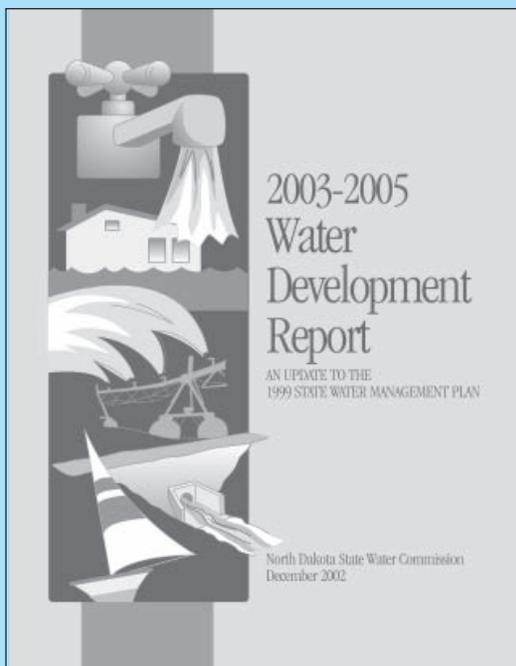


# The Oxbow

FROM THE NORTH DAKOTA STATE WATER COMMISSION

## SWC publishes update to State Water Plan

By Patrick Fridgen



The North Dakota State Water Commission recently published a 2003-2005 Water Development Report to serve as an update and supplement to the 1999 State Water Management Plan. The 2003 report provides up-to-date information regarding North Dakota's current and future water management project needs and outlines the state's ability to fund those needs.

In identifying North Dakota's future water project needs, the 2003 report lists projects that may go forward in the 2003-2005 biennium. This project list is derived on a biennial basis from a survey of project sponsors across North Dakota.

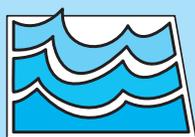
The Commission's new plan documents more than \$406 million in total water project needs for the 2003-2005 biennium. Based on current cost-share policies, the state's share of that amount would be about \$100 million (see table below). Since the state cannot afford all of these project needs in the upcoming biennium, a list of priority projects is identified.

To demonstrate the agency's ability to fund a portion of those project and program needs, the report also provides an explanation of the agency's estimated revenues for the 2003-2005 biennium. Among other things, the 2003 report outlines new State Water Commission cost-share requirements for various types of water projects.

Copies of the 2003-2005 Water Development Report are available from the State Water Commission's Planning and Education Division by calling (701) 328-4989, or the document can be downloaded from the agency website at: [www.swc.state.nd.us/reports/watmang.html](http://www.swc.state.nd.us/reports/watmang.html). ■

### Summary of Water Development Needs, 2003-2005

PROJECT CATEGORY	FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST
Bank Stabilization	\$ 0	\$ 115,000	\$ 115,000	\$ 230,000
Drainage/Channel Improvements	0	6,999,337	16,480,176	23,479,513
Flood Control	92,666,150	78,330,950	49,098,550	220,095,650
Irrigation	0	1,000,000	0	1,000,000
Multi-Purpose	5,000,000	1,936,000	1,869,000	8,805,000
Snagging & Clearing	0	462,360	1,387,080	1,849,440
Studies & Planning	1,000,000	1,596,000	1,040,000	3,636,000
Water Supply	89,497,555	9,200,000	48,553,454	147,251,009
<b>TOTAL</b>	<b>\$188,163,705</b>	<b>\$99,639,647</b>	<b>\$118,543,260</b>	<b>\$406,346,612</b>



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Patrick Fridgen, Editor

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# 2002 Devils Lake Basin Water Management Plan is published

By Michael Noone

Water management in the Devils Lake Basin is an issue that has generated a great deal of discussion and controversy for decades. An important tool in resolving this debate is planning at the watershed level, which works at restoring the viability of agriculture, ensuring flood protection in all reaches of the Devils Lake Basin, and lastly looking into recreational development for economic diversity.

It was determined by the Devils Lake Basin Joint Water Resource Board (DLBJWRB) in early 2002, that the need existed to update the 1995 Devils Lake Basin Water Management Plan (DLBWMP), and to re-evaluate its objectives based on more current and enhanced data.

The primary objective of the 2002 update of the DLBWMP was to use local citizenry for their experience and expertise. As a result, four subject committees (agriculture, economic development, recreation, and wildlife and fisheries) were created in order to represent the four broad areas of interest in the basin.

Each of the nine Devils Lake Basin counties (Benson, Cavalier, Eddy, Nelson, Pierce, Ramsey, Rolette, Towner, and Walsh) appointed a qualified local representative to serve on each subject committee, bringing their total number to 36. This action initiated the creation of a plan that was reflective of local interests, while still relying on the expertise of various state, federal, and private agencies who participated in a non-voting, technical support role.

There were several major innovations resulting from the 2002 DLBWMP. One such innovation was the evolution of the "three-pronged" approach to deal with flooding problems, into the "four-pronged"

approach to dealing with the water issues affecting the Devils Lake Basin. These four prongs now include upper basin water management, infrastructure protection, an outlet to the Sheyenne River, and a newly added fourth prong of economic recovery and revitalization.

Another major innovation resulting from the 2002 update was a thorough accounting and analysis of water-related projects in the Devils Lake Basin. In order to determine future needs, it was necessary to take into account what had already been accomplished. The 2002 DLBWMP contains a section detailing the various projects and studies that numerous state, federal, and local groups have been involved in since 1995.

The DLBWMP is a working plan, and as such, will need to be periodically updated. While this plan is intended to provide a long-term vision of water management in the basin, it is the nature of water management issues to change. It is important to continue to make progress towards the basin's long-term water management goals, while still retaining the flexibility to change the plan in order to meet short-term needs.

As a result, the DLBWMP will be reviewed at least every three years, by the DLBJWRB, with the assistance of the Subject Committees and Technical Support Groups. The Subject Committees have also recognized the need to keep their objectives, management issues, strategies, and procedures current, and have set an annual timetable for the update of the respective sections. Any changes in the DLBWMP must be approved by the DLBJWRB, with consultation from the four subject committees, and will be reflected in future plan revisions.

The Devils Lake Basin has taken control of their future and has made a positive step towards resolving many

of the issues associated with water management through the development and release of the 2002 DLBWMP.

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## Lindvig retires after 39 years



Following a successful career, and after 39 years of dedicated service to the State of North Dakota, Milt Lindvig announced his retirement from

the Water Commission, effective April 1, 2003. At the time of his retirement, Lindvig was serving as the Director of the Water Appropriations Division, a position he had held since 1974.

After graduating from the University of North Dakota with a Bachelor of Science degree in Geological Engineering and after serving two years in the United States Army, Lindvig started his career with the State Water Commission in 1963. Before becoming a Director, Lindvig was a Ground Water Engineer in the Hydrology Division, which was later named the Appropriations Division.

After retirement, Lindvig plans to spend more time at his family's farm near Williston, North Dakota, where he grew up. In addition, he hopes to spend time traveling with his wife, Hilda Mae.

On behalf of the State Water Commission staff, we wish Milt the best in his years of retirement. And, we wish him and his family many more years of happiness, health, and success. ■



# THE WATER PRIMER

## How bad is the drought situation in the Missouri River Basin?

As unfortunate as this may sound, the outlook for the Missouri River system's water levels are even more severe for 2003 than they were in 2002. And, if the winter of 2002-2003 is any indication of how the remainder of the year will progress in terms of moisture, it could be another rocky year for many of the upper-basin states – especially North Dakota.

The current drought situation that the Missouri River basin is suffering from, didn't just happen overnight. In fact, that is a common misconception about drought - that it just happens. But the truth is, severe droughts, like the one currently impacting much of the western United States, including the Missouri River basin, developed gradually over the course of a few years.

For example, runoff from the Missouri River basin above Sioux City, Iowa, was 65 percent of normal in 2000; 89 percent of normal in 2001; and 63 percent of normal in 2002. As a result of this compounding affect, only 42.7 million acre-feet of water was stored in the six mainstem reservoirs at the end of 2002. Compare this amount to the average end of year system storage of 55 million acre-feet, and it is obvious that the system is in dire straights.

To reverse storage deficiencies in the six mainstem reservoirs, it was the hope of all Missouri basin states that the upper reaches of the basin would receive above average snow

pack. However, as of January, snow pack above Fort Peck Dam in Montana was at a disappointing 58 percent of normal, and the Fort Peck to Garrison reach, including the Yellowstone, was only at 74 percent of normal. With that amount of snow pack, the U.S. Army Corps of Engineers was forecasting 19.2 million acre-feet of runoff in 2003, which is only 76 percent of normal. This means that an already stressed system, which is only storing 77 percent of the water it normally would, is now faced with another year of below average runoff – making recovery impossible without changes to the way the system is operated (but that's a whole other article).

So what does this mean for North Dakota? With the prospect of thousands of tourists descending upon North Dakota in the coming years to celebrate the bicentennial of the Lewis and Clark Expedition, boating access is critically important. The end of January lake elevation for Sakakawea was 1821 feet above mean sea level (amsl), with U.S. Army Corps predictions of 1819 amsl by the end of February. If Lake Sakakawea can maintain an 1819 amsl elevation, which is a best-case scenario, about 40 of 85 boat ramps on the reservoir will no longer be accessible. However, if current conditions persist and snow pack remains far below normal, a lake elevation approaching 1814 amsl is more likely. At that elevation, only around 14 of 85 boat ramps would remain accessible (with additional work).

On Lake Oahe, which for the most part no longer exists in North Dakota, the situation is even more grim. As of February, there were no operable ramps on the entire reservoir in North Dakota, and the lake is expected to drop an additional six feet by the end of summer.

These historically low lake levels will not only leave a bad impression with thousands of Lewis and Clark Trail seekers, but the negative impact to North Dakota's economy will also be substantial. Current estimates suggest that angler expenditures attributed to the Missouri mainstem system in North Dakota have been as high as \$64 million annually, with typical annual expenditures in the \$55 million range. Unfortunately, for many business and resort owners, there has been a very close relationship between reservoir levels and angler expenditures in the past.

In addition to access problems for boaters and anglers, North Dakota is also facing the prospect of losing several private and community water supply intakes. With four industrial, seven municipal, and nearly 100 irrigation intakes on Sakakawea and Oahe, the reality of water shortages in light of current and projected reservoir levels is becoming a serious threat to the well-being of thousands of North Dakotans and hundreds of thousands of acres of farmland.

In the words of a fellow Water Commission staffer, "if we don't get some moisture pretty quick, we're in big trouble." ■