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**POLLUTION FIGHTER**

## Wetlands would boost Big Darby, scientists say

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THE COLUMBUS DISPATCH

Placing wetlands along Big Darby Creek could do wonders for water quality in the stream, scientists say.

A report in the summer issue of the Ohio Journal of Science suggests that the first two wetlands — which filter pollutants from streams — could be created on property owned by the Nature Conservancy.

Li Zhang, lead author of the paper, said a wetland placed at the confluence of the Big Darby and the Flat Branch stream could remove contaminants, especially metals, that now enter the 5-mile Darby tributary from Honda of America plants near East Liberty and Marysville.

"It's a wonderful solution for water quality and recreation and to provide habitat for the fish and birds," Zhang said.

A wetland farther north could clean agricultural pollutants in the northern reaches of the stream and improve stream quality as far south as Columbus.

The wetlands wouldn't have to be bigger than 10 acres, said Daniel Fink, another author of the paper.

Zhang and Fink are scientists at the Olentangy River Wetland Research Park, 30 acres on Ohio State University property that include three man-made wetlands built a decade ago.

The Ohio Chapter of the Nature Conservancy paid \$25,000 for the research.

Protecting the creek and restoring it to some semblance of its character when European settlers first arrived in the area are priorities, said Richard Shank, the state chapter's director

The study provides the scientific background for a restoration project that the group hopes to begin within two years.

"If you protect your headwaters, it will benefit the entire system," Shank said.

Their research, conducted between 2000 and 2003, indicates that the stream above Flat Branch is relatively clean, Zhang said. But pollution entering the Big Darby from Flat Branch, which drains land near the Honda manufacturing plants near Marysville, changes the nature of the stream farther south.

Fink said that because the Flat Branch flows through well-drained agricultural land, water enters the stream fast and quickly discharges into the Big Darby. Scientists call streams such as this "flashy."

The water carries metals and soil that reduce oxygen-producing plant life, leading to stretches of the stream that have low oxygen concentrations. But add a wetland and things could improve, the researchers say.

For example, the roots of trees and other plants growing in wetlands filter metals, chemicals and eroded soil from water.

A few more well-chosen wetlands, Fink said, would help produce water that contains more insects, fish and mollusks as far south as Columbus.

Constructing wetlands would be part of an overall effort to create buffer zones of grass, shrubs and woods along streams in the Darby and Scioto watersheds to filter pollutants. A federal pilot program that pays landowners to set aside buffer zones

along waterways has been in effect in the Darby watershed for several years. Plans were announced in 2004 to expand it to the entire Scioto watershed over the next 25 years — if money is available. The conservancy owns 550 acres, and the Ohio Department of Natural Resources owns 100 acres in the upper reaches of the stream. This land likely would provide the core of any wetlands project. Shank also said it is important to encourage Honda, the largest landowner in the region, to continue environmental improvements at its manufacturing facilities. "No one is going to be big enough to do it all," he said.

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