

# International Souris River Board MEETS IN BISMARCK

The International Souris River Board (ISRB) met in Bismarck on February 20 to discuss various issues related to the 435 mile-long Souris (or Mouse) River. Although the 2011 flood brought the efforts of the ISRB to the attention of the public. The ISRB represents the provinces of Saskatchewan and Alberta, and the State of North Dakota, has been working on water management in the Souris River watershed for decades. During this time, the ISRB has paid particular attention to the causes, possible solutions, and mitigation efforts related to flooding.

The ISRB was presented with a summary of weather and soil data for the period leading into this winter, as well as three and six month forecasts for the region from the National Weather Service. Fortunately, thus far, it has been a dry fall and winter, and spring flows in the Souris River are expected to be below average. The majority of the flow in the river is currently being provided by the water table, which is high after last spring's wet weather.

Frost depth in the basin has been recorded as 43 inches in Minot, and 39 inches in Towner. While the

current forecast is for a low chance of flooding in the spring, one only has to look back to last spring to see how conditions can change rapidly. Snowpack, soil moisture, and reservoir conditions will continue to be closely monitored.

The ISRB also discussed efforts towards improving existing and creating new models that will allow a better characterization of the 2011 record-shattering flood, in the hopes of being better able to predict that type of flood event in the future. The ISRB discussed the Souris River gaging network, which is managed by the United States Geological Survey, and the joint operating agreements that govern the operation of the reservoirs in the Souris River system. Other discussions involved monitoring, communication, and protocols for issues such as fish health in the system.

The ISRB was created by the United States and Canada in 1941



Flooding in Minot in 2011

at the request of the International Joint Commission in order to ensure a more eco-systemic approach to water issues that affect the Souris River, including compliance for the apportionment of river flows, oversight of flood operations, and also to assist the International Joint Commission in preventing and resolving transboundary disputes.

In June, the ISRB will be hosting a public meeting with the location to be announced, and all interested are encouraged to attend. Details on the meeting will be available on the ISRB's website once it has been decided, at [http://ijc.org/en/\\_isrb](http://ijc.org/en/_isrb).

Meeting locations rotate between the member jurisdictions.

# More Progress On New Dickinson Water Treatment Plant

At their February 27 conference call meeting, the North Dakota State Water Commission approved the award of a contract for the membrane system for Dickinson's new 6 million gallon per day water treatment plant. The contract was awarded to Tonka Water of Plymouth, Minnesota for about \$2 million. The contract will consist of providing ultra-filtration membrane equipment for removing suspended solids from the water.

To meet the anticipated water demands due to projected population growth in southwest North Dakota associated with the rapidly growing oil industry, it was determined that the Dickinson Water Treatment Plant (WTP) required immediate expansion.

Because of the ongoing population growth, it is estimated that the required capacity out of Dickinson's WTP will need to be 18 million gallons per day. The existing Dickinson WTP only has a capacity of 12 million gallons per day.

The new 6 million gallon per day plant will be built just east of the existing WTP. The site for the new plant is sufficiently large enough



The above map shows the locations of the existing and future Dickinson Water Treatment Plants.

to support future expansion to approximately three times the size of the initial 6 million gallon per day plant. Future phased expansions up to the necessary 18 million gallons per day could then be accomplished - as the existing plant gets retired in phases. In addition to the capacity issues with the existing plant, there are portions of Dickinson's plant that are more than 60 years of age.

The new WTP will employ ozonation of the raw water coming into the plant, which combats taste and odor issues. This process will then be followed by lime softening and the membrane filtration.

The new WTP will be part of the Southwest Pipeline Project, which is owned by the State of North Dakota

and operated by the Southwest Water Authority. It is anticipated that ownership of the existing Dickinson WTP (which is currently operated by the Authority) will be transferred to the state in the near future.

Membrane water treatment systems can vary greatly in a number of ways, including, but not limited to size, configuration, and maintenance requirements. Because of this, the final design of the WTP will be dependent upon the specific design of the membrane system that was approved under this contract. Once the specifics of the membrane system are ironed out, the overall design of the new WTP will be able to move forward.

# Oil Development & Water Use

## NEW FACT SHEET AVAILABLE

Oil production in western North Dakota has been a high profile issue over the last few years, and along with the significant economic benefits related to oil hydrofracturing (fracking), there has been interest from the state's citizens about how the fracking process works, and what it means in regards to the state's water resources.

In order to address that interest, the Water Commission has recently produced a fact sheet providing an overview of oil production and related water use in North Dakota. Topics covered in the publication include:

- A timeline of oil production in the state
- Where oil fracking wells are located in North Dakota
- The geology behind oil production
- Where the water for oil production comes from
- How North Dakota fracking differs from fracking in other parts of the United States
- Permitting and tracking of water use for fracking in North Dakota
- A comparison of fracking to other water uses in the state
- Potential impacts to fracking from recent legal challenges to North Dakota's water resources from the U.S. Army Corps of Engineers

You can find the publication "Facts About North Dakota Fracking & Water Use" at <http://www.swc.nd.gov/4dlink9/4dcgi/GetContentPDF/PB-2419/Fact%20Sheet.pdf>.

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### FACTS ABOUT NORTH DAKOTA

## FRACKING & WATER USE

*With the growth of the oil boom in recent years, and the development of water dependent technologies that allow the capture of oil that was previously inaccessible, the public has expressed interest about how oil development may be affecting the availability of North Dakota's water resources.*

*This publication provides an overview of these issues and what they mean for North Dakota.*



Developed by the North Dakota State Water Commission

An oil drilling rig operates in western North Dakota. Photo courtesy of ND Oil and Gas Division



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