Water Watch

A newsletter for the Maquoketa River Watershed

Upper North Fork residents discuss watershed issues

by Charles Wittman, communications specialist, Maquoketa Watershed Project

There've been many changes to the landscape in the Upper North Fork Maquoketa River watershed in Delaware and Dubuque counties. Some changes have affected water quality and downstream flooding, and watershed residents would like to voluntarily tackle those environmental issues and seek solutions.

Approximately 120 mostly rural residents of the Bear and Hewitt Creeks and North Fork (Headwaters) Maquoketa River subwatersheds discussed a range of water quality issues during three public meetings held March 4-5 in Petersburg, Holy Cross and New Vienna.

Thirty-six of those attending also volunteered to participate in two additional meetings held March 15-16. At these meetings they discussed formation of watershed councils and considered watershed issues in greater depth, including voluntary actions by landowners to improve watershed and water quality management.

The three subwatersheds are upstream of Dyersville in the North Fork Maquoketa watershed (see map on page 2). A project to examine the flooding issues in Dyersville and Cascade began earlier this year, providing a catalyst for initiating citizen participation in these watersheds. A state-federal funded water quality project is proposed for Bear Creek subwatershed. The March meetings were conducted by Iowa State University Extension's Maquoketa Watershed Project staff in cooperation with these two projects.

In small-group settings during the March 4-5 meetings, the residents discussed changes they've noted during the past decade as well as potential issues. Each group was asked to discuss a set of issues and present a consensus response; individual responses also were compiled following the meetings. Following is a summary of those discussions.

• Residents said the big changes were fences disappearing as the shift to corn-soybean rotation took place on farms, the loss of hay ground, filling in of streams (fewer deep holes) and straightening of some streams. Many of these changes contributed to faster movement of water and quicker rising and falling of water levels

continued on page 2

Approximately 120 watershed residents attended three meetings for residents of the Upper North Maquoketa watershed of Delaware and Dubuque counties.

IOWA STATE UNIVERSITY
University Extension

Issue No. 109, April 2004

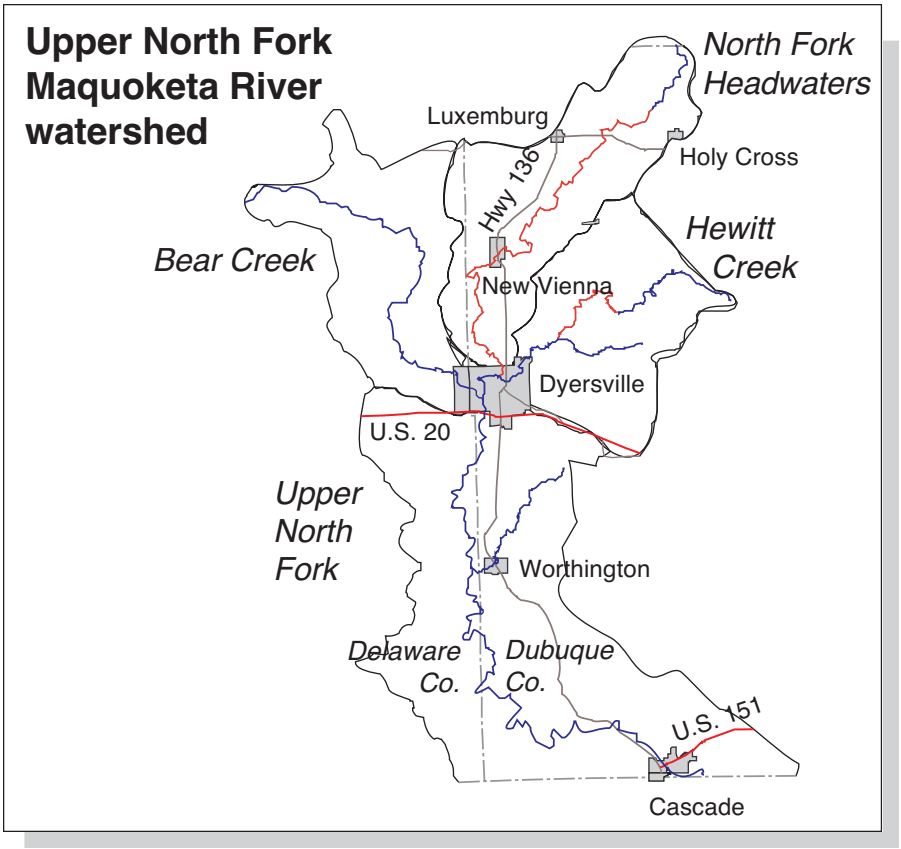
North Fork, cont.

following intense rains. They also noted instances of erosion due to changes in cropping practices, an increase in deer and eagle population but decrease in other wildlife, an increase in tiling, and decrease in pasture acres. On a positive note, they cited a general improvement in septic system outflow (less flow into the streams).

• What issue concerned these rural residents most? They ranked soil erosion as their primary concern. The New Vienna group, the largest of the three, ranked nutrient (nitrogen and phosphorus) losses from fields next, followed by the quality of groundwater and/or well water, the need to protect certain watershed assets and resources, flooding, stream erosion, surface water quality and biodiversity (the range of plants and animals).

• The groups were also asked what should be done to improve the watershed and water quality. The responses were wide ranging. In economic terms, the landowners favored paying farmers for alfalfa or grassland. They viewed monoculture (single crops) as a big negative and favored targeting erosion at points where water enters creeks and waterways, slowing runoff with terraces and ponds and starting conservation work at the top of the watershed (where the problems can start). They thought that the cities should do more to mitigate flooding by not allowing development in flood plains. They also were not in favor of the Iowa Department of Natural Resources making rules telling them what to do.

• Asked what they would like to see happen as a result of the watershed meetings, they said continued communication on the topic, with an emphasis on individual land stewardship, and more incentives and funding for conservation practices. They also thought that their voice would more likely be heard by lawmakers if they spoke as a group rather than as individuals.



• Individually, they are interested in seeing more riparian buffers installed in the watershed, as well as terraces, waterways and filter strips. They also indicated they thought more contour farming, no-till and incorporation of manure would benefit them.

• Residents felt that these beneficial changes would require additional funding, but said they thought they needed more information and technical assistance to make the changes.

• Near the end of the meetings, they were asked to discuss the benefits and barriers to watershed cooperation and coordination of efforts.

Among the benefits they cited were a better ecosystem, better soil with more organic matter, less erosion, less flooding, farmland preservation and overall well-being for everyone in the watershed. "Our kids will get the same or better quality of land than we have," one participant said.

Among the barriers they see are the practices of large-scale agriculture, the cash grain-based farm program, the lack of information about beneficial conservation practices and what the practices will do, costs and the unwillingness to change.

Those attending also said it was very important for all local residents to engage in these efforts to coordinate action to protect and manage the watershed (most gave it the highest rank of 10 on the scale of 1-10; the lowest ranking they gave was 8).

continued on page 4

Performance-based environmental management to be studied

by John Rodecap, ISU Extension coordinator, Maquoketa River Project

Maquoketa River subwatershed residents are developing plans to link farm management decision-making to desirable environmental outcomes. The approach is expected to demonstrate a flexible, accountable and effective system to reduce pollution from agricultural sources.

Watershed residents will evaluate the current status of water quality in their 25,000- to 60,000-acre watersheds. Targeting and prioritizing the most significant issues and "hot spots," they will develop a plan for water quality remediation. Local and regional agency and resource advisors will provide professional and technical expertise and assistance.

The goal is for producers and other residents to be on the ground floor in decision-making for their watersheds. The objective is to demonstrate that citizens in agricultural watersheds will voluntarily adopt and implement locally-based environmental goals in addition to economic goals.

The primary challenges will be to define water quality performance measures appropriate to the watershed that have a reasonable cost and are linked to farm management decisions.

This process will be facilitated by watershed resident councils whose charge is to define mechanisms that link incentives to environmental outcomes. Priority environmental issues vary from one watershed to another, calling for innovative place-based incentives.

Research-based tools including in-field assessment of end-of-season cornstalk nitrate nitrogen and soil test phosphorus and the use of the Iowa P-index and Soil Conditioning Index are expected to aid producers in refining their nutrient management decisions.

Measurable outcomes will motivate farmers to achieve a high level of environmental performance in a least-cost manner. The benefits to producers and the public sector include flexibility, innovation, less-costly solutions and increased ability to measure the effectiveness of conservation funding. Farmers are also aware of the potential market restrictive World Trade Organization (WTO) complaint, "Green Box."

The outcomes will enhance information systems and protect farm profitability as well as the social contract with the full watershed community.

Performance-based incentives for what is to be achieved (environmental outcome) do not dictate how that outcome is to be achieved. Targeting outcomes rather than practices promotes producer innovation in finding environmental solutions.

According to the U.S. Environmental Protection Agency, performance-based management is likely to become a prominent part of U.S. agriculture/environmental policy in the coming decades.

The goal of performance-based environmental management is to have producers and other watershed residents participate in decision-making for their watersheds from the beginning.

This performance-based environmental management model is circular and repeating with resident participation central to the process, instead of a linear model where residents participate only at certain stages.

Water Watch to end paper edition

After 20 years of covering nutrient management, conservation and other issues related to water quality, *Water Watch* newsletter will no longer be published in the current four-page paper format. The elimination of funding for staff, printing and postage means that future issues will probably be limited to electronic versions.

Water Watch started publication in 1984 to serve the Big Spring Basin Demonstration Project in Clayton County. From 1992-99, it served as the newsletter for the Northeast Iowa Demonstration Project.

In 1999, as the Maquoketa River Watershed Project was established, agencies that were part of the Maquoketa River Alliance decided that *Water Watch* should serve as the newsletter providing information to Maquoketa River watershed residents.

Water Watch was published as part of the water quality information and education effort funded by the Iowa Department of Natural Resources (IDNR), in which it was the I&E effort of the focused watershed projects in northeast Iowa.

Writing in the March/April 2004 issue of Iowa Conservationist, IDNR director Jeffrey Vonk says the state can be proud of recent improvements in water quality, in particular 31 stream maintaining viable and 27 additional coldwater streams with some natural reproduction of brown and brook trout.

If you would like to receive an electronic version of any future *Water Watch* publication, please provide us with an email address, by phone (563 425-3233) or email (jrodecap@iastate.edu). We will establish an email mailing list either to distribute the electronic version or to notify subscribers of the newest on-line issue. Current planning calls for maintaining the present schedule of publication, February, April, June, August, October and December.

Future issues, as well as archive issues back to December 1998 (#77), will be available at the web site, http://extension.agron.iastate.edu/waterquality/neidpmaterials/wwnews.html

Nork Fork cont.

Rural residents said that residents of both Dyersville and Cascade, and politicians also should be involved in the discussions.

Water Watch is published bimonthly and funded, in part, by the USDA CSREES project number 00-51130-9731, the Iowa Department of Natural Resources through a grant from the U.S. Environmental Protection Agency under the Federal Nonpoint Source Management Program (Section 319 of the Clean Water Act), and Iowa State University Extension. The newsletter is free to project participants and those interested in issues involving farming methods and their effects on groundwater quality. Subscribe by sending your address to **Water Watch,** Box 487, Fayette, IA 52142.
Charles Wittman, editor.
Phone: 563 425-3233; E-mail: cwittman@iastate.edu; Web site: http://extension.agron.iastate.edu/waterquality/

Maquoketa Watershed Project
P.O. Box 487
201 E. Clark
Fayette, IA 52142