#### MINUTES

## North Dakota State Water Commission Bismarck, North Dakota

March 9, 1989

The North Dakota State Water Commission held a meeting on March 9, 1989, in the lower level conference room of the Old State Office Building, Bismarck, North Dakota. Acting Chairman, Sarah Vogel, called the meeting to order at 8:00 a.m., and requested State Engineer and Secretary, Vernon Fahy, to call the roll and present the agenda. Commissioner Lorry Kramer was introduced, who was appointed to complete the remaining term vacated by Richard Backes (Term: February 1, 1989 - July 1, 1991).

#### MEMBERS PRESENT:

Governor George A. Sinner, Chairman
Sarah Vogel, Commissioner, Department of Agriculture, Bismarck
Joyce Byerly, Member from Watford City
Jacob Gust, Member from West Fargo
Lorry Kramer, Member from Minot
William Lardy, Member from Dickinson
Daniel Narlock, Member from Oslo, MN
Norman Rudel, Member from Fessenden
Jerome Spaeth, Member from Bismarck
Vernon Fahy, State Engineer and Secretary, North Dakota
State Water Commission, Bismarck

#### OTHERS PRESENT:

State Water Commission Staff Members Approximately 35 people 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.

CONSIDERATION OF MINUTES OF JANUARY 26, 1989 MEETING - APPROVED

The minutes of the January 26, 1989 meeting were approved by the following motion:

It was moved by Commissioner Lardy, seconded by Commissioner Byerly, and unanimously carried, that the minutes of the January 26, 1989 meeting be approved as circulated. SOUTHWEST PIPELINE PROJECT - PROJECT UPDATE (SWC Project No. 1736)

Dale Frink, Manager of the Southwest Pipeline Project, indicated construction has started on pipeline Contract 2-3B which

was bid on November 10, 1988. Johnson Construction has installed the 42-inch casing pipe under Interstate 94 near Dickinson and intends to cross the Green River in the near future using imported sand and backfill. The contractor anticipated to have this crossing completed prior to spring runoff, and normal pipelaying will not start until all the frost is out of the ground.

Negotiations have been started between the Rural Electric Cooperatives, the Western Area Power Administration and the State Water Commission regarding providing federal power to the Southwest Pipeline facilities. Mr. Frink said the current plan is to buy the power from WAPA and then pay the respective REC to deliver the federal power to the pipeline facilities. He noted this type of arrangement has been done on several other federal projects. The Oliver-Mercer Cooperative will be submitting a draft contract in the near future for providing power to the intake pumps and water treatment plant area.

The State Water Commission has sent out requests for proposals for the cultural resource mitigation requirements along the raw water pipeline. Mr. Frink said it is estimated the cost of this work will be approximately \$100,000. The proposals must be submitted by March 10, 1989, and the field work must be completed prior to construction.

SOUTHWEST PIPELINE PROJECT -APPROVAL OF AWARD OF CONTRACT 2-1 FOR RAW WATER PIPELINE (SWC Project No. 1736)

Dale Frink indicated that on February 2, 1989 bids were opened on Contract 2-1 for the raw water pipeline. The low bid was submitted for the 6.9-

bid was submitted for the 6.9-mile segment of the pipeline by Barnard Construction Company, Inc. from Bozeman, Montana, with a bid of \$2,472,000.

It was the recommendation of the State Engineer that the State Water Commission approve the awarding of Contract 2-1 to Barnard Construction Company, Inc. from Bozeman, Montana.

It was moved by Commissioner Narlock and seconded by Commissioner Lardy that the State Water Commission approve the award of Contract 2-1 of the Southwest Pipeline Project for the raw water pipeline to Barnard Construction Company, Inc. from Bozeman, Montana.

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

SOUTHWEST PIPELINE PROJECT APPROVAL OF AWARD OF CONTRACT
1-1/3-1A FOR INTAKE PUMP
STATION AND RAW WATER RESERVOIR
(SWC Project No. 1736)

Dale Frink indicated that on February 2, 1989 bids were opened on Contract 1-1/3-1A for the intake pump station and the raw water reservoir. The low bid for this contract was sub-

mitted by Industrial Contractors, Inc. from Bismarck, with a bid of \$2,106,000.

It was the recommendation of the State Engineer that the State Water Commission approve the awarding of Contract 1-1/3-1A to Industrial Contractors, Inc. from Bismarck.

It was moved by Commissioner Narlock and seconded by Commissioner Lardy that the State Water Commission approve the award of Contract 1-1/3-1A of the Southwest Pipeline Project for the intake pump station and the raw water reservoir to Industrial Contractors, Inc. of Bismarck.

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

Mr. Frink informed the Commission members that upon the award of these contracts, all state and federal funds available and allocated to the pipeline will be fully committed, which includes \$7.1 million of 1988 federal funds and \$4.3 million of state funds.

UPDATE ON INTERBASIN WATER TRANSFER STUDIES PROGRAM AND APPROVAL OF RESOLUTION 89-3-431 (SWC Project No. 1828)

Gene Krenz, Biota Transfer Studies Program Coordinator, presented background information on the Interbasin Water Transfer Studies Program (Biota Tra-

sfer). The report is attached hereto as APPENDIX "A".

Mr. Krenz explained the Biota Transfer Program is an outgrowth of one of the recommendations contained in the Final Report of the Garrison Diversion Unit Commission (December, 1984). The Commission recommended that a baseline survey of species and pathogens in waters of the Hudson Bay Basin be undertaken and that "this survey should be the responsibility of an independent international organization not affiliated with Governments of the United States or Canada. The scientific team should include qualified technical specialists from the State of North Dakota, the Province of Manitoba, the United States, and Canada, and should be funded as part of the Commission Plan."

Because there was incentive by the Canadians and the Federal Government to initiate the actions needed to begin meeting the above-stated objective, the State of North Dakota pursued the initiative. Canadian participation is very critical to the success of the program, and although it has taken approximately two years to arrange for such participation, Mr. Krenz said there is a Canadian serving on the Technical Advisory Team and that proposals submitted by Canadian scientists have been approved for funding. Canadian involvement also makes possible some level of cost sharing by the Federal Government through the U.S. Bureau of Reclamation and provides for a multi-lateral effort rather than a unilateral effort in the Mr. Krenz commented that any unilateral research program undertaken by the State of North Dakota would, in his opinion, nullify progress made to date and the research results of such a program would be viewed with suspicion by the Canadians and would be found to be unacceptable to them.

Governor Sinner assumes the chair.

Mr. Krenz discussed the current biennium budget for the Interbasin Water Transfer Studies Program, which the State Water Commission has committed \$50,000 and the Garrison Diversion Conservancy District has committed \$50,000. One hundred thousand dollars (\$100,000) is included in the 1989-1991 Executive Budget for the State Water Commission and it is anticipated that an additional \$100,000 will be available from the Garrison Diversion Conservancy District. Mr. Krenz said that up to \$100,000 may also be available through the U.S. Bureau of Reclamation for the 1989-1991 biennium, but the Bureau officials have indicated they want to participate by reserving the right to fund specific projects rather than pooling their funds with the State Water Commission and the Garrison Diversion Conservancy District. Mr. Krenz said it is important that the Bureau of Reclamation recognize that pooling their funds with

those funds of the State Water Commission, the Garrison Diversion Conservancy District, the North Dakota Water Resources Research Institute, and the other participating parties is intended to effectively accomplish the program objectives on an independent and international basis.

Mr. Krenz indicated that a meeting will be scheduled with the Bureau of Reclamation officials in an effort to confirm their commitment to cost sharing and to discuss the importance of pooling their funds with program participants in order that the character of the program be preserved.

Two study contracts, which are being drafted and which relate directly to the question of Canadian objections, were discussed by Mr. Krenz. The contracts will be forwarded to the principal investigator for each study. He noted each contract contains a provision requiring the investigator to publish an article based on the results of his research in a scientific paper and that the research information be presented at a seminar which will be scheduled next spring.

Commissioner Lardy indicated he had previously expressed reservations relative to proceeding with the study without Canadian participation. He offered his compliments to Mr. Krenz and others responsible for obtaining the Canadian involvement and encouraged the continuation of the Interbasin Water Transfer Studies Program.

Commissioner Lardy expressed concern that if the Bureau of Reclamation cost shares in the program and decided not to pool its funds with the State Water Commission and the Garrison Diversion Conservancy District, the creditability of the program results may be reduced. Commissioner Lardy said it is very important that the State Water Commission encourage the Bureau of Reclamation to participate in cost sharing in the Interbasin Water Transfer Studies Program being coordinated by the North Dakota State Water Commission and pool their funds with those of the participating parties to more effectively meet program objectives.

It was moved by Commissioner Lardy and seconded by Commissioner Narlock that the State Water Commission approve Resolution No. 89-3-431, which encourages the U.S. Bureau of Reclamation to participate in cost sharing in the Interbasin Water Transfer Studies Program being coordinated by the State Water Commission and to pool their funds with those of the program participating parties. SEE APPENDIX "B"

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

Mr. Krenz reported on the Fargo-Grand Forks and Surrounding Area Municipal and Industrial Water Supply Study, authorized as a result of the Garrison Reformulation Act, to analyze the adequacy of 100 cubic feet per second rate of flow in the Red River to meet the needs of the Red River Valley. The Technical Committee has been organized and Mr. Krenz said there has been communication with representatives of the Province of Manitoba who have indicated their interest in becoming involved in the study because of water supply problems encountered last year on the main stem of the Red River. Mr. Krenz said the Technical Committee has scheduled its next meeting for March 30 to review the draft work plan, the existing water use projections and to gather input to update those problems.

Secretary Fahy briefed the Commission members on HCR 3020 being considered by Legislature which would direct the Legislative Council to study interbasin biota transfer. Secretary Fahy explained that passage of HCR 3020 would be a duplication of the Interbasin Water Transfer Studies Program, which is an ongoing independent, international research program dedicated to removing Canadian objections. Involving the Legislative Council in a similar study could be in violation of the requirement contained in the Final Report of the Garrison Diversion Unit Commission recommending that the baseline survey be the responsibility of an independent, international organization not affiliated with the Governments of the United States and Canada.

SOUTHWEST PIPELINE PROJECT PRESENTATION BY WEST RIVER
JOINT BOARD OF ITS STUDY OF
INTEGRATION OF THE RURAL
DISTRIBUTION SYSTEMS WITH
THE SOUTHWEST PIPELINE PROJECT
(SWC Project No. 1736)

At the October 11, 1988 Commission meeting, representatives of the West River Joint Water Resource Board appeared to discuss a proposal developed and adopted by the West River water groups on July 20, 1988 for the southwest water delivery to im-

prove the management, operation and efficiency of the project and to enhance the objective of providing a good quality and quantity of water for all of the people in southwestern North Dakota. One of the issues addressed was the integration of the southwest rural water systems into the main southwest water pipeline, and it was determined a study of this concept be conducted at an approximate study cost of \$6,000. The West River Joint Board

agreed to fund 50 percent of the study costs, and a request was presented for the Commission's consideration to retain Bartlett and West/Boyle Engineering to conduct the study and that the State Water Commission fund the remaining 50 percent of the study costs.

At the October 11, 1988 meeting, the Commission members approved the request of the West River Joint Board to retain Bartlett and West/Boyle Engineering to conduct a study of the concept of integrating the rural water delivery systems into the Southwest Pipeline Project and approved cost sharing in 50 percent of the study costs, not to exceed \$3,000.

Representative Herb Urlacher, District 38, appeared before the State Water Commission and indicated a study of the integration of the rural water systems into the Southwest Pipeline Project has been completed. The Final Report, dated February 23, 1989, was distributed to the Commission members for their review and comments. Representative Urlacher discussed HB 1392 currently being considered by the Legislature which would authorize the State Water Commission to investigate integration of the southwest rural water systems into the Southwest Pipeline Project and if savings and advantages are determined to exist plans should proceed to construct the Southwest Pipeline Project and rural water delivery systems as one project.

Bruce McCollom, Project Manager for Bartlett and West/Boyle Engineering, presented a detailed summary of the study results of the integration of rural water distribution systems into the Southwest Pipeline Project, which was performed for the West River Joint Water Resource Board with the approval of the State Water Commission. Mr. McCollom discussed background information for the Southwest Pipeline Project and explained the procedure involved for the study.

Joseph Steier said he is a member of the Southwest Water Co-Op, the West River Joint Powers Water Resource Board, and is Chairman of the Slope County Water Resource Board, and believes this involvement indicates his concern and interest in water management and problems. Mr. Steier said he is very proud of his gold shovel which broke the ground for the Southwest Pipeline Project and said he hopes "with the Good Lord willing that some day he will be able to participate in the Southwest Pipeline Project completion ceremony." Mr. Steier urged the State Water Commission to look favorably upon the integration proposal.

Orville Moe, Chairman of the Golden Valley Water Resource Board, indicated he speaks for the

Board and for most of the people in the southwest counties of the need for good quality and quantity water. He said the integration proposal strengthens their hope that some day this will become a reality.

Alfred Underdahl, Chairman of the West River Joint Powers Board, indicated the Board is unified in its support of the integration of the rural water distribution system into the Southwest Pipeline Project and stated that one system would be more efficient in cost savings. Mr. Underdahl reiterated the need for water in the southwestern part of the state and said that because of the drought last year many of the people had to haul water for their cattle. He reported that to date there is very little snow cover and there may be sufficient runoff to fill some of the dugouts but not the creeks.

Loren Myron, Chairman of the SBD Rural Water Co-Op and the Southwest Pipeline Project Advisory Board Chairman, displayed a jug of brown water representing the water in his area and indicated it is his hope that some day he will be able to appear before the State Water Commission with a jug of white Garrison water. Mr. Myron noted that the study results indicate the integration of the Stark-Billings-Dunn Rural Water System into the Southwest Pipeline Project will save approximately \$2 million and said he supports the integration of the three rural water distribution systems into the main pipeline. He urged the State Water Commission to look favorably at this proposal.

Willie Mastel, a member of the West River Supply District from Dickinson, reiterated the District's concurrence with the integrated study and said a fear they want to share is that "we want this pipeline to become a reality and not be blamed in our part of the state for having the pipeline terminated in the Dickinson city limits."

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

David Sprynczynatyk, Director of Engineering for the State Water Commission, stated 100 applications have been received requesting MR&I Water Supply

requesting MR&I Water Supply Program funding. Of the 100 applications, 5 projects are in the design and construction phase and 4 of those projects are actively underway. Approximately 25 percent of the applications are in various stages of the feasibility study phase.

Mr. Sprynczynatyk said it is becoming increasingly apparent that the \$200 million MR&I Water Supply Program appropriation will be inadequate to meet the water supply needs of the state. Under the terms of the Garrison

Diversion Reformulation Act, water supply project costs eligible for grant funds include: construction, engineering, legal, right-of-way and administration. Mr. Sprynczynatyk said that in an effort to conserve MR&I Water Supply Program funding, it is recommended that the sponsoring entities administrative costs associated with the development of any specific MR&I project be considered non-eligible for grant funding through the MR&I Program. This policy recommendation was presented to the Garrison Diversion Conservancy District Executive Board and was approved on March 3, 1989.

It was moved by Commissioner Byerly and seconded by Commissioner Rudel that the State Water Commission approve the following water supply projects costs as eligible for MR&I Water Supply Program grant funds: construction, engineering, right-of-way and legal.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Rudel, Spaeth, Vogel, and Chairman Sinner 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
FUNDING FOR ENGLEVALE RURAL
WATER PROJECT DESIGN AND
CONSTRUCTION PHASE
(SWC Project No. 237-3)

Randall Binegar, MR&I Water Supply Program Coordinator, presented a request from the Ransom County Water Resource Board for the Commission's consideration to grant MR&I Water Supply Program funds for the design and construction phase of the Englevale Rural Water Project.

The project consists of the construction of a water supply well, water storage pressure system, and pipeline supply system for the unincorporated city of Englevale. The water supply for the community of Englevale is currently provided through individual wells. Based upon test hole data compiled by the State Water Commission, the aquifer underlying Englevale is very shallow and during the irrigation period the aquifer water level declines and wells within the city go dry. The proposed project would provide an adequate water supply for human consumption to 12 water users affected by low water levels in their individual wells.

Mr. Binegar indicated the project sponsor for the proposed project is the Ransom County Water Resource District. The Board completed the feasibility

study for the Englevale Rural Water Project without the use of MR&I Program funding. The design and construction costs for the Englevale Rural Water Project are estimated at \$93,000, and the project is consistent with the requirements of the MR&I Program.

It was the recommendation of the State Engineer that the State Water Commission approve MR&I Program funds in the amount of \$69,750 (75 percent of \$93,000) for the design and construction phase of the project.

Ken Stroh, Chairman of the Ransom County Water Resource Board, and Jim Lyons, Vice Chairman of the Board, appeared before the Commission to offer further information on the Englevale Rural Water Project and stated the irrigators will be contacted to assist with funding of the local share.

It was moved by Commissioner Lardy and seconded by Commissioner Gust that the State Water Commission approve MR&I Water Supply Program funds in the amount of \$69,750 for the design and construction phase costs for the Englevale Rural Water Project, contingent upon the availability of funds.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Rudel, Spaeth, Vogel, and Chairman Sinner voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

Consideration of a request by the Ransom County Water Resource District for State Water Commission participation in financing the local share of the costs of this project is discussed on page 19 of these minutes.

GARRISON DIVERSION PROJECT CONSIDERATION OF REQUEST FOR
MR&I WATER SUPPLY PROGRAM
FUNDING FOR GOLDEN LAKE RESORT
WATER SUPPLY PROJECT DESIGN AND
CONSTRUCTION PHASE
(SWC Project No. 237-20)

A request was presented for the Commission's consideration to grant MR&I Water Supply Program funds for the Golden Lake Resort Water Supply Project design and construction phase.

Randall Binegar, MR&I Water Supply Program Coordinator, said the proposed project consists of the construction of a water pipeline, water storage facility, and pressure system. The purpose of the project is to provide the Golden Lake Resort and Recreation Area with a satisfactory supply of water. The Golden Lake Recreation Area is currently served by

a single well which is not capable of providing adequate water for the area's use. As a result of the increased use of the recreational area, severe shortages of water have resulted in most years and hauling water to the site is necessary.

Mr. Binegar said the proposed source of a new water supply is the Traill County Rural Water Users. The project would tie a one and one-half inch PVC water main into the Traill County Rural Water line which is approximately one mile east of the recreation area. Tying into the system would provide the flows necessary for existing facilities and also provide potential for future facilities. A storage reservoir and pressure pump would also be installed.

The design and construction phase costs of the project are estimated to be \$58,000, and Mr. Binegar said the project is consistent with the requirements of the MR&I Program.

It was the recommendation of the State Engineer that the State Water Commission grant MR&I Water Supply Program funds in the amount of \$43,500 (75 percent of \$58,000) for the design and construction phase of the project.

Donald Elston and Lee Nerdahl, representing the Steele County Park District, were present to discuss the Golden Lake Resort Water Project. Mr. Elston said a pumping system was installed in Golden Lake to improve the water quality and the Park District is hopeful that the results of a channel cleanout study completed by the State Water Commission will allow for further improvement of the water quality. The increased use of the recreational area has caused a severe water shortage, and Mr. Elston emphasized the need for rural water.

It was moved by Commissioner Lardy and seconded by Commissioner Gust that the State Water Commission approve MR&I Water Supply Program funds in the amount of \$43,500 for the design and construction phase costs for the Golden Lake Resort Supply Project, contingent upon the availability of funds.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Rudel, Spaeth, Vogel, and Chairman Sinner 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
FUNDING FOR HANKINSON WATER
SUPPLY PROJECT DESIGN AND
CONSTRUCTION PHASE
(SWC Project No. 237-22)

A request was presented for the Commission's consideration to grant MR&I Water Supply Program funds for the Hankinson Water Supply Project design and construction phase costs.

Randall Binegar, MR&I Water Supply Program Coordinator, indicated that the project consists of the construction of a water supply well, water transmission line, and accessories to enhance the water delivery system. The city of Hankinson does not have an adequate water supply system to serve its users and as a result shortages requiring rationing have occurred numerous times in the last decade. Design and construction costs associated with the Hankinson Water Supply Project were estimated at \$611,500, and Mr. Binegar stated the project is consistent with the requirements of the MR&I Program.

It was the recommendation of the State Engineer that the State Water Commission grant MR&I Water Supply Program funds in the amount of \$458,625 (75 percent of \$611,500) for the design and construction phase of the Hankinson Water Supply Project.

James Falk, Mayor of the City of Hankinson, appeared before the State Water Commission to address the project. Mayor Falk indicated the current water supply system was designed and installed in 1950 for usage of approximately 100,000 gallons per day and throughout the years the usage has increased to approximately 300,000 gallons per day. The city is encountering problems with the delivery of water for adequate fire protection and water service to schools, churches and the hospital because of the small water transmission line originally installed. Mayor Falk stated water rationing has been necessary approximately every other year, and he urged the State Water Commission to act favorably on their request for MR&I funding for the design and construction phase of the Hankinson Water Supply Project.

It was moved by Commissioner Lardy and seconded by Commissioner Gust that the State Water Commission approve MR&I Water Supply Program funds in the amount of \$458,625 for the design and construction phase of the Hankinson Water Supply Project, contingent upon the availability of funds.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Rudel, Spaeth, Vogel, and Chairman Sinner 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
FUNDING FOR NEW TOWN WATER
TRANSMISSION LINE PROJECT
DESIGN AND CONSTRUCTION PHASE
(SWC Project No. 237-28)

A request was presented for the Commission's consideration to grant MR&I Water Supply Program funds for the New Town Water Transmission Line Project design and construction phase.

Randall Binegar, MR&I Water Supply Program Coordinator, indicated the city of New Town's water storage limitations have resulted in severe water shortages in recent years and it is necessary for the city to deliver poor quality raw water to the distribution system during periods of high usage. Mr. Binegar said New Town has entered into an agreement with the Fort Berthold Housing Authority, through the Indian Health Service, to construct a 535,000-gallon storage facility in the spring of 1989. The proposed transmission line project consists of the construction of a water supply transmission line between the existing elevated storage reservoir and the new ground storage reservoir to be constructed this spring. The correction of New Town's severe water shortage problem can be realized only through the construction of both the new water storage reservoir and the new transmission line.

Mr. Binegar stated that the proposed project does not include facilities for treatment of the existing water supply. Alternatives to replace the existing water supply for New Town will be considered in the Supplemental Northwest Area Water Supply Study currently being prepared and said the proposed water storage reservoir and transmission line will not be affected by a future change in the source of the New Town water supply.

report and feasibility study for the New Town Transmission Line Project included two alternatives for the transmission line project. Alternative No. 1 provided for a transmission line connecting the new ground storage reservoir, with an existing elevated reservoir, at a total estimated cost of \$144,000. Alternative No. 2 provided for the transmission line described in Alternative No. 1, with the addition of a second transmission line in the south part of town, to provide for increased dependability of the water supply system and improve the fire flow characteristics. The estimated total cost of Alternative No. 2 is \$172,000. Mr. Binegar commented that Alternative No. 1 alone will correct New Town's shortage problem and Alternative No. 2 simply provides for an enhancement of their existing system.

It was recommended by the State Engineer that in an effort to conserve MR&I Water Supply Program funds that the State Water Commission consider granting funds for

Alternative No. 1 in the amount of \$108,000 (75 percent of \$144,000) which is consistent with the requirements of the MR&I Program, for the design and construction phase of Alternative No. 1 of the New Town Transmission Line Project.

Warren Bratvold and Gene Hasby, representing the city of New Town, appeared before the State Water Commission to provide information on the New Town Water Transmission Line Project and to urge the Commission's favorable consideration of funding for the design and construction phase. In an effort to alleviate the water shortage problems, the city of New Town has been working with the Fort Berthold Housing Authority for the construction of a 535,000-gallon storage facility to begin this spring. Mr. Bratvold stressed the importance of the transmission line project for the construction of a water supply transmission line between the existing elevated storage reservoir and the new ground storage reservoir. The city receives its water supply from three wells and Mr. Bratvold stated there has been no indication of weakening in the flow.

It was moved by Commissioner Lardy and seconded by Commissioner Gust that the State Water Commission approve MR&I Water Supply Program funds in the amount of \$108,000 for the design and construction phase of the New Town Transmission Line Project, contingent upon the availability of funds.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Rudel, Spaeth, Vogel, and Chairman Sinner 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 RUGBY WATER TREATMENT
PLANT DESIGN AND CONSTRUCTION
PHASE

(SWC Project No. 237-31)

A request was presented for the Commission's consideration to grant MR&I Water Supply Program funds for the Rugby Water Treatment Project design and construction phase.

Randall Binegar, MR&I Water Supply Program Coordinator, stated this project has been broken down into two phases based on the urgency associated with each phase. Phase 2 of the project involves expanding the existing water treatment plant to provide for increased capacity, at an estimated project cost of \$979,400. Phase 2 of the project is considered less urgent than Phase 1.

Phase 1 of the project consists of grading the existing lime storage and handling facilities of the existing treatment plant. The existing lime storage and handling facilities are designed for the storage and handling of bagged lime. Bagged lime is becoming obsolete in the industry and is being replaced by bulk lime which is more economical. The proposed Phase 1 improvements would convert the lime storage and handling facilities from a bagged lime system to a bulk lime system. The project is considered urgent because bagged lime could become unavailable at any time leaving Rugby without the means of treating their water supply. Design and construction costs associated with Phase 1 of the Rugby Project are estimated at \$250,000. Mr. Binegar stated that the project is consistent with the requirements of the MR&I Program.

It was recommended by the State Engineer that the State Water Commission grant MR&I funds for the design and construction of Phase 1 in an amount not to exceed \$187,500 (75 percent of \$250,000) for the Rugby Water Treatment Project.

David Shelver, Mayor of Rugby; Howard Burns, Rugby City Auditor; and LeRoy Johnson, President of Rugby's City Council, appeared before the State Water Commission to discuss their proposed project and request the Commission's favorable consideration of their funding request.

Mayor Shelver stated the existing lime storage and handling facilities are designed for the storage and handling of bagged lime. The city has been notified bagged lime will no longer be available by fall and will be replaced by bulk lime which is more economical. Mayor Shelver stressed the urgency of the proposed Phase 1, which will consist of upgrading the existing lime storage and handling facilities of the existing water treatment plant in order that the city can properly treat its water. Phase 2 will be considered in the near future and will involve expanding the existing water treatment plant to provide for increased capacity.

It was moved by Commissioner Lardy and seconded by Commissioner Gust that the State Water Commission approve MR&I Water Supply Program funds in the amount of \$187,500 for the design and construction of Phase I of the Rugby Water Treatment Project, contingent upon the availability of funds.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Rudel, Spaeth, Vogel, and Chairman

Sinner voted aye. There were no may votes. The Chairman declared the motion unanimously carried.

GARRISON DIVERSION PROJECT -CONSIDERATION OF REQUEST FOR MR&I WATER SUPPLY PROGRAM FUNDS FOR MINTO WATER SUPPLY PROJECT DESIGN AND CONSTRUCTION PHASE

A request was presented for the Commission's consideration to grant MR&I Water Supply Program funds for the Minto Water Supply Project design and construction phase.

(SWC Project No. 237-7)

Randall Binegar, MR&I Water Supply Program Coordinator, indicated the Minto Water Supply Project consists of replacing Minto's threatened water supply source, which is currently dependent upon the deteriorating Minto Dam which could fail at any time leaving the city without a water supply. Mr. Binegar noted the quality of the existing supply source deteriorates substantially during certain periods of the year.

city The of Minto considering two alternatives for replacing the existing water Alternative No. 1 consists of a new water supply main between the cities of Grafton and Minto, a new ground storage reservoir, and a trihalomethane water treatment and pumping plant. Mr. Binegar stated the final determination regarding the need for trihalomethane treatment has not been made. If it is determined that trihalomethane treatment is required the total project costs are estimated at \$883,000. If trihalomethane treatment is not necessary, the total project costs are estimated at \$774,000. Negotiations with the city of Grafton continue on the purchase price of water.

Alternative No. 2 consists of the development of a well field in the Fordville Aquifer, a pipeline to deliver raw water to Minto, upgrading the existing water treatment plant, and an underground concrete water storage reservoir. Mr. Binegar said the city of Minto prefers this alternative to the Grafton alternative, however, the total estimated project costs for Alternative No. 2 are \$1,152,000, or \$269,000 more than Alternative No. 1 which includes trihalomethane treatment.

Mr. Binegar stated that upon evaluating the two alternatives, Alternative No. 1 provides reasonably comparable water at only slightly higher costs to the user, but at a much reduced total project cost.

It was the recommendation of the State Engineer that because of the great demand for MR&I Water Supply Program funds and the better cost/benefit ratio of Alternative No. 1, that the State Water Commission grant MR&I Water Supply Program funds in the amount of \$662,250 (75 percent of \$883,000) for the design and construction phase of the Minto project, contingent upon the determination by the State Health Department that trihalomethane treatment is necessary. It was also recommended by the State Engineer that in the event trihalomethane treatment is not determined to be necessary, the State Water Commission then grant MR&I Water Supply Program funds in the amount of \$580,500 (75 percent of \$774,000) for the design and construction phase of the Minto project. The determination to proceed with Alternative No. 1 or No. 2 will be made by the city of Minto.

John Schanilec, Mayor of Minto, and Dean Flanders, city businessman, were present to discuss the proposed Minto Water Supply Project.

Mayor Schanilec stated the city of Minto prefers Alternative No. 2 because in approximately 15 years the project's debt will be retired and plans can proceed on the proposed water treatment plant. Mayor Schanilec said the city has been negotiating with the city of Grafton regarding Alternative No. 1 for the purchase of water and noted the trihalomethane problem is a legitimate concern and is very essential for treatment of the river water.

Dean Flanders, city businessman and a concerned parent, indicated there is a real concern not only for the source of supply but also for good quality water. Although the city's preferred Alternative No. 2 project costs are higher, Mr. Flanders said this alternative provides more benefits than Alternative No. 1. He said the city is concerned about possible EPA standard changes in the future.

Commissioner Narlock stated he is familiar with Minto's water problems and said there is a real need for trihalomethane treatment of the river water and stressed the need for good quality and quantity water. Commissioner Narlock said he feels the city should be allowed to determine its source of water supply and that the State Water Commission should consider granting MR&I Water Supply Program funds for the greater amount recommended by the State Engineer for Alternative No. 1, which would be \$662,250.

It was moved by Commissioner Narlock and by Commissioner Lardy that the State Water Commission approve MR&I Water Supply Program funds in an amount not to exceed \$662,250 for the design and construction phase of the Minto Water Supply Project and that the city of Minto be allowed to determine the source of water supply.

Commissioner Lardy commented that in discussions regarding the water treatment plant concept for the Southwest Pipeline Project, one of the things that was stressed to the State Water Commission was the value of having a single treatment plant for accommodating changes in EPA standards. Commissioner Lardy said it may be significantly more costly to update one treatment plant that serves a small community than it would be to update a plant that serves several communities.

since this was her first Commission meeting she feels she does not have sufficient background information on this subject and wished to abstain from voting.

Commissioners Narlock, Spaeth and Vogel voted aye. Commissioners Byerly, Gust, Lardy, and Chairman Sinner voted nay. Commissioner Kramer abstained from voting. The recorded vote was 3 ayes; 4 nays; and 1 abstain. The Chairman declared the motion failed.

It was moved by Commissioner Gust and seconded by Commissioner Byerly that the State Water Commission approve MR&I Water Supply Program funds for the design and construction phase for the Minto Water Supply Project in an amount not to exceed \$662,250 (75 percent of \$883,000), contingent upon the determination by the State Health Department that trihalomethane treatment is necessary. In the event that the State Health Department determines trihalomethane treatment is not necessary, MR&I Water Supply Program funds shall be approved for the design and construction phase for the Minto Water Supply Project in an amount not to exceed \$580,500 (75 percent of \$774,000). determination to proceed with Alternative No. 1 or Alternative No. 2 shall be made by the city of Minto.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Rudel, Spaeth, Vogel, and Chairman Sinner voted aye. There were no nay votes. The Chairman declared the motion unanimously carried.

Governor Sinner leaves the meeting. The chair is assumed by Commissioner Vogel.

GARRISON DIVERSION PROJECT CONSIDERATION OF REQUEST FROM
RANSOM COUNTY WATER RESOURCE
BOARD FOR COST PARTICIPATION
IN ENGLEVALE RURAL WATER
SUPPLY PROJECT
(SWC Project No. 237-3)

David Sprynczynatyk again explained the Englevale Rural Water Supply Project. A request which was received from the project's sponsor, the Ransom County Water Resource District, was presented for the Commission's consideration for

cost participation in the non-federal share of the costs associated with the Englevale Rural Water Supply Project. The estimated total project cost is \$96,000. The Ransom County Water Resource Board's responsibility is the non-federal share of the costs, or \$26,250. Mr. Sprynczynatyk said 50 percent of the non-federal share, or \$13,125, is eligible for cost participation through the State Water Commission MR&I allocation of the Resources Trust Fund.

It was the recommendation of the State Engineer that the State Water Commission provide a 50 percent grant through the MR&I allocation of the Resources Trust Fund for the non-federal share of the Englevale Rural Water Project not to exceed \$13,125, contingent upon the availability of funds.

Kenneth Stroh, Chairman of the Ransom County Water Resource Board, explained that in Ransom County one mill brings in approximately \$10,000 annually which limits the county as to their local participation. Mr. Stroh indicated that the local irrigators will be approached relative to cost participation in the local share of the project.

It was moved by Commissioner Gust and seconded by Commissioner Lardy that the State Water Commission approve a 50 percent grant through the MR&I allocation of the Resources Trust Fund for the non-federal share of the Englevale Rural Water Project, in an amount not to exceed \$13,125. This motion shall be contingent upon the availability of funds.

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

CONSIDERATION OF REQUEST FROM WELLS COUNTY WATER RESOURCE DISTRICT FOR COST PARTICIPATION IN WATER SUPPLY INVESTIGATION (SWC Project No. 727) At the July 10, 1988 meeting, the State Water Commission approved a request from the Wells County Water Resource District, made in behalf of the Wells County Rural Water Association, to cost share in a water supply

investigation. The purpose of the investigation was to determine the availability and chemical quality of water from the Manfred Aquifer to serve the needs of a rural water system.

Milton Lindvig, Director of the State Water Commission's Hydrology Division, indicated the results of the investigation show that the Manfred Aquifer cannot supply the long-term needs of the rural water system.

During test drilling last fall, Mr. Lindvig said an aquifer was identified about two miles west of the Association's well field. Mr. Lindvig explained the characteristics of the aquifer and said all indications to this point are that this aquifer has the potential of providing a satisfactory water supply for the rural water system. Mr. Lindvig stated that before any capital investment is made to develop it as a source of supply an aquifer test must be conducted to provide information necessary to determine whether the aquifer could supply the needs of the rural water system. An aquifer test involves the pumping of a production well at a constant rate for a specific period of time while measuring water level changes in nearby observation wells. From this information one can determine individual well yields, boundary conditions, leakage and likely water quality changes that may occur from development.

A request was received from the Wells County Water Resource District, on behalf of the Wells County Rural Water Association, and presented for the Commission's consideration for assistance in undertaking a second phase of the investigation to identify a water supply by sharing in the cost of an aquifer test and related work. Mr. Lindvig indicated the total project costs are estimated at \$34,410 and the request before the Commission is to cost share in 50 percent of the costs in an amount of \$17,205. The Wells County Water Resource District has agreed to cost share in the remaining 50 percent of the costs.

Richard Leintz, representing the Wells County Water Resource Board, commented on the project and requested the Commission's favorable consideration for assistance in undertaking the second phase of the investigation and to cost share in 50 percent of the project costs.

It was the recommendation of the State Engineer that in order to complete the process of identifying a dependable source of good quality water to supply the needs of the rural water system the proposed second phase of the investigation must be completed, and that the State Water Commission approve assistance in this investigation and cost share in 50 percent of the project costs not to exceed \$17,205.

> It was moved by Commissioner Lardy and seconded by Commissioner Gust that the State Water Commission approve the request of the Wells County Water Resource District for assistance in undertaking a second phase of the water supply investigation to identify a dependable source of good quality water to supply the needs of the rural system and to cost share in 50 percent of the project's costs in an amount not to exceed \$17,205. This motion shall be contingent upon the availability of funds.

Commissioners Byerly, Gust, Kramer, Lardy, Narlock, Spaeth, and Chairman Vogel voted aye. There were no may votes. The Chairman declared the motion unanimously carried.

### CONSIDERATION OF AGENCY FINANCIAL STATEMENT

Matt Emerson, Director of the State Water Commission's Administrative Division, the Program Budget Expenditures, dated January 31, 1989, and the Program/Projects Authorized, dated February 28, 1989.

Secretary Fahy said the State Commission will present testimony before the Senate Appropriations Committee on March 10, 1989.

> It was moved by Commissioner Byerly, seconded by Commissioner Spaeth, and unanimously carried, that the State Water Commission financial report be approved.

1989 LEGISLATIVE REPORT

The State Engineer and staff members responded to questions concerning various bills in the Legislature.

> It was moved by Commissioner Lardy, seconded by Commissioner Narlock, and unanimously carried, that the State Water Commission meeting adjourn at 11:30 a.m.

> > Governor-Chairman

SEAL

ATTEST:

Vernon Fahy

State Engineer and Secretary

# NORTH DAKOTA STATE WATER COMMISSION

REGISTER

ATTENDANCE AT State Sta	ter Commission Meeting
	PLACE Brimaret 1)2
	PROJECT NO.

Your Name	Your Address	Who do you Represent? (Or Occupation)	
LAUID Sprynogwald	Bisnarek	Stare Water Commission	
Al Underlike	Helman	went River Sout Wat Reserve	
Loleb Marker	Taylor, M. J.	West Reum gaint B.	
Bruce F McCollon	Bismarck	BW/BEC Engineers	
RONALD FRENCH	GRAND FORKS	KBM, INC GNGINGGRING	
CHARLES YELL	GRAND FORKS	KBM INC. ENGINEERING	
John Schaniler	Minto, n.O.	CITY of MINTO, Mayor	
Vernon Lemke	MOTT N.D	Hettware Co. W. R.D.	
Nape-Christenson		3 rand Co WRD.	
Willie MAKE		West from Sugge Diel	
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Jim Tyon	Liston	Roman Co. W.S.D.	
	Lisoon	11 11 1-	
Richard Leine	Harvey	Welle co. W. R. D.	
TAMES M FAIR		City of Workinson	

## NORTH DAKOTA STATE WATER COMMISSION

## REGISTER

ATTENDANCE AT State 3	latir ammicion Materia
DATE March 9,1989	PLACE Bumarely MA
	PROJECT NO.

Your Name	Your Address	Who do you Represent? (Or Occupation)
Dan weekell	West Fargo	S.E. CASS WRD
Walles Abol	Bismarck	N.O. S. Dept. Health
JEROLD R. BACKES	BISMARCIC	BW/BEC
JOSEPH M. BICHLER	BEMARK	BW/BEC
Jim Bilmon	Bismuc X	Lowis : Clark Begional Council
Warran Brotvold	Newsown	city of New Yours.
K. Jan Hasly	New Foron	city of New Town
Karen Kreil	Bismarck	US Fisht Wildlige Service
Leonard Jacobs	Reeder	SW Water Coop
Orville K. Mac	Beach	Lolder Valla Water BD
Joseph of tein	Reeder	SM Mater Co-of.
GEME KNEMZ	Bismarck	State Water Commission
Melisso Huler	Bismanch	11 11 te
M'Le Duyer	Bisa	NO Water Users
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. 0	/	Will Co. 1000

## NORTH DAKOTA STATE WATER COMMISSION

## REGISTER

ATTEN	DANC	E AT	State	Dater Sumie	uin Muteria
DATE_	M	areh	9.1989	PLACE_Bi	march not
				PR	OJECT NO

Your Name	Your Address	Who do you Represent? (Or Occupation)
( David Slehe	1107 3.d Ave St Rugby 58968	Mayor
Solaym Johnson	23 County Roal Rufy	Pres Cily Court.
Howar Bruns	223-S.MAIN	city-Auditor-Rucby
Sing Stant	Bismarch	North Partial Carelland
Hamaral Sour	Bismarck	Office of Intergovernmental Cherico
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## Background Report

# INTERBASIN WATER TRANSFER STUDIES PROGRAM (BIOTA TRANSFER)

- Initiated by Governor Sinner on November 17, 1986.
- Program Objective: to undertake a research program designed to overcome Canadian objections to the importation of Missouri River water into the Hudson Bay drainage system (Red & Souris Rivers) via the Garrison Diversion Project.
- Program Rationale: Stated simply, North Dakota's objective is to remove Canadian objections by discovering new knowledge where it is now lacking, by conclusively refuting concepts based on misinformation, and by developing mitigation measures where technical and scientific objections cannot be overcome.
- Program Coordinator: responsibility for coordination and management of the Biota Transfer program was given to Gene Krenz, Director, Division of Planning, State Water Commission.
- Program Administration: program being administered by Dr. Jay Leitch
  of the Water Resources Research Institute under terms of a threeway contract between the State Water Commission, the Garrison
  Conservancy District and the Water Resources Research Institute.
- Program Budget:

Current Biennium: \$100,000. (\$50,000., Garrison Conservancy District; \$50,000., State Water Commission.)

1989-1991 Biennium: (Executive Budget includes \$100,000 for SWC budget; \$100,000 anticipated from Conservancy District; and up to \$100,000 may be available through the U. S. Bureau of Reclamation.)

- Research Currently Underway: (Scheduled for completion Fall of 1989).
  - Evaluation of Direct Filtration for Prevention of Biota Transfer in the Hudson Bay Drainage, Dr. Charles Turner, Associate Professor, Civil Engineering, UND, (\$32,314).
  - Fish Transfer Between the Missouri and Hudson Bay Basins: A Review of Fish Distributional Ecology and a Technical Analysis of Basin Transfer Issues, Dr. Rodney Sayler, Institute for Ecological Studies, UND, (\$14,000.)
  - Review of Interbasin Water Transfers with Special Attention to Biota Transfer, G. Padmanabhan, Associate Professor, Civil

## Engineering, NDSU, (\$15.000.)

#### New Studies:

- Assessment of Effect of Salinity on Dispersal of Rainbow Smelt and Carp in Waters Associated with the Garrison Diversion Unit, Dr. John Peterka, Department of Zoology, NDSU, (\$21,750.) (Scheduled for completion Spring 1991.)
- Study of the Stonecat Noturus Flavus as a Model of an Invasive Fish Species in Manitoba, Dr. Kenneth W. Stewart, Department of Zoology, University of Manitoba, (\$37,350.) (Scheduled for completion in 1992.)

### • Contracts being written:

- A Comprehensive Smelt Study, R. A. Bodaly, Dept. of Zoology, University of Manitoba and Dr. William G. Franzin, Dept. of Fisheries and Oceans, Freshwater Institute.
- A Survey of Polypodium hydriforme in eggs of Paddlefish and Shovelnose Sturgeon in Mainstream Reservoirs of the Upper Missouri River, Including Double Immunodiffusion Analysis of Blood for Antibodies, with Notes on Some Haematological Parameters, Dr. Harry Holloway, Jr., Dept. of Biology, UND.
- Oversight Committee: The Committee consists of agency heads and others who have an interest in the biota transfer issue and who exercise some control over how agency research dollars are expended.

William L. Guy, Chairman
Gene Christianson, State Health Department
C. Emerson Murry, Garrison Conservancy District
Dale Henegar, Game and Fish Department
Dr. Craig Schnell, Water Resources Research Institute, NDSU
Neil Stessman, Bureau of Reclamation
Dr. Jay Leitch, NDSU
Galen Buterbaugh, US Fish and Wildlife Service
Vern Fahy, State Water Commission.

• Technical Advisory Team: This Committee is responsible for the actual selection of research projects to be funded from a pool of research proposals.

Dr. Jay Leitch, Chairman, NDSU, Water Resources Research Inst. Gene Krenz, Co-Chairman, State Water Commission

Dr. Gary Clambey, NDSU, Zoology Department

Dr. Charles Turner, UND, Engineering

Dr. Gerald VanAmburg, Biology Dept., Moorhead State U.

Dr. Rodney Saylor, UND Environmental Center

Dr. Charles Bigelow, U. of Manitoba, Dean of Graduate Research

Dr. Frank Beaver, UND, Asst. Dir. Water Resources Research Inst.

ENCOURAGING U.S. BUREAU OF RECLAMATION TO
PARTICIPATE IN COST SHARING IN THE INTERBASIN WATER TRANSFER
STUDIES PROGRAM BEING COORDINATED BY THE NORTH DAKOTA STATE WATER
COMMISSION AND TO "POOL" THEIR FUNDS WITH THOSE OF THE STATE
WATER COMMISSION, GARRISON DIVERSION CONSERVANCY DISTRICT,
NORTH DAKOTA WATER RESOURCES RESEARCH INSTITUTE,
AND OTHER PARTICIPATING PARTIES

WHEREAS, the continued economic growth in the Souris and Red River Basins is contingent upon an assured supply of good quality water; and

WHEREAS, during periods of drought and other low flow conditions, a dependable supply of good quality water is available only through the transfer of Missouri River water to the Hudson Bay drainage; and

WHEREAS, concerns regarding the potential introduction of certain undesirable fish species, pathogens and parasites into Canadian waters through the features of the Garrison Diversion Project have caused Canadian interests to object to North Dakota's efforts to effect such a transfer; and

WHEREAS, the final report of the Garrison Diversion Unit Commission (December, 1984) stipulates that a baseline survey of species and pathogens in waters of the Hudson Bay be undertaken and that "this survey should be the responsibility of an independent, international organization not affiliated with Governments of the United States or Canada;" and

WHEREAS, the Interbasin Water Transfer Studies Program, an ongoing independent, international research program dedicated to removing Canadian objections, is underway; and

WHEREAS, it is imperative that the "independent" and "international" character of the program be preserved.

NOW, THEREFORE, BE IT RESOLVED, that the North Dakota State Water Commission, Governor George A. Sinner, its Chairman, and the State Engineer, at a meeting held on March 9, 1989, do hereby request that the U. S. Bureau of Reclamation seek the necessary approval needed to enable them to "pool" their funds with others to more effectively meet program objectives.

For the North Dakota State Water Commission:

George A. Alnner Governor-Chairman

SEAL

ATTEST:

Vernon Fany

State Engineer and Secretary