

Water Commission moves ahead with Devils Lake outlet

Educators look at yesterday's Missouri R.

By Bill Sharff

The 2002 Project WET Lewis and Clark Institute was a great success with 44 participants attending. Educators truly felt a part of the "Corps of Discovery" as they experienced the pulse of a Missouri River's past. A wide array of cultural presenters, historic sites, and interpretive tours greeted institute participants.

The Lewis and Clark Institute used presenters such as Keith Bear and Amy Mossett (Mandan-Hidatsa, Ft. Berthold Indian Reservation) and Kevin Locke (Lakota and Anishinabe, Standing Fork Indian Reservation) to provide images of the significance of the American Indian presence on the river and their cultural contributions to our heritage. Other presenters included Mike Scholl, who completed a Patrick Gass (member of the Lewis and Clark expedition) presentation, and twelve reenactors from the 17th U.S. Infantry from Fort Lincoln. The infantry discussed the role of the Missouri River and water in everyday life at the fort on the Dakota frontier.

Project WET facilitators also involved participants through cultural and historical presentations, and through Missouri River and Lewis and Clark music and songs. The institute also offered a huge number of hands-on activities that

the teachers will take back to their classrooms.

The institute was taught by Project WET facilitators and was funded in part by an EPA Section 319 Non-point Source Pollution grant, the State Water Commission, local county water resource districts, soil conservation districts, and school districts. ■



Institute participants are carving dugout canoes while learning about the watercraft used by the Lewis and Clark Expedition.

The North Dakota State Water Commission is moving ahead with the construction of a 100 cubic-foot per second (cfs) temporary, emergency outlet from the West Bay of Devils Lake to the Sheyenne River. The first phase of the project involves the construction of a new access road and earthen pad where two pumps will be placed.

Nine acres of land were purchased from an area landowner where the pump site will be located, and an easement has been acquired for the access road. Wanzek Construction Inc. of Fargo, North Dakota was awarded the construction contract with a bid of \$79,500.

This phase of construction is located three miles south of Minnewaukan. When operational, the two pumps will be capable of moving approximately 45,000 gallons of Devils Lake water per minute (or 100 cfs), through a combination of pipelines and channels to the Sheyenne River, which empties into the Red River.

The State Water Commission voted unanimously to start construction on the state sponsored project at their August 15, meeting in Devils Lake. This was following a disappointing announcement from the U.S. Army Corps of Engineers on August 12, 2002, that said a recommendation on a federal outlet would not be released until January, 2003, at the earliest. ■



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COMMISSION MEETING MINUTES

The North Dakota State Water Commission (Commission), chaired by Governor John Hoeven, acted on several items of business and was given status reports on continuing water management projects and programs at the August 15, 2002, meeting in Devils Lake.

Action items approved included:

- Funding in the amount of \$200,000 for the Drought Disaster Livestock Water Assistance Program (DDLWAP) for 20 counties where drought emergencies existed. The DDLWAP was initially established by statute in 1991. The program was previously active between July 1991, and June 1993, and was reinstated to provide cost-share assistance to ranchers who were impacted by the drought of 2002.

- Conditional approval of funding for Cass County Drain numbers 24, 25A and 60 in the amounts of \$116,614, \$170,252, and \$64,750. Ultimately, approval of funding for the projects is subject to the availability of funds, attainment of a positive local assessment vote within six months, satisfaction of all permit requirements, and receipt and approval of final designs.

- Funding in the amount of \$25,000 for a floodwater retention site study in the Swan Creek watershed.

- State cost-share for the City of Fargo's Red River Flood Insurance Mapping and Hydraulic Analysis Project in the amount of \$35,646. The project will address the need for detailed elevation mapping and a hydraulic analysis for the insur-

ance mapping study through Fargo. The data will be used in the Red River insurance study to update floodplain elevations and Flood Insurance Rate Maps in order to accurately delineate floodplain areas.

- Funding in the amount of \$267,430 for the Fargo-Moorhead and Upstream Feasibility Study. The study encompasses the area of Fargo-Moorhead and upstream to the South Dakota border. It will be completed by the U.S. Army Corps of Engineers and will provide a comprehensive watershed approach to identifying potential flood damage reduction and environmental enhancement projects.

- Cost-share of \$35,000 for 50 percent of North Dakota's share of a Red River UNET study between Grand Forks and Drayton. The study will look at the hydraulic impact of levees on the river system to determine whether additional modifications of the levee system are worth pursuing, or if other means of addressing the flooding problem should be sought.

- Additional funding for several rural flood control projects that had non-funded eligible balances. At their May 1, 2002, meeting, the Commission moved to increase funding for individual flood control projects to \$250,000 per project for the 2001-2003 biennium. The policy change also applied to projects that received prior cost-share approval during the current biennium in which the funding limitation was \$200,000. Therefore, the eligible balances for Richland County Drain 95, Grand Forks County Drain 27A, and Cass County Drains 14 and 29A, were approved for additional funding.

- A service contract for the City of Zap that specifies a maximum flow-rate of 48 gallons per minute. In 2001, the City of Zap expressed

interest in entering into a Southwest Pipeline Project service contract.

- A debt service credit for Mott in the amount of \$8,525 for costs of connecting the city to the Southwest Pipeline Project.

- An Amendment to the Perkins County, South Dakota, Rural Water System Service Contract. *(If interested, the full amendment and stipulations are available from the State Water Commission)*

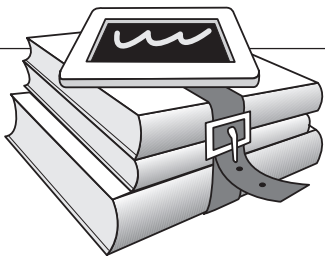
- Funding for easements in the amount of \$130,000 for the Northwest Area Water Supply project.

- Funding for the McKenzie County Water Resource District in the amount of \$22,750, and for McLean-Sheridan Rural Water in the amount of \$52,050 for feasibility studies of additional service areas. The funding for both efforts is in the form of 65 percent MR&I grants, which are contingent on the availability of federal funding.

- Eligibility for future reimbursement of a federal grant up to \$5 million of eligible project costs for Williston under the MR&I program requirements.

- Release of easement and dedication for the two easements for Hildenbrand Dam, as it is no longer useful and will not be reconstructed.

- A resolution of condemnation authority for the State's Devils Lake outlet project. It was recommended of the Commission that the state take more aggressive steps toward implementing the State's temporary outlet after the U.S. Army Corps delayed their recommendations regarding the permanent outlet until January, 2003. ■



THE WATER PRIMER



The Red River: A Profile in Time

PART III: TAMING THE RED?

By Mike Noone

This is the third in a series of articles that breaks down the history of the Red River basin into four distinct phases; each important in helping us gain a better understanding of how the natural, social, and economic environment that exists today came into being.

Even before the devastating flood that struck Grand Forks in 1897, agriculture was already becoming a major force in the Red River Valley. The highly fertile lake bottom soils produced enormous yields. A series of years with extremely high production, coupled with the increasing use of farm machinery, led to “bonanza farms,” sometimes tens of thousands of acres in size. Unfortunately, the very success of the farmers hurt them, with overproduction exceeding the demand of local markets, inevitably leading to depressed prices.

In spite of the bust cycle experienced by Red River Valley farmers, the demonstrated value of land in the valley led to ever increasing numbers of farmers making their voyage by train to unbroken lands. Eventually, the railroads allowed settlement of lands far from the rivers and streams, encompassing much of North Dakota, Minnesota, and Manitoba. However, the richest land still lay within the footprint of glacial Lake Agassiz, and farming remained the most intense in the Red River Valley.

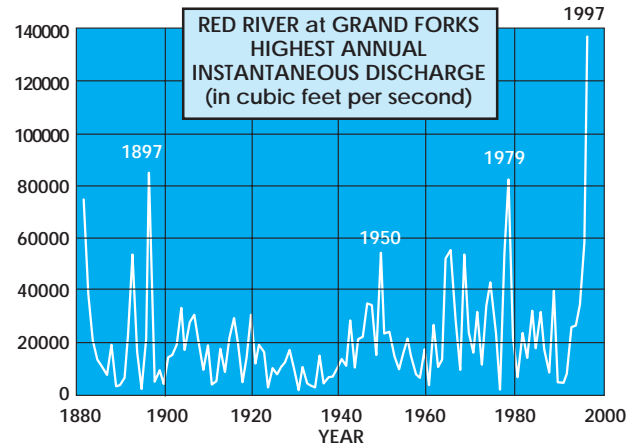
Notwithstanding the fact that land within the Red River Valley was the

most heavily farmed, significant amounts of that land was still unable to be cropped. This was due to the fact that the Red River Valley encompasses a good portion of the prairie pothole region; an area of numerous wetlands and poorly drained land.

As a result of the unsuitability of the Red River Valley’s drainage system for conventional agriculture, and the numerous wetlands dotting the landscape, agriculturalists began to develop an extensive series of drainage ditches designed to move the water off their land. Minnesota, Manitoba, and North Dakota all passed bills designed to assist in the development of drainage projects in 1883, 1887, and 1893 respectively, which ultimately helped to shape the valley into the agricultural Mecca that it is today.

Following the then flood of record at Grand Forks in 1897, was a period of about 50 years of relatively small floods. Both agricultural and urban development continued along the Red River, and the cities of Fargo, Grand Forks, and Winnipeg grew.

During this relatively low flooding period, many structures were built within flood-prone areas. As a result, it came as a great surprise to a generation unfamiliar with such problems, when in 1950, a small flood compared to the 1897 event occurred, but still caused \$100



million in damages and displaced approximately 100,000 people in the Grand Forks area.

Subsequent flooding events also occurred in 1965, 1966, 1967, 1978, 1979, and 1996, each one causing varying amounts of damage to the inhabitants of the Red River Valley. However, a new flood of record devastated the valley in 1997, after a winter of record-breaking snowfall, culminating in a surprise April blizzard. The 1997 flood, which crested at approximately 136,000 cubic-feet per second in Grand Forks, produced over half again the flow of the previous flood of record in 1897. It is estimated the 1997 flood caused nearly \$4 billion in damage throughout the valley.

The 1997 flood had a profound effect on the Red River Valley, and initiated a great deal of study into the causes, results, and possible preventative measures for flooding. In the fourth and final article in this series, the potential factors leading to, and some possible solutions to the flooding problems in the valley will be discussed. ■