SWC Funds Rapid Deployment Gages

Following the 2009 flood, it became apparent that it would be of great value to have additional streamflow information in critical areas that could be accessed in a timely manner. In the past, when additional streamflow information was needed in areas where there were no existing gages, or when emergency conditions required more detailed monitoring, the United States Geological Survey (USGS) has used rapid deployment gages - when they were available. In many instances, these types of gages have proven to be valuable and flexible tools in flood forecasting and response.

Unfortunately, the USGS has not always had enough rapid deployment gages available, as their inventory is used throughout the country.

After the floods of 2009, funds were made available for flood mitigation grants through the Federal Emergency Management Agency (FEMA). To avoid the issue of not having gages available in North Dakota as needed, Water Commission staff prepared an application for funding to purchase six rapid deployment gages.

The Commission’s application was ultimately approved, and the USGS ordered the six gages. During this year’s spring flooding, the six gages were installed at Burlington, Minot, Logan, Beaver Creek (below Jamestown), the Highway 46 crossing of the Sheyenne River below Kathryn, and the James River near Manfred.

In addition to the six new gages purchased by the Commission, the USGS deployed ten other short-term stream gages throughout the state in critical areas needing additional monitoring during the spring of 2011.

The total cost of the six gages was $65,830. Under the grant program they were funded through, 75 percent of the funds were provided by FEMA, 10 percent by North Dakota’s Department of Emergency Services, and the remaining $9,875 was paid by the Commission. The grant, however, was a reimbursement, therefore the Water Commission had to make full payment of the total cost, and will later request a reimbursement of $55,955 from the other agencies.

Funding for the total cost of the gages was approved by the Water Commission at their March meeting in Bismarck.

Advisory Committee Meets to Discuss Devils Lake Outlet Issues

On March 30, the Devils Lake Outlet Management Advisory Committee met in Valley City to give the community downstream of the outlet the opportunity to hear the most current outlet-related information, discuss their concerns, and receive answers to their questions.

The Committee meets on at least an annual basis. Topics covered at the last meeting included issues related to the Devils Lake outlet, such as the prior year’s operations, winter precipitation, forecasted Devils Lake elevations, projected outlet operations for the coming year, and issues related to construction of the new East Devils Lake outlet.

As discussed in the previous month’s issue of North Dakota Water, the State Water Commission is moving forward with a 250 cubic feet per second (cfs) east end outlet that will take water via underground pipeline from East Devils Lake to the downstream side of Tolna Coulee. This project is scheduled for completion in the spring of 2012, and is expected to cost between $62 million and $90 million.

In addition, the Water Commission has also been looking into a 100 cfs expansion of the west end outlet, although it was reported at the advisory meeting that the additional 100 cfs from the west end will likely be added to the East Devils Lake outlet instead – making it 350 cfs, rather than 250 cfs. Design work is continuing on the west end expansion, but the East Devils Lake outlet with the 350 cfs capacity has higher priority.

Bruce Engelhardt, Director of the Water Development Division at the Water Commission, provided an overview of outlet expansion efforts, and took numerous questions from the audience on how any new outlets would be operated in response to flows and water quality in the Sheyenne River.

Engelhardt explained that the outlets would only be operated after spring flows have passed, and would be lessened if severe rain events were to occur during the operating season. Engelhardt also told the audience that outlet operations would be constrained to ensure downstream beneficial use of the water is maintained.

Engelhardt talked at length about the Tolna Coulee control structure that will be constructed prior to spring runoff in 2012, in order to prevent catastrophic damages downstream from a natural overflow. Engelhardt stressed that the Tolna Coulee was not being armored, and that the control elevation of the outlet would not be raised above an elevation of 1.458 feet above mean sea level.

Tolna Coulee would not be raised above an elevation of 1.458 feet above mean sea level.

The Outlet Advisory Committee includes three Governor-appointed members representing downstream interests, the State Engineer, and representatives from the Red River Joint Water Resource Board, Devils Lake Joint Water Resource Board, Upper Sheyenne River Joint Water Resource Board, Ramsey County Commission, Benson County Commission, and the Spirit Lake Nation.
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Bill Sharff Receives NDEA’s 2011 Human Service Award

On April 9, the North Dakota Education Association’s 2011 Human Service Award was presented to the Water Commission’s Bill Sharff, who is Director of North Dakota’s Water Education for Teachers (WET) program.

The Human Service Award calls public attention to an individual who reinforces the value of giving to others, particularly children, and by their actions have taken upon themselves the responsibility to improve the human condition and enhance its dignity and worth.

Bill has directed North Dakota’s Project WET since 1990. During that time, he has been instrumental in delivering Project WET to North Dakota’s K-12 educators through 29 instructional institutes, 150-plus credit workshops, as well as hundreds of seminars, water festivals, and in-service opportunities.

Project WET facilitates and promotes awareness, knowledge, exploration and stewardship of North Dakota’s water resources, and how water interacts with both the human and natural environments.

Congratulations to Bill for receiving this well-deserved award!

Above: Sharff accepting the award. Below: Kim Belgarde, Bill Sharff, and NDEA President Dakota Draper.

NEW Tolna Coulee Issues Factsheet Available

A new factsheet is available from the State Water Commission titled “Tolna Coulee Issues.” The purpose of the factsheet is to provide an overview of the complexities involved in removing addition water from the Devils Lake system via outlets. More specifically, it addresses the many challenges that would be associated with removing water from Stump Lake via the Tolna Coulee. The factsheet also provides background information on the Devils Lake area’s flooding issues and the ongoing flood fight.

The Tolna Coulee Issues factsheet is available for download via the Water Commission’s website at www.swc.nd.gov. From the website, click on “Devils Lake Flooding” and then “Outlet.” The factsheet can also be requested by calling 701-328-4989 or by e-mail, dapetersen@nd.gov.