



LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

the

VIADUCT

Dedicated to the conservation, preservation and wise use of our natural resources.

Spring 1998

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Fun in the Sun

300 Students Attend Spring Conservation Sensation

A beautiful spring day and hundreds of elementary students added up to another successful "Spring Conservation Sensation" on Wednesday, May 6 at Czechland Lake near Prague.

Nearly 300 students from a variety of area schools converged on the lake for a day of hands-on learning about natural resources and the environment. Among many other activities, students got to plant trees, launch air-powered "water rockets," spin the "Water Wheel of Fortune," and practice their casting and other fishing skills.

"The Spring Conservation Sensation is a really neat opportunity for kids to learn about their natural resources," said Katherine Vasa, primary coordinator of the event for the Lower Platte North NRD. "This year, with the beautiful weather and the cooperation between the teachers, students, and presenters, it was another big success."

More than 2,500 students have attended the Spring Conservation Sensation since its inception in 1991. The event is open to schools from Butler, Saunders, Platte, Colfax, and Dodge



Lake Life

Larry Angle, Water Resources Manager for the Lower Platte North NRD, shows students some of the aquatic insects found in Czechland Lake as part of the "Lake Ecosystems" session.

counties. Thirteen schools attended the 1998 Sensation.

Presenters for the Conservation Sensation were drawn from a variety of federal, state and local agencies. Members of the Prague FFA chapter served as guides. In-kind services were provided by the Wahoo Dairy Queen.

The event was sponsored by the Lower Platte North Natural Resources District, Saunders County Extension, the Farm Service Agency, the Lower Platte South and Upper Big Blue NRDs, the Natural Resources Conservation Service, the Nebraska Department of Environmental Quality, the Nebraska Game and Parks Commission, and the Nebraska Humanities Council.

The Lower Platte North NRD would like to extend its thanks to all of the volunteers and presenters for their invaluable assistance in staging this popular event.



Blastoff!

A stream of water can be seen trailing behind a "Water Rocket" as it blasts into the sky at the Spring Conservation Sensation. The "rockets" were actually two-liter pop bottles filled with a mixture of compressed air and water. Students experimented to see who could fire their rocket the highest.

What in the World is GIS?

Did you know that for the last year and a half, the Lower Platte North NRD has been compiling DOQQ, DEM and GPS information for use in a GIS?

For the layman, what that alphabet soup boils down to is this: with the click of a mouse button, NRD staff can now access a vast array of information on the district's rivers, towns, watersheds, and dozens of other geographical features.

A Geographic Information System (GIS) is a computer program designed to let users display and analyze geographic data in a variety of ways. One common use of GIS is to produce interactive maps, showing only the features users want to see. For instance, if someone wanted a map showing rivers, watersheds and registered wells in the NRD, the district's GIS could produce a map showing just those features in a matter of seconds.

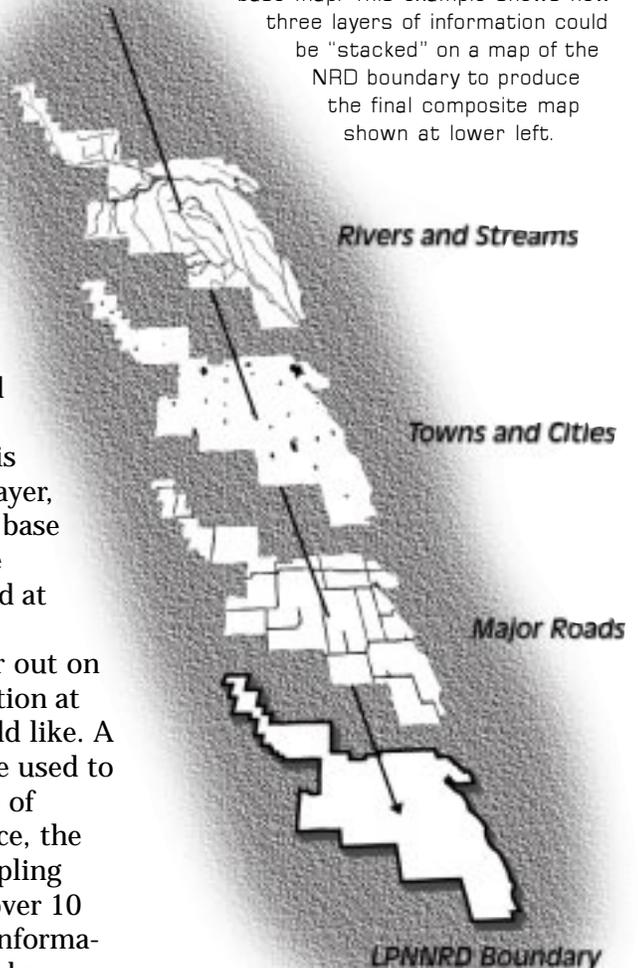
"GIS gives us easy access to information on a landscape level," said Shane Buscher, one of the NRD staff members responsible for creating and maintaining the district's GIS system.

Currently, the Lower Platte North's GIS can display dozens of geographic features, including the district boundaries, county lines, township and range lines, section lines, watershed lines, cities and towns, roads, rivers and streams, lakes, wetlands, registered wells, and many others -- with more being added all the time.

Each type of feature is stored as a "theme," or layer, that can be overlaid on a base map. These layers can be easily added or subtracted at any time.

Users can zoom in or out on the map to view information at whatever scale they would like. A "query" command can be used to find highly specific types of information -- for instance, the location of all water sampling sites with nitrate levels over 10 parts per million. More information also can be obtained by clicking on individual features. For example, clicking on a registered well will show the type of well, the legal description, any water sampling results, and other information.

GIS software allows different layers of information to be overlaid to create a base map. This example shows how three layers of information could be "stacked" on a map of the NRD boundary to produce the final composite map shown at lower left.



Buscher and fellow NRD staffer Shaula Ross built the district's GIS using information from a variety of sources. State and federal natural resources agencies supplied maps and other important tools, such as highly accurate aerial photos known as Digital Ortho Quarter Quadrangles (DOQQs). Digital Elevation Models (DEMs) and Global Positioning System (GPS) coordinates were also incorporated into the system.

In a matter of seconds, GIS users can produce a composite map showing any features they want. This map of the Lower Platte North NRD shows rivers and streams, towns and cities, and major roads in the district.

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IN BRIEF

Review Set for Saunders County Rural Water Feasibility Study

Olsson Associates Consulting Engineers of Lincoln has been hired by the Lower Platte North NRD to conduct a review of the Saunders County Rural Water Feasibility Study. That study, conducted by the U.S. Army Corps of Engineers, concluded that it might not be economically feasible to use treated water from the Mead Ordnance Plant cleanup to create a rural water district in Saunders County. The NRD questioned some of the cost estimates used in reaching that conclusion, which prompted the decision to seek an independent review. Saunders County and the NRD will split the \$6,900 cost for the review.

Small Dams to Receive Funding

The Lower Platte NRD will cooperate on two separate projects to control erosion on county roads in Saunders and

Butler counties. In Saunders County, two small road dams will be built along County Road 30 between roads X and Y to control erosion from a tributary of Sand Creek. In Butler County, a small road dam will be built on County Road 39 between roads V and W to control erosion from a tributary of Skull Creek. The NRD will provide 50 percent cost-share for each project, up to a maximum of \$10,000 in Saunders County and \$6,000 in Butler County.

Elkhorn Breakout IPA Dedication

A dedication for the Elkhorn River Breakout IPA will be held on Monday, June 29 at 4 p.m. at the project site southeast of Fremont. Landowners and project partners will be invited to attend. The project was designed to halt further erosion damage from the Elkhorn River, which caused serious damage when it attempted to cut a new channel during 1993 flooding.

GIS *cont. from page 2*

The end result is an extremely powerful tool for planning future projects and tracking changes in natural resources conditions. Information that was previously stored in dozens of different places has been pulled into a centralized location for easy access by NRD staff.

The public also can benefit from the district's GIS information. For a nominal fee, the NRD staff will produce GIS maps tailored for a customer's specific needs. A CD-ROM sampler is

also available. The sampler contains the district's current GIS database and the ArcExplorer software needed to access the information.

That software is extremely user-friendly, Buscher noted.

"It all sounds complicated, but people shouldn't be scared of GIS," Buscher said. "The hard part, getting the geographic data into a usable form, is done."

"Once people start using the software, they realize how easy and useful GIS can be," he said.

the VIADUCT

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More Than 600 Producers Certified at Nitrogen Management Training

Six hundred and thirty-nine producers in the Lower Platte North NRD were certified in nitrogen management at training sessions held in March. Producers are required to attend the training once every four years under the NRD's Ground Water Management Area rules and regulations.

Eleven training sessions were conducted across the NRD by district staff and four county extension educators. The sessions were well-attended and the feedback received from producers was very positive.

The next round of training will be held January-March, 1999.

Sample Kits Available From NRD For Required GWMA Water Samples

Owners of irrigation, industrial and municipal wells are required to submit a water sample to the Lower Platte North NRD for nitrate analysis once every four years. The NRD has free sample kits available, containing sample jars and instructions for collecting samples. The kits can be ordered by contacting the NRD directly at (402) 443-4675, or by sending in a request card, available at county extension, NRCS, and FSA offices, and at most coops and fertilizer dealers. The cards are postage-paid, so they just have to be filled out and dropped in the mail.

REMINDERS

Ultrasonic Flow Meter Available

The Lower Platte North NRD will have an ultrasonic flow meter available again this summer. The meter is an easy and accurate way to determine the output of a well in gallons per minute. The fee for this service is \$20 for the first well and \$5 for each additional well. However, if other field work is being done for the farmer, a flat \$5 fee will be charged to measure each well, including the first.

Chemigation Permit Renewals

Two hundred and ninety-three renewal forms for chemigation permits were sent to chemigators in April. The deadline for renewing permits was June 1.

New chemigation permits can be applied for at any time by contacting the NRD.