

FROM THE NORTH DAKOTA STATE WATER COMMISSION

## **Publications Available From State Water Commission**

The following new Water Commission publications are available for download via the Commission's website at www.swc.nd.gov. Paper copies may be requested by calling the Planning and Education Division at 701-328-4989, or email dapetersen@nd.gov.

#### 2013-2015 Water Development Plan

The State Water Commission has completed a 2013-2015 Water Development Plan to serve as an update to the 2009 State Water Management Plan. The new Water Development Plan:

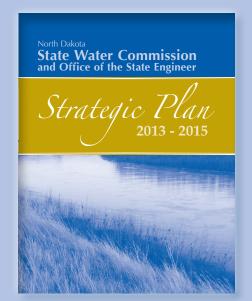
- Water Development
- Provides a progress report of the state's



priority water development efforts;

- Provides up-to-date information regarding North Dakota's current and future water development project needs and priorities;
- Provides current information regarding revenue sources for water development; and
- Serves as a formal request for state funding.

#### 2013-2015 Strategic Plan



The 2013-2015 Strategic Plan, produced by the State Water Commission and Office of the State Engineer, contains descriptions and overviews of the agency's major projects and programs. It also provides a summary of agency goals addressed by each of the projects and programs, and anticipated progress on those efforts through 2015.

# Missouri River Dredging Project COMPLETED

Dredging work on sandbars on the Missouri River in south Bismarck and Mandan started on November 19. Preliminary work started the week prior, with construction crews building access to the sandbar located near Fox Island. Work on both sides of the river was completed by November 30.



Excavated channel looking south to the confluence of the Missouri and Heart Rivers. 11,000 cubic yards of material were removed to create the channel.

One dredging location was adjacent to Fox Island where the storm drain for south Bismarck, or Bismarck Storm Drain #1 enters the Missouri River. A large sandbar had developed at this location causing concerns for potential flooding, due to impediments to the interior drainage of south Bismarck ice jams. Contractors were hired to create a 7-foot deep, 500-foot channel at the south end of the sandbar. It is estimated that 11,000 cubic yards of material was excavated at this location. Excavated sand was distributed to other areas on the sandbar, and contoured to match the natural aesthetics of the area.

Dredging at the confluence of the Heart and Missouri River near Fort Abraham Lincoln has also taken place. At this location, a 1.200-foot pilot channel was excavated on a 45-acre sandbar. Approximately 11,000 cubic yards of sand were excavated to construct this channel. An additional 6,000 cubic yards of sand were also removed in a shallow area downstream of the Heart River to increase channel conveyance.

Both of these projects were costshared between local governments and the State Water Commission, with the Commission contributing 75 percent of the funding for each of the two projects.





Additionally, a new United States Geological Survey (USGS) gage has been installed south of Fort Abraham Lincoln. This gage station was funded by the State Water Commission, and is operated by the USGS. The addition of the new gage south of Mandan will provide data about river levels that can be compared to, and evaluated with data from the gage in Bismarck. This data can be used to indicate the formation of ice jams, to enhance situational awareness and emergency management of the Missouri River.

Excavation equipment staged near the Missouri and Heart River confluence as seen from Fort Abraham Lincoln State Park.





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### **Devils Lake Outlet Advisory Committee Meets**

On Thursday, Nov. 29, a meeting was held in Carrington, ND to discuss operations of the two Devils Lake outlets in 2012, and to provide a preliminary outlook for 2013. The Devils Lake Outlet Management Advisory Committee and Devils Lake Outlets Advisory Committee attended the meeting, which was chaired by Governor Dalrymple. The committees have members from the Devils Lake, Sheyenne and Red River basins. There are also representatives from Minnesota and Manitoba.

The primary purpose of the meeting was to inform committee members of the current status of the outlets; provide a summary of their operations in 2012; provide water quality and mitigation information; and to outline preliminary forecasts for 2013.

Bruce Engelhardt, Director of Water Development at the State Water Commission, gave a presentation, discussing precipitation and lake levels in the Devils Lake basin over the last several years, and provided an overview of outlet operations for the East and West Devils Lake Outlets in 2012.

Engelhardt noted that a dry 2012 gave the outlets time to catch up, after several years of record elevations. "In 2012, outlet operations allowed a record amount of water to be removed, totaling more than 157,000 acre-feet, or about 1 foot off of Devils Lake," said Engelhardt.

"We were also helped by the warm and dry winter of 2011-2012, which allowed us to run the West Devils Lake Outlet a full month earlier than normal," continued Engelhardt. And thanks to the expedited construction of the East Devils Lake Outlet; which was constructed in only nine months, that project began removing water in June 2012.

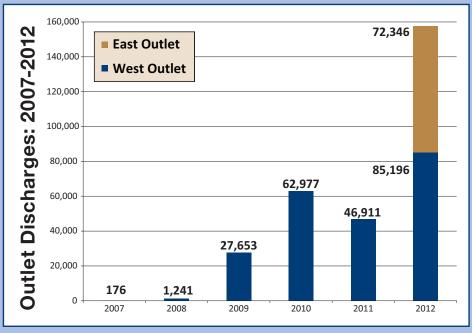
Engelhardt cautioned that one dry year did not mean the flooding problem was solved in the Devils Lake basin. With over 3.5 inches of precipitation in October, which is 2 inches more than the post-1993 average, the need to operate the outlets in 2013 is paramount.

Dave Glatt, Environmental Health Section Chief at the North Dakota Department of Health noted that 2012 represented what was expected to be the most challenging year in terms of outlet impacts on Sheyenne River water quality, with the outlets providing the majority of river flows for most of the year.

In addition to significantly reducing the elevation of Devils Lake, outlet operations proved to be of benefit downstream in 2012. With an extremely dry year reducing river flows, the Devils Lake Outlets provided most, if not all of the flows in the Upper Sheyenne River. Even in Grand Forks, low flows on the Red Lake River (a tributary of the Red River) meant that without Devils Lake water, the Red River might have dropped to levels low enough to have impacts on Grand Forks' municipal water source. One representative from the Sheyenne River basin noted that fishing was the best it had been in many years in Lake Ashtabula.

The State Water Commission's outlet mitigation efforts were also discussed, describing progress made on two low-water crossings on the Sheyenne River, two sites along the West Devils Lake Outlet, and \$15 million that was provided both to Valley City and Fargo to address potential water quality impacts from outlet operations.

The meeting closed with Governor Dalrymple thanking committee members for attending, and expressing the intent to meet again prior to start up of the outlets in 2013.



By starting the West Devils Lake Outlet a month earlier than normal, and with the operation of the newly constructed East Devils Lake Outlet, the State Water Commission was able to remove a record amount of water from Devils Lake in 2012. Water removed by the outlets accounted for about 1 foot, of the over 2 feet that Devils Lake dropped in 2012.