

# The Oxbow

FROM THE NORTH DAKOTA STATE WATER COMMISSION



## Busy 2006 Construction Season Expected

Provided here is a look at some of the anticipated projects the Water Commission's construction crew will pursue during the 2006 construction season.



### Long Creek Dam

*Problem:* Water is seeping through the rubble masonry dam. In addition, the protective coat on the downstream side of the dam is beginning to separate from the structure.

*Anticipated Repairs:* The Water Commission's construction crew will install a Bentomat membrane sealant on the upstream face, and patch areas on the inside and surface of the weir.

*Estimated Cost:* \$66,000



### Harvey Dam

*Problem:* The City of Harvey has safety concerns about the inlet structure at the dam, particularly during their upcoming centennial celebration. Also, trees have grown up on the dam embankment, which ultimately can cause problems to the integrity of the dam.

*Anticipated Repairs:* The Water Commission's construction crew will install a steel tube railing around the inlet structure, as well as rope barrier floats in the water around the inlet.

*Estimated Cost:* \$20,000

## Wakopa Dam

**Problem:** The principal spillway at the dam continues to become clogged with debris from beavers, forcing water to leave the reservoir through the emergency spillway. Since the emergency spillway was not designed to sustain constant flow over long periods of time, erosion is beginning to occur downstream of the dam.

**Anticipated Repairs:** Repairs will be made to the emergency spillway where erosion has occurred. In addition, modifications will be made to the principal spillway system to prevent the frequent usage of the emergency spillway.

**Estimated Cost:**  
\$15,000 - \$30,000

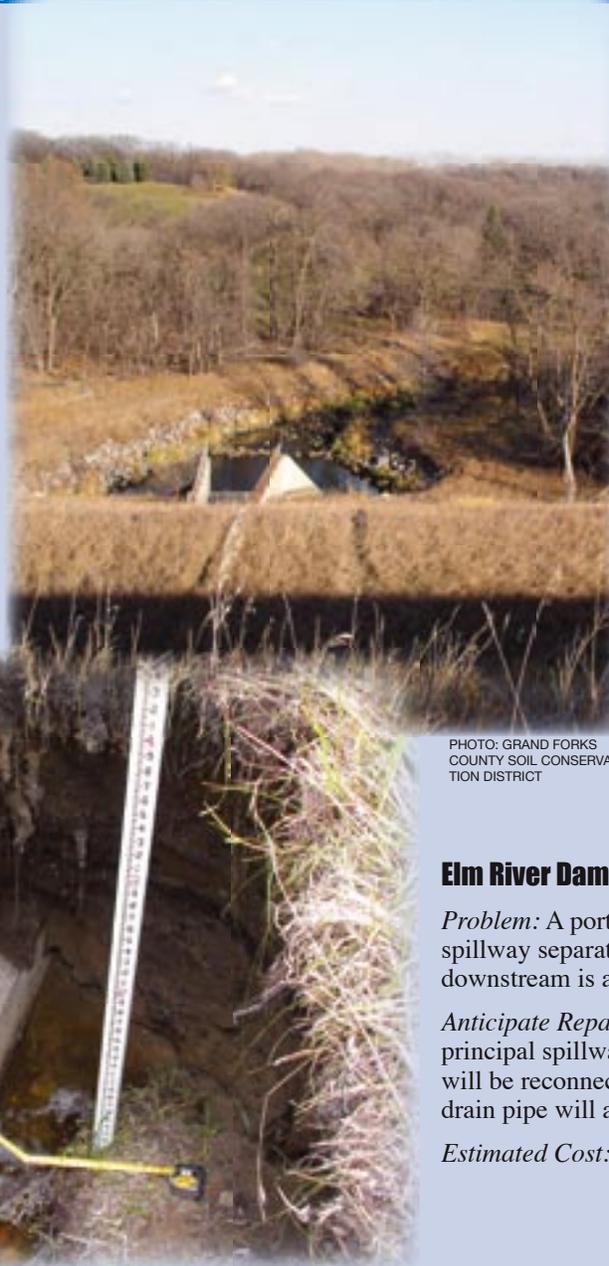


PHOTO: GRAND FORKS COUNTY SOIL CONSERVATION DISTRICT

## Larimore Dam

**Problem:** The low-level drawdown system has been releasing the poorest quality water from the reservoir (as designed). As a result, the downstream fishery is beginning to be negatively impacted.

**Anticipated Repairs:** The Game and Fish Department has suggested that aeration baffles be installed inside the concrete drop inlet, directly below the discharge point of the low-level drawdown. The disturbance in flow will aerate the water being released, thus improving water quality.

**Estimated Cost:** \$3,000

## Elm River Dam

**Problem:** A portion of the principal spillway separated in 2004. Erosion downstream is also a problem.

**Anticipate Repairs:** The portion of the principal spillway pipe that separated will be reconnected. The damaged toe drain pipe will also be repaired.

**Estimated Cost:** \$11,000

## Enderlin Park Dam

**Problem:** The rubble masonry channel dam, known as Enderlin Park Dam, washed out in the spring of 2004. Currently, there is only a small section of the dam remaining near each streambank.

**Anticipated Repairs:** A sheet pile weir will be installed upstream of the old rubble masonry dam.

**Estimated Cost:** \$80,000



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# Flood Map Modernization Begins in North Dakota

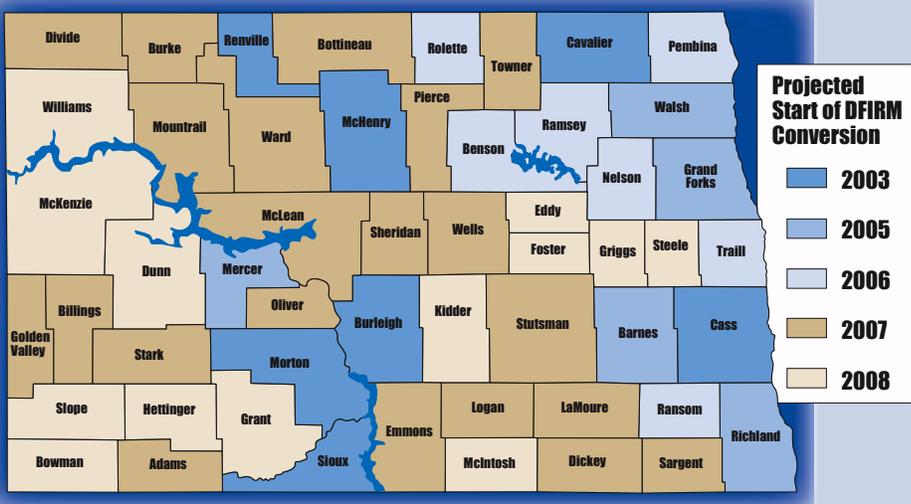
By Shandi Teltschik

Most of North Dakota's Flood Insurance Rate Maps (FIRMs) and their associated Flood Insurance Studies (FISs) are now over 10 years old. In fact, some FIRMs are even 15 to 20 years old. Thus, aging FIRMs, coupled with population growth and community development in several communities throughout the state, have created a situation where some existing FIRMs and FISs no longer adequately depict the flood risks facing our state.

In response, the Federal Emergency Management Agency (FEMA) has implemented a five-year Flood Map Modernization Program (or Map Mod), for which the goal is to update and modernize the nation's FIRMs and FISs by 2010. Generally speaking, the updates will primarily involve the use of updated and more reliable flood data information, and the conversion of paper FIRMs to a digital format called a DFIRM. The overall result and finished product will be a national seamless flood risk data layer.

The Map Mod process to convert a FIRM to a DFIRM takes approximately two years. This process includes scoping local needs, digital map data collection, hydrologic and hydraulic analyses, public review of the preliminary FIRM and FIS, and then public adoption of the new FIRM. In North Dakota, study areas for the Map Modernization Program are broken down by county-level.

The advantages of DFIRMs over the old paper FIRMs is that digital flood maps will allow for more effective floodplain management, emergency planning, and risk assessment. In addition, having DFIRMs will allow for better map maintenance and faster incorporation of Letters of Map Change. There will also be wider availability



of DFIRMs to the general public via the Internet. However, for those who would rather have paper copies of the FIRMs, they will still be produced and made available to anyone interested.

While FEMA is the federal agency funding the Map Modernization Project, the State Water Commission (SWC) is managing Map Mod in North Dakota through FEMA's Cooperating Technical Partner (CTP) program. As the main North Dakota CTP since 2005, the SWC serves as a centralized point of contact for local entities, and will continue to coordinate multiple Map Mod projects annually through the life of the program.

FEMA and the SWC are not the only players involved in the Map Mod effort. Local input and participation are absolutely critical to the success of the project in North Dakota. As such, at the start of each county-wide Map Mod effort, public scoping meetings are held. This is usually the first opportunity for local constituents to convey their flood mapping needs, which are then used to define the overall project scope of work for a particular county.

In addition to identifying local flood mapping needs, local governments are welcome to make contribu-

tions known as "leverage." Leverage can be in the form of funds or digital data. Current digital topographic data in particular, is highly sought after as part of the Map Mod process.

To keep local interests more engaged and better informed about the Map Mod process, the SWC is planning to send out project status reports to local participants, and to make as much information available as possible via the SWC website. By keeping informed about Map Mod efforts that affect individuals and their communities, local residents will have a better idea when preliminary flood maps will be available for viewing and comment.

In 2005 alone, North Dakota received over \$1.3 million for Map Modernization projects in five counties - including Walsh, Grand Forks, Barnes, Mercer, and Richland. Map Mod activities in these counties range from DFIRM conversion and updating studies, to performing new studies all together. The Map Modernization figure above shows the tentative schedule for initiating DFIRM activities in the state through 2008.

If you would like more information about any aspect of Map Mod, contact Shandi Teltschik, North Dakota's Map Mod Coordinator, at (701) 328-4961 or e-mail [steltschik@state.nd.us](mailto:steltschik@state.nd.us).