

The Oxbow

FROM THE NORTH DAKOTA STATE WATER COMMISSION

Make A Splash festivals make impression

By Bill Sharff

Bigger and better characterizes the 2002 "Make A Splash with Project WET" water festivals. This fall 2,654 fourth and fifth grade students, 145 teachers from 62 schools, and 272 volunteers participated in the annual "Make A Splash" festivals. The festivals were held in Dickinson (September 26-27), Moorhead, Minnesota (September 30 - October 2) and Grand Forks (October 3-4); in conjunction with National Project WET's Water Education Day, September 27.

The national effort was sponsored by International Project WET, with extensive support from Nestle' Waters of North America. This was the third annual effort of this kind and is the nation's largest single

water education event - designed to raise awareness of the critical need for water education and the vital role water plays in our everyday lives. The North Dakota water festivals

consisted of structured learning stations, which included demonstrations and exhibits where students were actively engaged in hands-on water activities and investigations.

Some of the Project WET and other festival activities included: *Pollution Take It or Leave It!* (water cycle and water pollution); *Pollution Solutions* (watersheds and water pollution); *H₂Olympics* (physical properties of water); *Those Darn Dams* (understanding dam functions and building your own dam); *Turbidity or Not Turbidity* (how muddy water can happen); *Pucker Effect*



Kayleen Marmon, Belfield School elementary teacher and Project WET facilitator, explains to fifth graders about *Turbidity or Not Turbidity* at the Dickinson festival.

Project WET facilitators receive 2002 awards

By Bill Sharff

Project WET facilitators are formal and informal educators who, once trained and certified, are authorized to plan and conduct a variety of Project WET teacher and youth educational programs and events. The following are award recipients for 2002. A more detailed description of Project WET award levels can be found in the "The Water Primer" in the November and December 2001 issues of *North Dakota Water* magazine.

First Mate Level:

(15-74 hours of Project WET programming)
 Kristi Anderson, Ashley Public School
 Michelle Bechtold, Belfield Public School
 Kayleen Marmon, Belfield Public School
 Sherry Heilmann, Dakota Elementary,
 Minot Air Force Base

Navigator Level (75-149 hours):

Kim Belgarde, Madison Elementary, Fargo
 CaraLee Heiser, A.L. Hagen Junior High,
 Dickinson
 Linda Sharff, Sitting Bull College, Fort Yates
 Carol Zito, Human Nutrition Research
 Center, Grand Forks

Captain Level (150-299 hours):

Rita Kainz, Hope/Page Public School

Commodore Level (300-499 hours):

Pam Hintz, Elgin/New Leipzig Public School
 Sharleen Stigen, Billings County Prairie
 Elementary

Project WET 2001

Educator Facilitator of the Year:
 Kim Belgarde, Madison Elementary, Fargo

2002 Project WET USA

Outstanding Contributor Award:
 Kim Belgarde, Madison Elementary, Fargo

(groundwater contamination); *A-maze-ing Water* (urban non-point source pollution); *Reaching Your Limits* (water quality treatment concepts); *The Long Haul/Liquid Treasure Trunk* (water use, water hauling and water conservation); *Sum of the Parts* (demonstrating watersheds and water pollution); *Streamtable* (demonstrating river dynamics); *Would You Drink This Water?* (can senses determine water quality); *Conservation Choices* (water conservation dilemmas); and *Water You Doing?* (historical use of water). Fourth and fifth grade students from all three festivals spent a half-day participating in these and other hands-on water-related activities.

Bill Sharff, the state's Project WET director, feels the festivals have really helped students understand North Dakota's water resource management issues. Karl McKennon, Executive Director of the Dakota Science Center said, "the Make A Splash water festival is a perfect example of fulfillment of the Dakota Science Center's mission - to promote lifelong curiosity with all the sciences in youth, families, teachers, and the community through discovery, exploration, and interaction." Mary Massad, Office Administrator for the Southwest Water Authority feels, "It is so important for our youth to learn about this (water) most precious resource... The festival helps us educate children on how important an adequate supply of quality water is in our everyday lives."

All three of the "Make A Splash" festivals included pre- and/or post-festival activities. The Project WET activity, "A Drop in the Bucket" was a pre-festival activity used in Grand

Forks that introduced students to why water is a vital resource that must be protected.

The Fargo area festival gave each class an opportunity to participate in a "Water Festival Classroom Showcase" where they could show off some of their knowledge about water at Family Night by displaying some of their reactions.

The Dickinson water festival challenged students to write essays on what they learned at the water festival. All three festivals introduced students to the "Make A Splash" journals prior to their attendance. All students used the journals at the water festivals after each learning session as a time to reflect on what they had experienced and learned.

All three festivals also included a "Family Program of Exploration" at which children and their parents and the general public were invited to attend.

All students received a variety of special "Make A Splash" water education materials in addition to pencils, bags, and bookmarks. Teachers received a "Make A Splash" Educator's Guide, brochure, and poster from Project WET, and a host of water-related educational materials. "The water festival met my needs as an educator by exposing the children to interaction with scientists and professionals through discovery and experiment," said Lynn Gilbraith, Ben Franklin Elementary School teacher at Grand Forks.

Major sponsors of the "Make A Splash" water festivals were the

Southwest Water Authority; Dakota West Resource, Conservation and Development Project; Dakota Science Center; Cargill; River Keepers; the U.S. Environmental Protection Agency (Grand Forks, Dickinson, and Fargo festivals, respectively); and local water resource and soil conservation districts. Special thanks to all the organizers, sponsors, funders, volunteers, presenters, school personnel, and of course, the participating students and teachers. ■

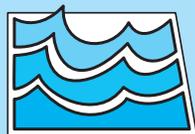


COMMISSION MEETING MINUTES

The North Dakota State Water 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 October 10, 2002, meeting in Bismarck. Action items approved, included:

- An exemption under the AgPACE Program to allow the conversion of land currently irrigated by the gravity method to irrigation by sprinkler method. Previously, only new irrigation development was eligible under AgPACE provisions.
- New Southwest Pipeline Project capital repayment rates of \$0.87 per thousand gallons for contract users and \$26.50 per month for rural users. These compare with 2002 rates of \$0.85 per thousand gallons for contract users and \$26.03 per month for rural users.

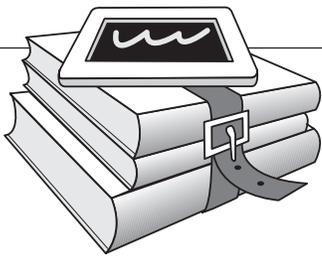
• Proposed changes to legislation related to the management of North Dakota's water resources. *Full text of the proposed changes can be acquired by calling the State Water Commission office at 328-4941.* ■



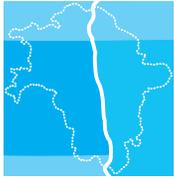
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THE WATER PRIMER



The Red River: A Profile in Time

PART IV: LOOKING TO THE FUTURE

By Mike Noone

This is the fourth and final article 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.

The 1997 flood had an immense impact on the Red River Valley, beyond the nearly \$4 billion dollars damage that it caused. This tragic event also spurred residents, state, federal, and private agencies to try and understand the forces that led to the 1997 flood, and how a similar, or worse, disaster could be prevented from happening in the future.

One of the main concerns to residents of the Red River Valley was the actual mechanisms that caused the 1997 flood. The general consensus from the scientific community is that the main reason for the flood was a winter of above average snowfall, coupled with an early and rapid spring melt, and consequently runoff, leading to a large amount of water in the Red River. This large amount of water was far greater than the bank capacity of the river, and significant overland flooding was the result.

However, some people contend that other factors aggravated the intensity of the flood. Homes built within the floodplain, wetland drainage, and roadside ditches have

all been blamed, incorrectly, as the sole reason for the devastation caused by the flood.

Unfortunately, the causes of flooding are complex, and cannot be blamed on just one factor. What has been discovered through various studies is that while all of the previously mentioned factors likely had some type of effect on the 1997 flood, their absence would not have prevented the flood from occurring, or even significantly lessened its impact.

There are other problems that occurred during the 1997 flood that could have been prevented. In 1997, there was a significant level of coordination that existed between various agencies inside the United States and Canada. One problem encountered was that there was no common program that tied flood-control and preparedness efforts together across international boundaries. As a result, trans-border efforts tended not to meld together seamlessly, sometimes leading to redundancies and problems integrating different flood information and remediation programs.

Currently, the United States and Canada are making progress towards a basin-wide water management group in the Red River Valley, the Red River Basin Commission (RRBC), which hopes to avoid some of the pitfalls that were encountered in 1997. Other major developments have included improved floodplain management;

removing or preventing the location of homes and other buildings in flood-prone areas; and modified building standards that promote the construction of homes less vulnerable to flood damage.

Construction of local protection projects is another way that the 1997 flood effects could have been less severe. Winnipeg was well served by their extensive dike and diversion systems that allowed water to travel relatively harmlessly around the city.

In the United States however, many emergency levees were constructed both in the cities, and around isolated rural farmsteads. Despite this, damage was still severe for Grand Forks and other towns and isolated farmsteads, when those emergency levees were overtopped.

Since the 1997 flood there has been major work on both sides of the international border, with an improved dike being constructed around Grand Forks, and an immense secondary dike being proposed around Winnipeg. Fargo and Wahpeton are also in the process of improving their flood control efforts, as are many other small communities throughout the valley.

However, even though much work has been completed, the danger from flooding still remains. For that reason, we should be forever aware that the next large flood may be just on the horizon. ■