEC-SWPP                               |

NORTH DAKOTA STATE WATER COMMISSION  
REGISTER

ATTENDANCE AT \_\_\_\_\_

DATE \_\_\_\_\_ PLACE \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

| Your Name      | Your Address | Who do you Represent?<br>(Or Occupation) |
|----------------|--------------|--|
| Steve Dyke     | Bismarck     | North Dakota<br>Game + Fish Dept.        |
| Dennis Meyer   | Mandan       | Toman Engineering                        |
| John Olson     | Devils Lake  | Olson-Kaufman Inc                        |
| Lee Klapprott  | Bismarck     | SWC                                      |
| PRESTON SCHOTT | "            | SWC                                      |
| Walter Lipp    | McClusky     | McLean-Sheridan                          |
| IVON BOE       | TURTLE LAKE  | MCLEAN-SHERIDAN                          |
| VERN FAHY      | BISMARCK     | ?  |
| Robert Markey  | Devils Lake  | RT & Boyd, Webster, ND                   |
| Richard Regan  | Devils Lake  | Ramsay County W.P. B.                    |
| OJ Gaud, Jr    | Fat Totten   | Devils Lake Sioux Water Reserve          |
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NORTH DAKOTA STATE WATER COMMISSION  
REGISTER

ATTENDANCE AT \_\_\_\_\_

DATE \_\_\_\_\_ PLACE \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

| Your Name   | Your Address | Who do you Represent?<br>(Or Occupation) |
|-------------|--------------|--|
| D. Tugchell | WEST FALLS   | CASS Co. WRD                             |
| Mike Dwyer  | Bismarck     | ND Water Users                           |
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**REQUEST FOR FUNDING**  
**FROM THE**  
**RESOURCES TRUST FUND**  
**FOR THE**  
**1991-93 BIENNIUM**

**JANUARY 15, 1991**  
**STATE WATER COMMISSION**

Section 57-51.1-07.1(2) of the North Dakota Century Code requires that "Every legislative bill appropriating moneys from the Resources Trust Fund pursuant of subsection one must be accompanied by a State Water Commission report."

The following allocations represent the recommendation from the Water Coalition and the allocation based on income to the Resources Trust Fund of \$14.9 million during the 1991-93 biennium. Background information and other data needed to satisfy these requirements are included in the attached report.

| <u>Project or<br/>Funding Requirement</u> | <u>Water Coalition<br/>Recommendation</u><br>\$ millions | <u>State Engineer<br/>Recommendation</u><br>\$ millions |
|---|--|---|
| Contract Fund                             |  |   |
| General Projects                          | \$ 4.1   | \$ 1.8  |
| Hydrologic Investigations                 | 0.5  | 0.5   |
| Southwest Pipeline Project                | 9.0  | 2.5 <u>1/</u>   |
| Devils Lake Feasibility Study             | 1.2  | 0.8   |
| Souris River Flood Control                | 1.8  | 1.8   |
| MR&I                                      | 2.0  | 4.0   |
| NAWS                                      | 0.2  | 0.2   |
| Maple River Dam                           | 4.0  | 1.0   |
| SWC Administration                        | <u>0</u>   | <u>2.3</u>  |
|   | \$22.8   | \$14.9  |

1/ Includes \$1.5 million of anticipated carryover.

## I. STATE WATER COMMISSION CONTRACT FUND

### A. Project Description and Related Engineering Studies:

The State Water Commission's contract fund is used to cost-share with local sponsors on engineering construction projects and on the hydrologic data collection program. The engineering construction projects include flood control projects, water supply projects, recreation projects, irrigation projects, and drainage projects. Investigations and extraordinary maintenance are also cost-shared. Depending on the project type, 25 to 50 percent is provided by the State Water Commission. The contract fund has been used as the state's primary water resource development fund since 1943.

Based on a survey of the 64 water resource districts in the state, it was determined that over \$54 million of projects potentially could be developed in the next biennium. Under current cost-share guidelines, it was determined that \$4.1 million would be necessary to cost-share on the projects that were likely to start in the next two years. Due to funding restraints, \$1.8 million is requested for general projects. This amount does include reallocation of \$144,664 for the Stone Creek/White Spur project. Funds for this project are currently authorized as carryover, but project delays will probably not allow the project to be completed before June 30, 1991. Since carryover funds cannot be carried over again, the funds must be reallocated.

The contract fund also supports the State Water Commission's U.S. Geological Survey Cooperative program. The hydrologic data collection part of the program consists of the streamflow gaging network, monitoring ground water levels and quality. This program is an essential element in the ongoing process of managing the state's water resources. The request to support this program is \$486,446.

Contract services to support hydrologic investigations include test drilling and related work, surveying, water level measurements, stream gage measurements, soil classifications, and other services as may be required.

**B. State Water Plan:**

The majority of the potential projects are included in the State Water Plan. The State Water Commission does review the projects individually, as specific requests are made, to determine whether the projects are compatible with water management plans.

**C. Description of Project Need:**

As previously indicated, the contract fund is used to cost-share on all types of water resource projects in the state. The 64 water resource districts have several projects that are ready for development and many more in the preliminary development stage. These projects individually are not extremely comprehensive or costly, but the projects are very important to

specific areas and often have a higher benefit to cost ratio than larger projects. The \$1.8 million requested would be used to cost-share with other agencies and entities for general project purposes.

The \$486,446 requested for hydrologic data collection will be used to cost-share with the U.S. Geological Survey. This program is based on a 50/50 cost-share.

**D. Alternative Funding Sources:**

Alternative funding sources for the smaller projects funded from the contract fund is generally nonexistent. Federal funding is essentially not available, therefore funding is left up to state and local sources. Without state assistance, the locals would not be able to develop the small projects.

The hydrologic data collection program with the U.S. Geological Survey is based on a 50/50 cost split. Discontinuance of state funds would essentially eliminate this Coop program.

**E. State Water Commission Recommendation:**

The State Water Commission requests \$1.8 million for General Contract Fund projects, and \$500,000 for Hydrologic Investigations.

## II. SOUTHWEST PIPELINE PROJECT

### A. Project Description and Related Engineering Studies:

The Southwest Pipeline Project is a water supply system to furnish Missouri River water to 19 cities and 3 rural water organizations in southwestern North Dakota. The water will be diverted from Lake Sakakawea at Basin Electric Cooperative's intake structure located on Renner Bay northwest of Beulah. The project includes 324-mile pipeline system and several other principal features, including a 15-million gallon per day water treatment plant located north of Zap; 11 booster stations; 12 storage and control reservoirs; an operating and control headquarters facility at Dickinson; and a telemetry system for centralized control of the project.

The project is essentially designed and construction began in 1986. It has continued at a pace set by availability of funds. At present all components necessary to deliver raw water to Dickinson are either complete or under construction.

Following is a summary of past studies related to the Southwest Pipeline Project:

In 1971, the State Water Commission was directed to determine the future water requirements of southwestern North Dakota and the feasibility of diverting water from the Missouri River into the area for multiple uses. This study, called the West River Study, was conducted from July 1971 to July 1975.

The 1977 State Legislative Assembly authorized the Southwest Area Water Supply Study (SAWS). Unlike the multiple use West River Study, the SAWS was limited to municipal and rural water delivered in a pipeline. The SAWS study area included all of North Dakota south and west of Lake Sakakawea and the Missouri River. This report evaluated several alternative plans to provide potable water to the study area and recommended a particular plan.

The 1981 Legislative Assembly appropriated \$983,000 to be used by the State Water Commission to contract for the pre-final design. At this time, the project's name was changed to the Southwest Pipeline Project.

In 1983, the Legislative Assembly of the state of North Dakota authorized the construction of the Southwest Pipeline Project and appropriated \$6 million for the final design and to acquire the necessary right-of-ways. These activities were essentially completed by June 30, 1985.

The 1989 Legislative Assembly appropriated \$29,591,404 to the Southwest Pipeline Project. Of this amount, \$3,600,000 were state funds (Resources Trust Fund and Land and Minerals Trust Fund). The remainder represented authority to spend federal funds.



**B. State Water Plan:**

The Southwest Pipeline Project is an integral part of the State Water Plan. The State Water Plan was developed around the assumption that the Southwest Pipeline Project would meet the water needs of 27 cities and the surrounding rural areas in southwestern North Dakota. Of those 27 cities, 19 have executed water service contracts.

**C. Description of Project Need:**

The need for the project is well documented. The area's surface water supplies are erratic and cannot be relied upon as a dependable water supply. The ground water aquifers are extremely limited and those that do exist contain water of very poor quality. Many cities obtain their water supplies from wells 1,000 to 1,500 feet deep. Many farms obtain their water from lignite coal aquifer seams that yield water of a dark brown color resembling coffee. Many other farms and ranches are forced to haul water often at distances of 15 to 20 miles.

The city of Dickinson receives its water supply from a dam and reservoir on the Heart River. Because of the erratic flows of the Heart River, the city has faced severe water rationing programs in recent years. The situation became so critical that the city was forced to run a pipeline from their sewage lagoon to the water treatment plant and actually recycled their sewage to meet the water demands. Even in years of adequate reservoir

storage, the city has serious water treatment problems due to the colloidal bentonite and algae in the reservoir water.

The \$1 million requested would be used to continue design of the next phase of the project, and to prepare to receive additional federal funds.

D. Local Sponsorship and Direction:

In early 1990, the "Southwest Water Authority" was formed. This body was formed as an interim entity to provide local sponsorship for the Southwest Pipeline Project until a permanent entity is created by the legislature.

The Southwest Water Authority also serves as the local advisory body, and in that function, supersedes the Southwest Pipeline Project Advisory Committee. Southwest Water Authority includes representatives of the water resource districts, the city of Dickinson, and the rural water districts in the area.

One of the Southwest Water Authority's first acts was to produce a listing of the order in which remaining components of the project should be completed. Their preference is to build the components serving the Dickinson, Belfield, and Medora areas first, and then to build the components serving the New England, Mott, and Bowman areas.

A major decision remains to be made regarding treatment of the water. Besides the authorized plan with a water treatment plant north of Zap, there is an alternate proposal to use Dickinson's treatment plant for uses west and south of Dickinson, and to build smaller treatment plants to serve areas between Lake Sakakawea and Dickinson.

The Southwest Water Authority prefers to defer the decision on the treatment plant at this time.

**E. Alternative Funding Sources:**

About one-half of funds expended to date on Southwest Pipeline Project have been state funds. The majority of the state funds were appropriated from the Resources Trust Fund. In addition, 1.8 million from land and minerals trust fund was used in 1989. The other main source of money invested in Southwest Pipeline Project to date is from the Municipal, Rural and Industrial Water Supply fund of the Garrison Diversion Project.

The current budget request for the Southwest Pipeline Project seeks the authority to build (if sufficient federal funding is available) most components of the system which can be served by the Dickinson Water Treatment Plant. This amounts to approximately \$26.5 million in construction costs and \$3.4 in support costs. Of this amount, \$2.5 million is requested from the Resources Trust Fund. In spite of the availability of federal money, state money is still needed for the following

reasons: 1) The federal funding is determined on an annual basis and has been highly variable in the past. Certain administration and maintenance costs must be provided for in the event of inadequate federal funding; 2) The current level of state funding (\$23 million) is not yet at the 25 percent level required for the entire project (\$148 million); 3) Continued state commitment to Southwest Pipeline Project makes an important statement of support, not only to the federal government, but also to the people the project is meant to serve; and 4) \$1.5 million of the \$2.5 million request is for carryover funds. The contracts for the Dodge Pump Station and the Richardton Pump Station and Reservoir will not be complete by the end of the biennium. Up to \$1.5 million of currently appropriated money may not have been expended by that time.

**F. State Water Commission Recommendation:**

The State Water Commission requests \$2.5 million for the Southwest Pipeline Project.

### III. DEVILS LAKE

#### A. Project Description and Related Engineering Studies:

The dramatic decline in Devils Lake water levels, caused by the ongoing drought, has created an immediate need to develop a plan to implement the lake's highly valued recreation resources. The U.S. Army Corps of Engineers is currently preparing a reconnaissance level study of an inlet and outlet for Devils Lake. This one-year study is a 100 percent federally funded effort that will lead into a feasibility level study, if the reconnaissance study shows that there is at least one alternative that is justified to be pursued. The feasibility study, however, requires a 50 percent nonfederal match; one-half of the non-federal match must be actual dollars and one-half can be in-kind services provided by a nonfederal entity or organization. The feasibility study will include an Environmental Impact Statement that will likely be rather extensive. The cost of the feasibility study is estimated to be \$2-4 million. As a result, the nonfederal match could be as high as \$2 million. It is requested that \$800,000 of this amount be allocated from the Resources Trust Fund. The remaining requirement could be in-kind services and local dollars.

#### B. State Water Plan:

An inlet and outlet for Devils Lake has been an integral part of several State Water Plans. Originally, the Garrison Diversion Project included a canal inlet and outlet, along with a detailed operating plan for the lake. While the ongoing Corps

studies may change the specific details, the ultimate goal remains the same - a project to stabilize the level of Devils Lake.

C. Description of Project Need:

The drought which has afflicted a large portion of the Northern Great Plains during the past three years, has caused significant declines in water levels of lakes and reservoirs throughout the region. Devils Lake has receded from an elevation of 1428.9 msl in 1987, to 1424.7 msl in early 1990. The volume lost between these two elevations is approximately 225,000 acre-feet. Since Devils Lake is replenished almost entirely by spring runoff, the lack of significant snowmelt and the forecast of below median spring rains, suggest the water level may continue to drop through 1990.

Continued declines in Devils Lake water levels pose a very serious threat to this highly valued natural resource. Devils Lake has, in recent years, become a nationally acclaimed sport fishery and it contributes substantially to North Dakota's water-based recreational opportunities.

A creel census of the 1988 summer sport fishery and 1988-89 winter ice fishery conducted by the ND Game and Fish Department, reported almost 938,000 angler hours were spent fishing on Devils Lake. Using this creel census data, it was estimated that anglers spent \$27.4 million to fish on Devils Lake during the

1988-89 fishing season. Using the multiplier for recreation and tourism contained in the Input/Output Economic Model developed at North Dakota State University, the gross business volume generated by fishermen in the region exceeds \$90 million. This level of business activity supports almost 1,400 jobs. Recreation on Devils Lake has become a growing and extremely valuable resource to the state's economy.

While the current water level conditions are drought related, it is recognized that flood control is also a long-term problem. The fluctuation from low to high water levels is cyclic and the overall longer term objective is to stabilize both types of fluctuations. Thus, many of the project features were designed to address both low lake levels and flood control. Combining project features for both purposes results in economic efficiency.

**D. Alternative Funding Sources:**

The federal government requires a 50 percent nonfederal cost-share for feasibility studies. This nonfederal cost-share must be at least 50 percent cash and the remaining portion can be in-kind services.

There are several state and local agencies that can and will contribute in-kind services. The feasibility studies will require substantial analysis of existing water quality data and possibly will require additional water quality samples. The

State Health Department is well equipped to provide assistance in this area. The Game and Fish Department can provide significant inputs regarding creel census and past histories of the fishery of Devils Lake. Local assistance will also be required in several areas.

The feasibility study will require, however, anywhere from \$1 to \$2 million in cash. This contribution could come from a combination of several state and local entities. The Devils Lake Joint Board is probably in the best position to provide a cash contribution at the local level. A large contribution will likely be required from both the state and locals if the project proceeds into the construction phase.

E. State Water Commission Recommendation:

The State Water Commission requests \$800,000 for the Devils Lake Feasibility Study.



#### IV. GARRISON DIVERSION MUNICIPAL, RURAL AND INDUSTRIAL WATER SUPPLY PROJECTS

##### A. Project Description and Related Engineering Studies:

The Garrison Diversion Unit Reformulation Act of 1986 re-authorized a modified version of the Garrison Diversion Unit. Section 5 of this act includes provisions for the planning and construction of municipal, rural, and industrial water supply systems to serve cities and rural areas statewide. The act authorized the sum of \$200 million of federal funds with the stipulation that the total project costs be shared by the federal government (75 percent), and state and/or local entities (25 percent). The federal funds can only be expended as the money is appropriated annually from Congress and if there is a 25 percent up-front, nonfederal match.

The requested \$4.0 million appropriation from the Resources Trust Fund will be combined with local/city money for the 25 percent match.

At present, nearly 120 applications have been received for MR&I funding. Ten projects have been completed and six are in the design and/or construction stage. Approximately \$37 million of federal money was received between 1986 and 1990, with \$25 million spent on the Southwest Pipeline project.

At this time, the federal funding during the 1991-93 bien-nium is unknown. The Congressional authorization varies from

year to year and federal funding is becoming more difficult to obtain. It is anticipated that \$9 to \$10 million will be obtained during FY '91. It is hopeful that like amounts will be available in future years.

**B. State Water Plan:**

The State Water Plan does not specifically include any municipal water supply projects. The State Water Plan does include water supply development as a general statewide goal.

**C. Description of Project Need:**

As part of the process of developing a MR&I plan, all cities in the state were contacted for their interest and need in obtaining a new water supply. Nearly 120 cities and rural water systems have applied for funding from the program. Each of these cities have been given a priority rating based on a system approved by the State Water Commission.

**D. Alternative Funding Sources:**

It is the intent that state funds from the Resources Trust Fund be used to supplement federal MR&I allocations to produce a perpetuating fund dedicated to financing water supply projects. This fund would be disbursed annually, part as a grant, and part as a loan. The loan repayments would go back into the Resources Trust Fund to build a permanent fund whose earnings could replace the federal MR&I funds when that program's \$200 million ceiling is reached.

Presently, the State Water Commission has authority to loan contract funds, but the authority to place the repayment funds into the Resources Trust Fund does not exist.

It may also be possible to receive reimbursed funds for the program from the federal government. These funds should also go into the Resources Trust Fund.

An amendment has been proposed to SB 2017 to grant the necessary authority. If this occurs, it is intended to initiate the grant-loan program in the 1991-93 biennium.

**E. State Water Commission Recommendation:**

The State Water Commission requests \$4 million for the Garrison Diversion MR&I Program.

**V. NORTHWEST WATER SUPPLY PROJECT  
(EAST NAWS)**

**A. Project History and Description:**

The NAWS/Fort Berthold integrated water supply project would provide a MR&I water supply to six counties in north-central North Dakota. Originally the project included all the counties in the northwest corner of the state, but after further investigations, it was determined more feasible to divide the area into at least two general areas: 1) The west NAWS area (Williston), and 2) The east NAWS area centered around Minot. The east NAWS project has been separated from the other MR&I projects for basically two reasons: First of all, the \$181 million estimated cost is larger than what can be supported by the current MR&I program. Secondly, since east NAWS could serve areas on the Fort Berthold Indian Reservation, it seemed advantageous to integrate the east NAWS project with the MR&I projects on the Reservation.

Federal funding will be sought as a joint project with the Fort Berthold Indian Reservation. A reconnaissance level has been prepared for this purpose. A project need at this point is a project manager to coordinate the project efforts at the local, state, and federal levels. There are many requirements for developing a project of this scope and a full-time staff coordinator is needed.

The integrated report also may need to be updated and expanded in several areas. In addition, if federal monies are obtained, a nonfederal match will also be required. As a result, a \$200,000 allocation from the Resources Trust Fund is requested to advance the project during the 1991-93 biennium.

The NAWS/Fort Berthold integrated water supply project can be defined as a piped, potable water distribution system for the project area. Except for two sub-areas on the Fort Berthold Reservation, Mandaree and Twin Buttes, the system is supplied from one source. This source is an intake on Lake Audubon. The Twin Buttes and Mandaree areas have separate intakes on Lake Sakakawea due to their physical location with respect to the rest of the integrated water distribution system.

The service area of the proposed integrated NAWS/Fort Berthold water supply system includes the northern part of McLean County; most of Ward County, and all of McHenry County, Renville, and Bottineau Counties; and most of Mountrail County. The major users on this system would include Minot (which also services Minot Air Force Base and North Prairie Rural Water); Upper Souris and All Seasons Rural Water Districts; the larger cities of Garrison, Kenmare, Mohall, Bottineau, New Town, Stanley, and Parshall; all of the Fort Berthold Indian Reservation; and several small cities not presently served by rural water.

Components of the proposed integrated system would include an intake at Lake Audubon and a 32-million gallon per day (mgd) conventional water treatment plant located near the water source at Lake Audubon. In addition, water could also be treated at Minot, if additional softening is required by the city. Approximately 525 miles of pipeline (ranging from 4 inches to 48 inches in diameter), 13 pumping stations, 13 storage reservoirs, and three pressure reducing stations would be required to serve the area.

**B. State Water Plan:**

The NAWS project is not specifically included in the 1983 State Water Plan. However, it is included in the state's current MR&I plans, and as a regional water system does promote the Water Commission's preference for joint facilities.

**C. Description of Project Need:**

Municipalities, farms, and ranches in the project area use existing ground water and surface water sources to varying degrees. Many farms and ranches also haul water for domestic consumption and livestock use. In most cases, it is apparent that the available water supply does not meet established water quality standards set by the Safe Drinking Water Act. Published reports by the U.S. Bureau of Reclamation and the Three Affiliated Tribes have also identified problems with both the municipal and rural water supplies on the Fort Berthold Reservation. During the formulation of the NAWS study, a needs

survey was conducted in the study area during March and April of 1988. The survey consisted of contacting all of the cities, communities, and rural water districts in the study area. The results of the survey indicate that nearly all water supplies need some form of treatment to meet the current and/or proposed standards of the Environmental Protection Agency Safe Drinking Water Act.

**D. Alternative Funding Sources:**

There are several other sources that could contribute to the funding of this request. The Souris River Joint Water Resource Board, the city of Minot, the Fort Berthold Indian Reservation, and the Garrison Diversion Conservancy District are all possibilities. Federal funding, through the MR&I program, is also a possibility. All of these sources will be explored as a funding source for cost-sharing.

**E. State Water Commission Recommendation:**

The State Water Commission requests \$200,000 for the Northwest Water Supply Project.

**VI. SHEYENNE/MAPLE RIVER FLOOD CONTROL  
PHASE III**

**A. Project Description:**

The Sheyenne/Maple River Flood Control, Phase III, consists of a dam and reservoir on the Maple River. The proposed dam would be located in the NE1/4, Section 14, Township 137 North, Range 54 West, on the Maple River in Cass County. The dam site is approximately eight miles northeast of Enderlin. The flood control pool would encompass all the land upstream of the dam below an elevation of 1055.0 feet. The project area can best be described as river bottom land characterized by riverine wetlands, lowland hardwoods, grasslands, and cropland. The total project area is approximately 2,860 acres. The embankment would be compacted earthfill with top of dam elevation at 1060.0 feet, top width of 30 feet, maximum height of 70 feet, and length of 1,850 feet. The side slopes would be 1:4 upstream, and 1:3 downstream. The outlet works consist of a 9-foot diameter conduit and the 500-foot uncontrolled concrete ogee spillway. The conduit would be used for normal discharges, and the spillway would be designed to pass the probable maximum flood peak outflow of 62,000 cfs.

**B. State Water Plan:**

The Maple River Flood Control Dam is a recommended project in the North Dakota State Water Plan.



**C. Description of Project Need:**

The need for the project is to control flooding and/or provide recreational opportunities. Flooding, which is almost an annual event, follows the typical pattern of the rest of the Red River basin. The primary areas affected by the flooding throughout the subbasin's floodplain are urban, agricultural, and environmental in nature. Enderlin, Durbin, and Mapleton, North Dakota, are the only communities in the subbasin that are subject to recurrent flooding. The Maple River flows have a high velocity, but as the river enters the plains area to the north and east of Leonard, the velocities decrease greatly, causing siltation and a lowering of the stream capacity. Shallow channels and diminished gradients in this area cause floodwaters to overflow existing channels into the surrounding lacustrine plain, damaging cropland, farmsteads, transportation facilities, and urban areas. The Maple River also increases the flood problem on the Sheyenne River. Flows on the Maple River discharge into the Sheyenne River above the communities of Rivertree Park, Harwood, and Brooktree Park.

**D. Alternative Funding Sources:**

The economic analysis performed by the U.S. Army Corps of Engineers indicate that building a dam on the Maple River to control flooding is economically not justified and is not in the federal interest. The cost of construction by the Corps was estimated at \$26 million. The average annual benefits for such a project would vary from \$528,000 for the dry dam alternative, to

\$962,000 for the recreation pool alternative. These benefits and costs result in benefit/cost ratios of 0.2 to 0.36.

The Southeast Cass Water Resource District estimates that the dam can be constructed for about \$12.0 million by either the state or local water resource district. The District has requested funding from the Resources Trust Fund in the amount of \$4 million during the 91-93 biennium, and \$4 million for the 1993-95 biennium. Due to funding restraints, it is requested that \$1,000,000 be requested from the Resources Trust Fund during the 1991-93 biennium.

**E. State Water Commission Recommendation:**

The State Water Commission requests \$1,000,000 for the Maple River Flood Control Project.

## VII. SOURIS RIVER FLOOD CONTROL PROJECT

### A. Project Background and Description:

In 1985, the State Legislature appropriated \$905,000 to the Souris River Flood Control Project. The State Water Commission allocated another \$1 million to the project during the 1987-89 biennium. Due to project delays, \$1,858,692 of these funds were approved as carryover during the 1989-91 biennium. While considerable progress is currently being made on the project, it is not likely that these funds will be spent by June 30, 1991. While the need still exists for these funds, it is not possible to carryover funds more than one biennium. It is estimated that \$1,772,872 will become turnback dollars to the Resources Trust Fund, and it is therefore requested that these dollars be reallocated to the project for the 1991-93 biennium.

The Souris River Flood Control Project includes several features:

1. Rafferty and Alameda Dams in Saskatchewan;
2. Levees and channel improvements at Burlington, Minot, and Velva;
3. Floodproofing of several rural residences;
4. Improvements to Lake Darling Dam and to other refuge structures; and
5. Miscellaneous roads and railroad relocations.

The Corps of Engineers is responsible for the project features in North Dakota, and the Province of Saskatchewan is responsible for the two Canadian dams.

Rafferty and Alameda Dams are both under construction in Saskatchewan, but these projects have been under extensive legal scrutiny regarding environmental concerns. This has delayed the completion of the dams, and in turn, the need for payments to Canada as part of the US/Canadian cost-share agreement. Rafferty Dam is currently about 90 percent complete, and the construction of Alameda began in October 1990. Hopefully, both of the projects will be completed within the next two years.

**B. State Water Plan:**

The State Water Plan does not specifically recommend Rafferty and Alameda Dams, but flood control was listed as a primary need in the Souris River. The water plan did recommend continuing studies on the Lake Darling compromise plan.

**C. Description of Project Need:**

The need for flood control on the Souris River has been apparent for many years. Major floods have caused substantial damage to Minot and Velva. Many farms experience flooding problems nearly every year.

The Souris River flood control project, as currently design, is a multi-feature approach to the flooding problems along the Souris River. A major obstacle to past plans was the objections of local residents to Burlington Dam and the lack of a suitable alternative that would significantly reduce major flooding along the Souris River. The Rafferty and Alameda Dams in Saskatchewan

apparently are the missing link to the long-awaited solution for  
Souris River flood control.

\$1.8 million is needed to meet the obligation to the project  
made by previous legislative action. This money would come from  
unexpended funds from previous appropriations.

**D. Alternative Funding Sources:**

The funding requirements for the Souris River flood control  
project has been established for several years. Although the  
project has incurred some delays, it is important that all  
parties continue to support the original agreements.

**E. State Water Commission Recommendation:**

The State Water Commission requests \$1.8 million for the  
Souris River Flood Control Project.

**RESOLUTION NO. 91-1-441  
IN APPRECIATION - MATT EMERSON**

WHEREAS, Matt Emerson has retired as the Assistant Secretary to the North Dakota State Water Commission; and

WHEREAS, Matt served the State of North Dakota and the State Water Commission from 1966 through 1990; and

WHEREAS, his service as water permit technician helped to set the standard for water permit processing in the late 1960's; and

WHEREAS, his early involvement in developing the 1968 State Water Plan helped shape subsequent planning efforts; and

WHEREAS, his service as Assistant Secretary to the State Water Commission provided guidance and leadership to the employees of the Commission; and

WHEREAS, Matt's dedicated service is an example for others to follow; and

WHEREAS, during his nearly 25 years of service, Matt made many friends within the Commission; and

WHEREAS, his advice, friendship and counsel will be missed by the members of the State Water Commission and its staff.


NOW, THEREFORE, BE IT RESOLVED that the North Dakota State Water Commission; its Chairman, Lieutenant Governor Lloyd Omdahl; State Engineer, David Sprynczynatyk; and the staff of the State Water Commission, at a meeting held January 15, 1991, in Bismarck, North Dakota, do hereby express their thanks and appreciation to Matt Emerson for service as Assistant Secretary to the State Water Commission; and

BE IT FURTHER RESOLVED that we wish Matt and his wife, Bertha, the best of health and happiness in their future endeavors.

FOR THE NORTH DAKOTA STATE WATER COMMISSION:

SEAL

  
\_\_\_\_\_  
Lloyd B. Omdahl  
Lieutenant Governor-Chairman

  
\_\_\_\_\_  
David A. Sprynczynatyk  
State Engineer and  
Chief Engineer-Secretary