

MINUTES

North Dakota State Water Commission Telephone Conference Call Meeting Bismarck, North Dakota

April 22, 2003

The North Dakota State Water Commission held a telephone conference call meeting in the Governor's conference room, State Capitol, Bismarck, North Dakota, on April 22, 2003. Governor-Chairman, John Hoeven, called the meeting to order at 9:30 AM, and requested State Engineer, and Chief Engineer-Secretary, Dale L. Frink, to call the roll. Governor Hoeven announced a quorum was present.

STATE WATER COMMISSION MEMBERS PRESENT:

Governor John Hoeven, Chairman
Roger Johnson, Commissioner, Department of Agriculture, Bismarck
Charles Halcrow, Member from Drayton
Larry Hanson, Member from Williston
Elmer Hillesland, Member from Grand Forks
Curtis Hofstad, Member from Starkweather
Jack Olin, Member from Dickinson
Harley Swenson, Member from Bismarck
Robert Thompson, Member from Page
Dale L. Frink, State Engineer, and Chief Engineer-Secretary,
North Dakota State Water Commission, Bismarck

OTHERS PRESENT:

Doug Friez, North Dakota Division of Emergency Management, Bismarck
John Coughlin, President, Coughlin Construction, Minot
Senator Tom Trenbeath - District 10, Cavalier
Representative David Monson - District 10, Osnabrock
Representative Wayne Tieman - District 10, Cavalier
William Hardy, Cavalier County Water Resource District, Walhalla
Robert Blake, Cavalier County Water Resource District, Wales
Neil Romfo, Cavalier County Commission, Langdon
Matthew Sagsveen, Assistant Attorney General, Bismarck
Blake Nicholson, Associated Press, Bismarck
State Water Commission Staff

The attendance register is on file with the official minutes.

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

CONSIDERATION OF AGENDA

A request for state cost share participation for the Karlsruhe aquifer denitrification study was included on the agenda.

NORTHWEST AREA WATER SUPPLY PROJECT STATUS (SWC Project No. 237-04)

James Lennington, project manager for the Northwest Area Water Supply (NAWS) project, provided the following status report:

Contract 2-1A - First Main Transmission Line: The contractor, S. J. Louis Construction, St. Cloud, Minnesota, resumed work on contract 2-1A on April 22, 2003. The North Dakota Department of Transportation granted permission for the contractor to excavate the west end of the U.S. Highway 83 bored and cased crossing. The west end of the casing pipe is not in alignment and the contractor will attempt to straighten it. The contractor will then install pipe in the casing, and install approximately 10,000 feet of pipe remaining under contract 2-1A. The completion date for this work is July 15, 2003.

A draft of the sewer study undertaken to determine the impact of the NAWS pipeline on future sewer developments in southwest Minot is anticipated in the near future. The results of the study will be provided to concerned landowners in the area, and provide information relative to possible future condemnation appeals.

Project Intake: Planning and design work continues on the Lake Sakakawea intake. A soils exploration drilling rig bored holes along the alignment of the intake pipe and building location for the separate intake option. Equivalent level cost estimates are currently being prepared for the separate intake and the Snake Creek pumping plant intake options.

Pretreated Water Reservoir: Plans and specifications have been drafted for the pretreated water reservoir south of Minot, which will be submitted to the Bureau of Reclamation and the North Dakota Department of Health. An option to purchase approximately 10 acres of land for this reservoir has been secured. The "poured in place" reinforced concrete reservoir will have a volume of approximately 3 million gallons of water in two separate halves. Although the reservoir is not currently planned for construction, having the plans and specifications in place and the land acquired will allow this phase of the project to move forward should funding become available.

Pressure Reducing Valve (PRV) Site for Contract 2-1B: The pressure reducing valve (PRV) vault included in contract 2-1B requires a structure 30 feet long by 18 feet wide that will be located adjacent to U.S. Highway 83 near the bored and cased highway crossing. Approximately 1.5 acres are

required for the structure and appurtenances, which the contractor will need access to by the end of April, 2003. Because agreement has not been reached with the landowner, condemnation proceedings have been initiated to obtain this parcel of land and the pipeline easement across this property.

**NORTHWEST AREA WATER
SUPPLY PROJECT -
AUTHORIZE STATE ENGINEER
TO AWARD CONTRACT 2-1B TO
COUGHLIN CONSTRUCTION,
MINOT, ND
(SWC Project No. 237-04)**

Bids were opened for Northwest Area Water Supply project contract 2-1B on March 20, 2003. The contract documents specify that the State Water Commission has 90 days to award the contract after the bid opening, which occurs on June 18, 2003. The contract is for approximately 9.5 miles of 36-inch

and 30-inch main transmission pipeline and includes a pressure reducing valve station.

James Lennington stated there were 8 bids received from contractors. The apparent low bid received was \$4,711,424.98 from Coughlin Construction, Minot, ND.

Three alternate items were included in the bid including "poured in place" combination air vacuum/air release valve vaults in the event high water tables are encountered and a prefabricated option for the pressure reducing valve (PRV) station. The prefabricated PRV alternate in the apparent low bid is \$335,621.91 versus \$335,974.56 for a "built on site" PRV station in the base bid, a difference of \$352.65. It has been elected to go with the "built on site" PRV station. All of the contractors, with the exception of one contractor, included ductile iron pipe in their bids. Although the Bureau of Reclamation approved the State Water Commission's bid specifications for the project, which permit the use of ductile iron pipe or corrosion resistant steel pipe, Secretary Frink informed the Commission members that the Bureau has received a protest from Northwest Pipe Company stating that the ductile iron pipe specified by the Commission does not satisfy the minimum corrosion prevention criteria of the Bureau. The protest concludes that the lowest bidder for contract 2-1B used ductile iron pipe which does not conform to the Bureau's criteria.

The contract documents allow the State Water Commission to select the most advantageous bid. The project engineer has reviewed the bids received and has recommended the award of contract 2-1B to Coughlin Construction, Minot, ND. A combination of MR&I and local funds will be used for this contract. The contract will require approval by the Bureau of Reclamation, and the award of the contract and notice to proceed are contingent on the completion of the contract documents and a legal review. The time for completion is specified as no later than November 1, 2003.

It was the recommendation of the State Engineer that the State Water Commission authorize the State Engineer to award Northwest Area Water Supply project contract 2-1B to Coughlin Construction, Minot, ND, contingent upon a legal review of the contract documents by the state, and written concurrence by the Bureau of Reclamation that the contract prerequisites have been satisfied.

It was moved by Commissioner Swenson and seconded by Commissioner Johnson that the State Water Commission authorize the State Engineer to award Northwest Area Water Supply project contract 2-1B to Coughlin Construction, Minot, ND, contingent upon a legal review of the contract documents by the state, and written concurrence by the Bureau of Reclamation that the contract prerequisites have been satisfied.

Commissioners Halcrow, Hanson, Hillesland, Hofstad, Johnson, Olin, Swenson, Thompson, and Governor Hoeven voted aye. There were no nay votes. Governor Hoeven announced the motion unanimously carried.

APPROVAL OF STATE COST SHARE PARTICIPATION FOR EMERGENCY REPAIRS AND CONSULTING ENGINEERING SERVICES AT MOUNT CARMEL DAM IN CAVALIER COUNTY (SWC Project No. 1346)

Mount Carmel Dam in Cavalier county was built in 1970 for the purposes of recreation and water supply. The dam is located northeast of the city of Langdon and is owned by the Cavalier County Water Resource District. The earthen embankment is

46 feet high and 670 feet in length, and is currently classified as a medium hazard dam, which would require the dam to pass a 0.5 Probable Maximum Precipitation event without overtopping. The State Water Commission approved state cost share participation of approximately \$85,000 of the \$323,000 construction project.

In 1995, the Mount Carmel Dam structure was modified. The total project cost of the modifications was \$870,074, of which the State Water Commission approved a 50 percent state cost share participation in the amount of \$435,037 (\$339,995 from the Contract Fund and the remainder as in-kind services). The modifications included blocking off the 66-inch diameter principal spillway pipe, widening and raising the emergency spillway, and constructing a concrete chute spillway with a low-level drawdown. The embankment crest and downstream slope were raised 3.5 feet.

On March 29, 2003, a high school student taking photographs for a class discovered that Mount Carmel Dam was failing. Water was found to be flowing uncontrollably under the chute spillway

and exiting out of a large void at the toe of the dam. Federal, state, and local emergency actions kept the dam from completely failing, but the dam will require a major restoration. The reservoir serves as the water supply source for nearly 5,000 people.

Todd Sando, Assistant State Engineer, explained the emergency efforts which included the construction of an emergency earthen coffer dam around the chute spillway. Work began immediately on unblocking the old 66-inch diameter reinforced concrete principal spillway pipe to lower the water level in the reservoir. A sheetpile wall was constructed around the drop inlet to more permanently cut off the flow of water under the spillway and to keep flood events from passing through and under the chute spillway. Mr. Sando stated that the sheetpile wall is not intended as a permanent repair, but it should keep the dam from failing and allow large flood events to pass through the emergency spillway so that the dam is not overtopped.

In an effort to determine the failure cause of Mount Carmel Dam, Secretary Frink recommended that the State Water Commission contract with a consulting engineer experienced with dam design to perform a forensic analysis of the incident and possibly design a new structure. The estimated cost for the emergency operations and construction of the sheetpile wall is \$150,000, and the estimated cost for the forensic analysis, partial design, and other items related to surveillance and short-term work is \$250,000, for a total estimated cost of \$400,000.

It was the recommendation of the State Engineer that the State Water Commission approve state cost share participation of 75 percent of the initial costs, not to exceed \$300,000 from the funds appropriated to the State Water Commission in the 2001-2003 biennium, associated with the emergency repairs and consulting engineering services at Mount Carmel Dam, contingent upon the availability of funds. Secretary Frink explained that a 25 percent cost share would be required from the locals in the amount of \$100,000.

It was moved by Commissioner Swenson and seconded by Commissioner Olin that the State Water Commission approve state cost share participation of 75 percent of the initial costs. not to exceed \$300,000 from the funds appropriated to the State Water Commission in the 2001-2003 biennium, associated with the emergency repairs and consulting engineering services at Mount Carmel Dam. This motion is contingent upon the availability of funds, and a 25 percent local cost share in the amount of \$100,000.

William Hardy, Cavalier County Water Resource District, expressed appreciation to the State Water Commission for its past support, and to the State Engineer and the Commission staff for its expeditious efforts associated with the emergency failure at Mount Carmel Dam. In discussion of the proposed cost share arrangements, Mr. Hardy explained the district has approximately seven years of payments remaining on the 1995 Mount Carmel Dam reconstruction project. The county currently has limited funds in its emergency fund, and Mr. Hardy stated that the additional \$100,000 local cost share being proposed for the recent failure of the dam will cause a financial hardship on the county. Mr. Hardy requested the State Water Commission consider an 80 percent state/20 percent local cost share arrangement associated with the emergency repairs and consulting engineering services.

Because of the State Water Commission's previous involvement with Mount Carmel Dam, the Commission members concurred that it is the responsibility of the state to determine the cause of failure of the dam, and agreed to an 80 percent state/20 percent local cost share arrangement associated with the emergency repairs and the consulting engineering services. Commissioner Swenson offered the following modification to the motion, which was agreed to by Commissioner Olin:

It was moved by Commissioner Swenson and seconded by Commissioner Olin that the State Water Commission approve state cost share participation of 80 percent of the initial costs, not to exceed \$320,000 from the funds appropriated to the State Water Commission in the 2001-2003 biennium, associated with the emergency repairs and consulting engineering services at Mount Carmel Dam. This motion is contingent upon the availability of funds, and a 20 percent local cost share in the amount of \$80,000.

Commissioners Halcrow, Hanson, Hillesland, Hofstad, Johnson, Olin, Swenson, Thompson, and Governor Hoeven voted aye. There were no nay votes. Governor Hoeven announced the motion unanimously carried.

It was moved by Commissioner Hillesland, seconded by Commissioner Halcrow, and unanimously carried, that the State Water Commission recognize Josh Metzger, Wales, North Dakota, for his efforts relative to Mount Carmel Dam.

Secretary Frink informed the Commission members that staff has inspected two dams in the state which also have a design similar to the Mount Carmel Dam.

**APPROVAL OF STATE COST
SHARE PARTICIPATION FOR
KARLSRUHE AQUIFER
DENITRIFICATION STUDY
(SWC Project No. 1908-01)**

The State Water Commission and the North Dakota Department of Health have observed increases in nitrate contamination in the Karlsruhe aquifer. The main nitrate source is irrigated agriculture; approximately

6,000 acres are irrigated in the Karlsruhe aquifer.

Previous research by Dr. Scott Korom of the University of North Dakota has indicated that some aquifers can remove substantial amounts of nitrates. The Commission and the Department have jointly requested Dr. Korom to develop a research study plan and project for measuring rates of nitrate removal in the Karlsruhe aquifer. The proposed study is estimated to cost \$43,026, and is anticipated to be completed in June, 2005. The request before the State Water Commission is for a 50 percent state cost share in the amount of \$21,513. The Department will be responsible for the remaining 50 percent of the research study and project costs.

It was the recommendation of the State Engineer that the State Water Commission approve a 50 percent state cost share, not to exceed \$21,513 from the funds appropriated to the State Water Commission in the 2001-2003 biennium, to conduct a research study on the potential for nitrate removal from the Karlsruhe aquifer.

It was moved by Commissioner Thompson and seconded by Commissioner Johnson that the State Water Commission approve state cost share participation of 50 percent, not to exceed \$21,513 from the funds appropriated to the State Water Commission in the 2001-2003 biennium, to conduct a research study on the potential for nitrate removal from the Karlsruhe aquifer. This motion is contingent upon the availability of funds.

Commissioners Halcrow, Hanson, Hillesland, Hofstad, Johnson, Olin, Swenson, Thompson, and Governor Hoeven voted aye. There were no nay votes. Governor Hoeven announced the motion unanimously carried.

There being no further business to come before the State Water Commission, Governor Hoeven adjourned the meeting at 10:20 AM.

John Hoeven, Governor
Chairman, State Water Commission

Dale L. Frink
North Dakota State Engineer, and
Chief Engineer-Secretary to the
State Water Commission