

## SWC Construction Summary, 2008 Season

The 2008 construction season was again productive for the Water Commission's construction crew. Wet conditions in early months delayed the start of some projects, but dry conditions throughout late summer and fall resulted in good working conditions and completion of planned projects.

The Water Commission's construction crew made repairs, modifications, or constructed projects at Tolna Dam in Nelson County, Sheyenne Dam in Eddy County, Green Lake in McIntosh County, and Odland Dam in Golden Valley County. The construction crew also constructed, modified, and repaired stream gages and water quality collection sites throughout the state in cooperation with the United States Geological Survey.

The construction crew includes Project Manager Darron Nichols, Dan Bahm, and John Edwards.

### Tolna Dam, Nelson County

This project was quickly advanced because of concerns about increasing seepage. Work included the construction of a new cutoff wall on the upstream side of the spillway to stop seepage. As part of this effort, the reservoir was lowered several feet and the approach channel was cleaned out. Exposed seepage paths were sealed beneath the weir, and a bentonite/clay cut-off wall was constructed by trenching approximately

12 feet. In addition, a bentonite mat was used to cap the top of the cut-off wall up to the weir face, and a rock cover was reestablished on the approach channel.

### Sheyenne Dam, Eddy County

Sheyenne Dam, which was originally constructed in 1936, was in poor condition, and several items needed repair to prevent further deterioration of the dam.

The project included removal of the existing concrete cap and constructing a new concrete cap over the weir structure. In addition, existing



The new concrete cap and rock riprap fish passage at Sheyenne Dam.

sheetpile was removed, repairs were made to both abutments, and a rock riprap fish passage was constructed, which required over 3,000 cubic yards of rock.

The newly repaired weir and rock-covered approach channel at Tolna Dam.



Commission construction crew members Dan Bahm and John Edwards resurface Odland Dam with gunite.



At the Green Lake project, concrete was poured between two sections of sheet pile and rock protection was installed on both the upstream and downstream sides of the structure.

### Green Lake, McIntosh County

Concerns about the outlet control structure at Green Lake were identified during a Water Commission spring inspection. Then, just weeks later, the Commission was contacted by the McIntosh County Water Resource District about the same concerns. It appeared that ice had damaged the sheet pile weir causing it to deform, rotate, lift, and separate at one of the joints. Ice did not make

direct contact with the weir while the lake was frozen, but it is expected that high winds pushed ice up against the weir after breaking up, causing the damage.

A new sheet pile weir was installed on the upstream side of the existing weir, and concrete was poured between the two. Rock protection was added on both the upstream and downstream sides of the structure. And, the old weir was straightened and cut to the 1973 original elevation.

### Odland Dam, Golden Valley County

Odland Dam is an old rubble masonry weir that has been gunited several times, most recently in the early 1980s. The face of the weir was beginning to deteriorate and show signs of freeze thaw damage, and the abutment drains had buildup material covering outlets.

The Golden Valley County Water Resource District requested that the Commission's construction crew repair the spillway weir by removing the old surface and wire mesh, and resurfacing with new gunite.

### USGS Gauging Stations, Statewide

The Commission's construction crew constructed, modified, and repaired several United States Geological Survey gauging stations/collection sites throughout North Dakota. The work involved installation of orifice lines, installation of staff gages, removal of gage houses, installation of gage houses, and repairs to sheet pile control sections.



# COMMISSION MEETING MINUTES

The North Dakota State Water Commission (Commission) held a meeting at the State Office Building in Bismarck on Sept. 30. The Commission acted on several items of business and heard reports on various water management happenings across the state. In action items, the Commission:

Approved a cost-share request from the Burleigh County Water Resource District in the amount of \$25,000 for the development of an Emergency Action Plan (EAP) for McDowell Dam. The purpose an EAP is to identify potential emergency situations that could occur at a dam and specify courses of action to be taken when emergency situations arise. The total cost to develop the EAP is \$36,000.

Approved a cost-share request from the Lower Heart River Water Resource District for a levee improvement project along the Heart River in Mandan. The amount requested and approved by the Commission totaled \$125,396. The total project cost is estimated at \$259,320.

Approved a cost-share request of \$136,499 from the Minot Park District for a Souris River bank stabilization project along Souris Valley Golf Course.

Approved a \$75,000 cost-share

request from the North Dakota Board of University and School Lands (Board) to complete an ordinary high water mark delineation project along the Yellowstone and Missouri Rivers in McKenzie County. The Board is responsible for managing the state's mineral interests associated with sovereign lands, which are basically public lands in and around navigable lakes and streams. The Missouri and Yellowstone Rivers are both considered navigable.

Approved a cost-share request from the Maple-Steele Joint Water Resource District in the amount of \$112,500. The purpose of the cost-share is to partially fund the preliminary engineering phase of the Upper Maple River Dam project. This phase will include detailed principal and emergency spillway design, embankment design, backwater mapping, landowner meetings, and permitting requirements so the dam can be constructed in Steele County.

Approved a cost-share request in the amount of \$405,667 from the Maple-Rush River Joint Water Resource District for a Swan Creek diversion reconstruction project at Casselton.

Approved cost-share of \$20,789 for the North Dakota Natural Resources Trust. The Game and Fish Department and Garrison Diversion also pay the same amount into the Trust – making up the state's 10 percent match.

Authorized the State Engineer to award Northwest Area Water

Supply Project contract 2-2C to Northern Improvement Company of Fargo. Northern Improvement was the apparent low bidder, with a total base bid of \$4.79 million. The engineer's estimate was \$5.5 million. The 2-2C contract, also known as the Kenmare-Upper Souris Pipeline project, will include 52 miles of 10 and 12-inch pipeline from Berthold through Kenmare to the Upper Souris water treatment plant.

Authorized the State Engineer to execute an amendment to the interim water supply service agreement between the Commission and Minot. The amendment will allow Minot to terminate the agreement if water service from Lake Sakakawea is not progressing, and the continued supply to NAWS is determined to be a detriment to Minot's water users.

Approved water rates of \$2.20/1,000 gallons for Berthold, and \$0.28/1,000 gallons for Minot for the 2009 calendar year.

Approved a resolution of appreciation to Al Balliet, who recently retired from the Commission after 42 years of service with the state.

Approved a resolution of appreciation to Elmer Hillesland who recently resigned from the Commission. Hillesland served on the Commission since 1993.

Best wishes to both Al and Elmer, and may they both experience the best of health and happiness in their future endeavors.



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