

The Oxbow

FROM THE NORTH DAKOTA STATE WATER COMMISSION



East Devils Lake Outlet Project Well Underway



Sections of the 96-inch steel pipe arrive along the East Devils Lake Outlet alignment.

By Patrick Fridgen

The State of North Dakota's efforts to move forward with a second outlet from the Devils Lake system is well underway.

The North Dakota State Water Commission's Outlet Project Manager, Jon Kelsch, says "all of the 96-inch steel pipe has been delivered, and about one third of the 96-inch concrete pipe has also arrived on site." The remainder

of the pipe will continue to be delivered, with all of it scheduled to be on site by late fall.

When completed, the East Devils Lake outlet will be approximately 5.5 miles in length, from the southeast corner of East Devils Lake to Tolna Coulee. The project will be made up of buried pipeline, with one third of it being steel and the other two thirds concrete. At the intake, one 50 cfs, and four 75 cfs pumps will move up to 350

cubic feet per second (cfs) of Devils Lake floodwater, and a rock filter is also included in the design.

The contractor hired to install the pipe is Garney Construction out of St. Louis, Missouri. By the middle of September, they had already started the process of stringing pipe along the alignment route and moving dirt to install pipe.

"All of the land needed for the project has been acquired, and so far, things seem to be progressing on schedule," said Kelsch. "As long as things continue to go well, we should be able to have the project operational by next June."

Kelsch also explained that with all of the trucks delivering pipe and heavy equipment to the area, some of the roads were starting to show some wear. To mitigate those impacts, the Water Commission hired Ames Construction out of Minneapolis, Minnesota, to do road maintenance, in addition to site preparation along the route at the intake location.

Since 2005, the state has been operating an outlet from the west end of Devils Lake. That outlet was originally built with an operational capacity of 100 cubic feet per second (cfs). However, in June 2010, the state completed a major expansion to the outlet, increasing its capacity to 250 cfs. The west end outlet consists of two pump stations, a rock filter, approximately 4 miles of pipeline, and 10 miles of open channel.



Concrete pipe sections arrive on site.

The west and East Devils Lake outlets will have a combined operating capacity of 600 cfs. And together, the two outlet projects will be able to remove about 200,000 acre-feet of water from Devils Lake over the course of a full seven-month operating season if they are operated at maximum capacity.

In addition to the west and East Devils Lake outlets, Devils Lake area residents and local government representatives have expressed

interest in developing an emergency water transfer channel from Stump Lake to Tolna Coulee, and ultimately into the Sheyenne River.

This outlet project would be about one mile long and flow via gravity. The amount of discharge that could pass through this additional outlet would depend on lake level, as outlined in the adjacent Stump Lake Outlet Flows table.

Stump Lake Outlet Flows	
Lake Elevation	Flow (cfs)
1453	27
1454	90
1455	185
1456	311
1457	472
1458	668
1459	900
1460	1,172
1461	1,485
1462	1,840



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Questions Arise Over New Tile Drain Law

A tile drainage system being installed in a field near the NDSU campus.

By Patrick Fridgen

During the 2011 Legislative Assembly, lawmakers passed a bill to expedite the tile drainage permitting process to deal with all of the new systems that are being installed in the Red River Valley. The new law went into effect April 20, 2011.

The law states that any tile drainage system comprising eighty acres of land area or more requires a permit. “Traditionally, those permits came to our office for an initial review before they were forwarded to the local water board,” said State Engineer, Todd Sando. But with the new law in place, those permit applications go directly to local water boards – without going through the Office of the State Engineer.

“If a local water board determines that a tile drain application will have statewide significance, then the Office

of the State Engineer gets involved,” said Sando. “Otherwise it’s their call.”

One of the commonly cited selling points of tile drainage is that it removes excessive soil moisture more effectively than traditional surface drainage systems. This allows growers improved access to fields that otherwise might be too wet to till, plant, or harvest. And as the ongoing wet cycle continues to impact much of the Red River basin – the popularity of tile drainage is most certainly on the rise, with new systems being installed all the time.

However, a common concern is being raised more and more to the Office of the State Engineer by local water boards. Due to the rising popularity of tile drainage systems, the push to get more of these systems installed means many are going in without necessary permit applications.

The new law says that if a person installs a tile drainage system without first securing the necessary permit, they are liable for downstream damages, and could be guilty of an infraction.

Water board members like Rich Axvig, from Grand Forks County, are trying to get the word out. “We want farmers and contractors to know that if they’re installing a new tile system that has a land area of eighty acres or more, they need to file an application with the appropriate water board,” said Axvig. “It’s a simple application process, and it’s worth going through the effort to avoid fines or liability issues later down the road.”

The two-page application is available for download via the Water Commission’s website at www.swc.nd.gov, or call 701-328-2752 to have an application mailed.