

The Oxbow

FROM THE NORTH DAKOTA STATE WATER COMMISSION

Corps holds Missouri River meetings

By Patrick Fridgen

On April 12, the U.S. Army Corps of Engineers stopped in Bismarck as part of its spring public meetings regarding the 2005 Missouri River System Annual Operating Plan. In addition to Bismarck, the Corps also made visits to Glasgow, Mont.; Pierre, SD; Omaha, Neb.; and St. Louis and Kansas City, Mo. At these annual meetings, the Corps provides an overview of the status of the system as well their plans for dam operation throughout the year – depending on various runoff scenarios.

To begin the hearing, the Corps emphasized the severity of the current drought in the Missouri River basin, which is now in its fifth year - with little relief in sight (see Drought Monitor figure). As of April 1, the

mountain snowpack water content above Fort Peck was only at 71 percent of normal, and between Fort Peck and Garrison, it was only slightly higher at 73 percent of normal. This means a continued drop in system storage can be expected throughout the coming year.

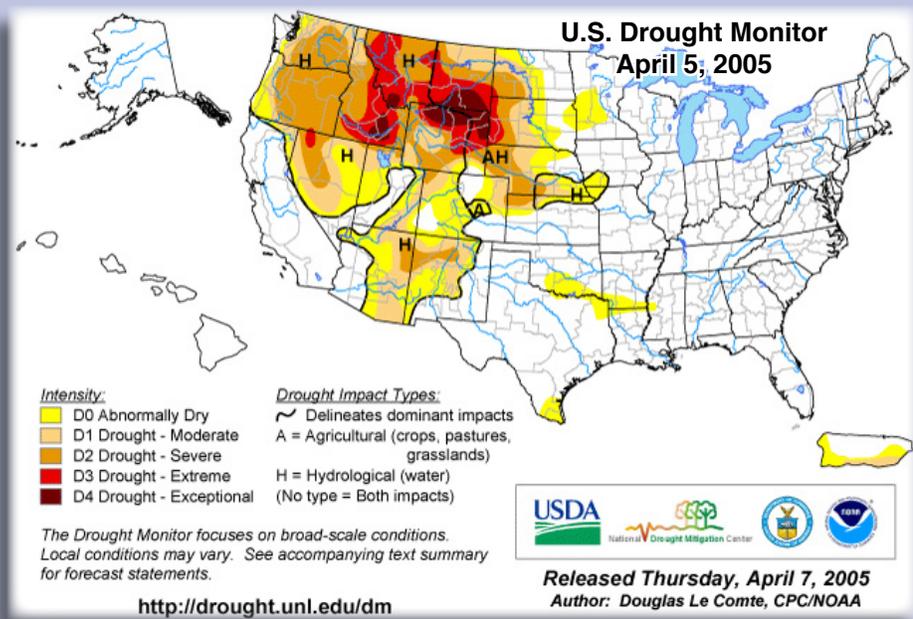
As far as system storage goes, there are currently only 35.5 million acre-feet (MAF) of water stored in the system – which is a new spring record low. To put this into perspective, the previous record low was set in January 1991, at 40.8 MAF. In a normal year, the Corps typically likes to start the summer with 57 MAF of water in the system, or 21.5 MAF more than is currently available.

Of great significance, is the fact that the system has been drawn down

so far, that the very industry (navigation) that has advocated higher river flows downstream and the release of water from upper basin reservoirs, will now be subjected to a shortened navigation season. If system storage dips below 35 MAF by July 1, the navigation season will be shortened 61 days. If system storage dips below 31 MAF before March 15, 2006, there will be no additional water released for navigation next year. As Governor Hoeven pointed out in his remarks at the hearing, had the lower basin states been more open to water conservation in the upper reservoirs during the past five years, they might not have been facing a complete shut-down of the navigation industry in the coming years.

Unfortunately, it seems that much of the damage has already been done, leaving almost all hope for improvement with Mother Nature. As the big upper three reservoirs currently sit, Fort Peck, Garrison, and Oahe are down 35, 29, and 34-feet, respectively. Lake Sakakwea was at 1808.4 feet above mean sea level (amsl) in April, which was a new record low, surpassing the previous record set in May 1991 of 1815 feet amsl. If the Corps' projections are correct, Sakakwea will continue to break record low elevations for most of the next year. On Oahe, the situation is much the same. As of April, its elevation was 1573.8 feet amsl – far below the previous record low of 1580.7 feet amsl set in 1989.

In response to the record low water levels, there were concerns brought before the Corps by various interests at the hearing relating to weed control and the associated fire danger along the many miles of exposed shoreline, water and shoreline access, and the health of the fishery. To address some of these concerns, the Corps has allocated additional funding from their budget to pay for weed control, boat ramp improvements/access, water supply intakes, and cultural resources protection.



Highway 20 temporarily closed due to seepage from Devils Lake

By Patrick Fridgen

On March 29, the North Dakota Department of Transportation closed Highway 20 along the south shore of Devils Lake (near St. Michael) due to seepage that was occurring through the roadbed. State officials were alerted of the problem by a local individual who reported seeing water flowing from the base of the roadbed. In addition, it was possible to see areas where the flowing water had actually eroded a path through the ice on the downstream side of the road (see photo).



Once state officials observed the situation more closely, the highway was closed, and traffic was diverted to alternative routes. This precaution was taken because it was not immediately clear how extensive the seepage problem was and how it had affected the integrity of the roadway.

The issue of roads acting as dams has been a major concern of local residents and government officials for more than five years – particularly in this area. Where the seepage problem was found along Highway 20, the water on the lakeside of the highway is about 11.5 feet higher than the water on the other side. The reason this poses such a serious problem is because the roads in the area acting as dams are not designed or built to serve that purpose. As Devils Lake began its rapid rise, roads were quickly raised to maintain transportation corridors throughout the area. As a result, many are now holding back water and acting as dams – a function they are not designed to serve.

Should Highway 20 ever breach under the pressure of rising Devils Lake floodwater, it is estimated that 30 homes and families would

be directly impacted downstream. During the time of the road closure, 30 rooms were reserved at the Spirit Lake Casino Hotel in case the families needed to be evacuated.

After extensive monitoring, which included test drilling along the base of the roadbed, it was determined that Highway 20 was safe, and it was reopened for travel April 1. The roadway continues to remain open

for travel, but it is under frequent observation.

The Department of Transportation, in consultation with other state agencies, has been considering several alternatives to repair the problem. At the time this article was written, it is anticipated that the most viable option is to build a seepage and stability berm on the downstream side of the road embankment. This will essentially amount to the installation of fill

and a collection pipe that will more safely divert the seepage away from the roadbed.

As far as the cause of the problem, it is speculated that the seepage may have occurred in an area that previously contained a culvert through the old roadway. However, this has yet to be confirmed. Efforts are underway to locate and fill any buried culverts in the roadway.

SWC employee Kurt Kunz will be missed

The water community lost a dear friend and colleague when Kurt Kunz died from injuries sustained in a car accident April 3, 2005.

Kurt had been employed with the Water Commission since 1982, where he was an Engineering Tech III in the Water Development Division. With the nature of Kurt's position, he was constantly serving as an agency point of contact with the general public, contractors,



and land surveyors. Kurt was responsible for all of the original survey notes, GLO plats, and provided various types of surveying information to anyone who made requests to the Commission. In addition, Kurt used his computer and technological skills to also serve as a draftsman for the Commission.

In his time away from the office, Kurt loved the outdoors, where he often went hunting, fishing, and ATV riding. He was also an avid Native American artifact collector.

Kurt's good humor and smiling face will be dearly missed at the Water Commission.

Upper Sheyenne River Joint WRB manages water basin-wide

By Michael Noone

The North Dakota State Water Commission has long held the goal of encouraging and supporting efforts to manage water resources on a basin-wide basis. Joint water boards have become a force for positive change, with groups such as the Red River Joint Board, the Devils Lake Basin Joint Water Resources Board, the BOMM Board, the Pembina River Basin Advisor Board, and now the Upper Sheyenne River Basin Joint Water Resources Board (Joint Board).

The Joint Board, which was originally comprised of just three counties (Barnes, Griggs, and Nelson) in

the Upper Sheyenne River Basin, has been intermittently active for over a decade.

In 2003, the Joint Board expressed interest in including all of the 12 counties in the Upper Sheyenne River Basin in their board, and in getting more involved in water resource management issues. The Water Commission worked closely with the Joint Board, and over the course of the next two years, numerous meetings were held to discuss the benefits of managing water on a basin-wide basis. Through the efforts of the board's members, membership of the Joint Board expanded to eventually include nine counties, including: Barnes, Benson, Eddy, Foster,

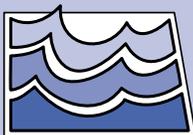
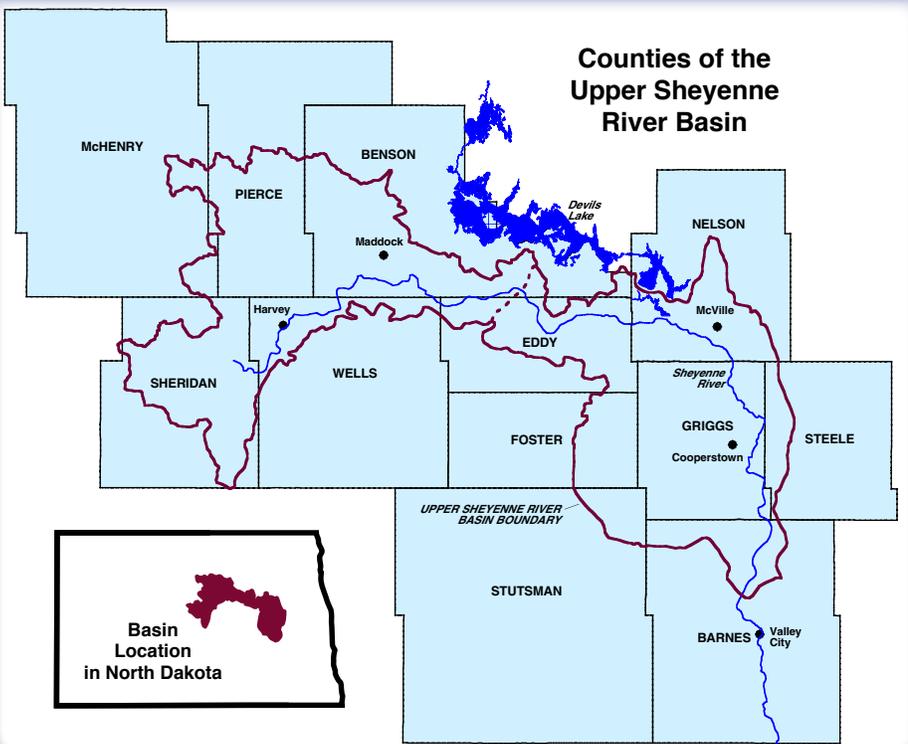
Griggs, Nelson, Steele, Stutsman, and Wells.

The Joint Board developed a mandate "To bring the watershed above Bald Hill Dam (Lake Ashtabula) into a partnership in order to review issues and create solutions through local, county, state, and federal cooperation."

Encouraged by the success of the 2002 Devils Lake Basin Water Management Plan, and having a desire to develop a vision for future water management in their basin, the Joint Board began the process of developing an Upper Sheyenne River Basin Conceptual Water Management Plan in late 2004. The purpose of the plan is: 1) to define water management issues; 2) to begin the process of organizing and prioritizing project needs; 3) to state objectives for water resource management in the basin; and 4) to provide strategies designed to manage the Upper Sheyenne River Basin in a manner that best meets the needs of all interested parties.

Similar to the Devils Lake Basin Water Management Plan of 2002, this process will be locally driven and directed, with local, state, and federal agencies involved in only an advisory capacity.

The planning process is well underway, and the Water Commission is looking forward to providing assistance to help move water management in the Upper Sheyenne River Basin in the same positive direction that other joint boards have taken over the years.



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