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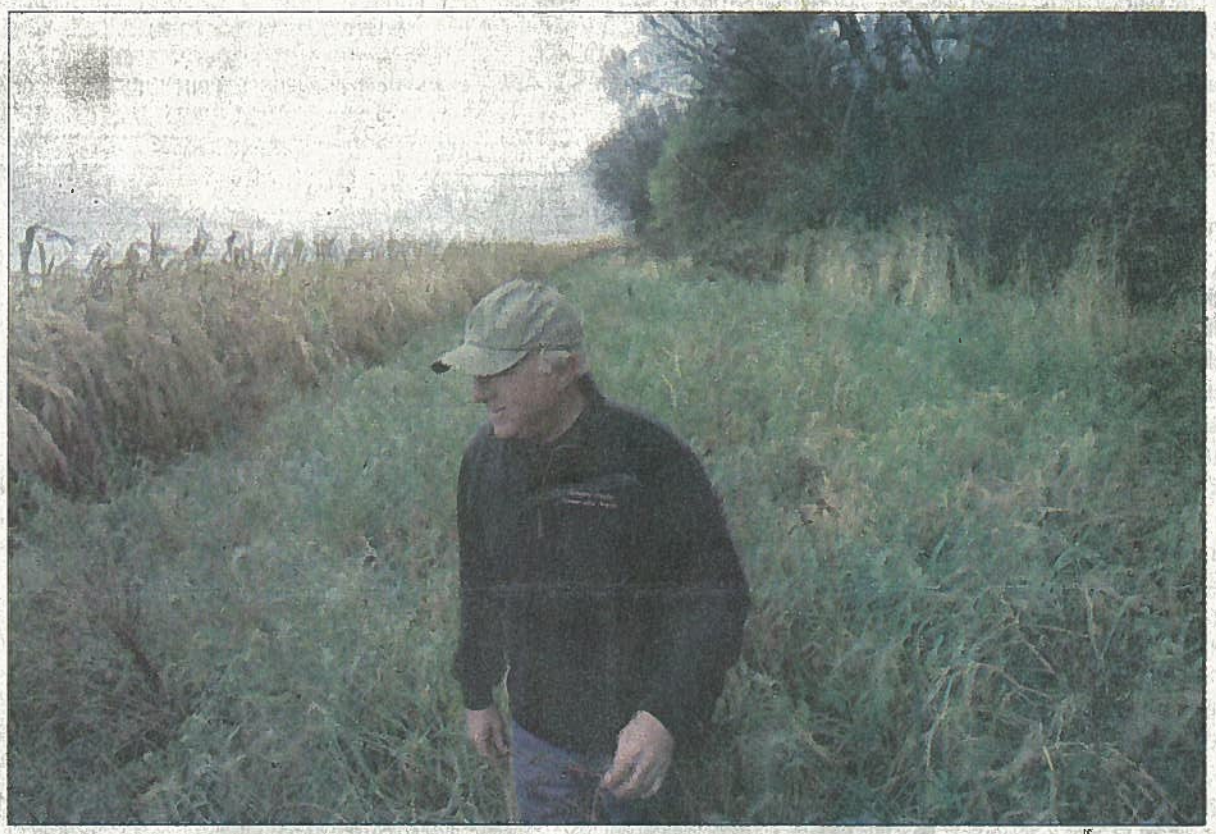
GROUND CONTROL

FARMERS PART OF THE **PROBLEM**, **SOLUTION** TO WATER POLLUTION



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Glen Von Bergen, district special program coordinator for McHenry County Conservation District, walks through an MCCD planted filter strip that borders the agricultural land throughout the county. The strip helps filter runoff of pollutants.

EPA cites agriculture, not industry, as primary water polluter

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Wildflowers and grasses act as a filter strip to remove sediment and other pollutants that can run off from agricultural land.

By KEVIN P. CRAVER
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Ask anybody what they think is the largest source of water contamination, and industry most likely will be the culprit they name.

It's not hard to explain why, from Erin Brockovich's fight against Pacific Gas and Electric to Love Canal, N.Y., or locally, since 2006, when brain cancer cases in McCullom Lake were blamed in lawsuits on groundwater contamination from neighboring manufacturers.

But industry isn't the biggest water polluter, which is a daunting thought, given that it dumped 232 million pounds of toxic chemicals into U.S. waterways in 2007, according to a report released this week by Environment America, a federation of state and local environmental groups.

It's agriculture.

The largest source of contamination of lakes and rivers is runoff from the nation's 330 million acres of agricultural land, according to the U.S. Environmental Protection Agency. It also plays a significant role in contamination of groundwater and estuaries.

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Conservation District provides guidelines to land use

• POLLUTION

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Primary agricultural pollutants are sediment, which brings with it nitrogen and phosphorus, which affects aquatic life by lowering the oxygen content of water.

It's a statistic that local farmers have been addressing for years through improved management practices and technology, according to experts such as David Brandt, district conservationist for the U.S. Department of Agriculture Natural Resources Conservation Service.

"Agriculture is an excellent neighbor to our natural resources, because if you do the proper things, it's an excellent land use," Brandt said. "Agriculture and water protection can go hand in hand if you develop a good conservation plan and apply it."

People can spot such measures if they know what to look for. Farmers who lease McHenry County Conservation District land must abide by conservation guidelines on chemical use and where they plant, said Glen Von Bergen, district special program coordinator. He pointed out a farm property near the district's headquarters west of Woodstock, where a gap of tall grasses stood between corn ready for harvest and trees leading down to a tributary of the Kishwaukee River.

The buffer is called a filter strip because the grasses' deep roots filter the runoff from the field. Other fertilizer and other chemicals farmers can use. Land buffers mean farmers can't plant as much as they would like, but Von Bergen said the district's 68 tenant farmers didn't mind the rules.

"I think this is a big leap ahead for the conservation district to more vigorously protect the waterways," Von Bergen said.

Many agricultural uses are exempt from the federal Clean Water Act, said Stacy James, water resources scientist for the Springfield-based Prairie Rivers Network. The nonprofit agency estimates that 80 percent of Illinois land is devoted to agriculture, with corn, soybeans and pigs being the largest uses.

"Because of the sheer amount of acreage and the fact that the Clean Water Act does not regulate most pollution discharges from agriculture, a farmer can apply however much fertilizer or pesticides they want to their property, and they don't have to have a permit for that, whereas industry has to have a permit from the [Illinois Environmental Protection Agency] as to how much pollution they can discharge," James said.

Agricultural uses that create specific point sources of contamination, such as high-density livestock "factory farms," require IEPA discharge permits, James said, but the agency has neither the funding nor the staff to adequately enforce compliance.

But agricultural impact on water significantly has improved over the past an acre in the early 1980s to 2.7 tons an acre today. Volkers also said that farmers who bought agrochemicals in bulk must take and pass a test on how to apply them.

Volkers and Brandt said that development posed just as much of a threat to water as agriculture. Volkers referenced a recent study of the Kishwaukee River by the Chicago Metropolitan Agency for Planning, which concluded that the majority of its nitrogen and phosphorus content comes from municipal wastewater, not agriculture. Brandt likewise said that water quality decreased significantly as population density increased because of roads, impervious surfaces, lawn treatments and other sources.

"It's not to say that [agriculture] is perfect by any means, but in general we can say we're moving in the right direction," Volkers said.

Technical advances also are helping water quality in the long run, Brandt said. One such advance is variable rate technology, which allows tractors equipped with global positioning systems to apply the exact amount of chemicals where they are needed, based on soil conditions throughout farmers' land. The technology helps farmers save money, given the price of fertilizers.

Brandt said that other ideas, such as filter strips and other land buffers, are not catching on as fast.

"We've had a hard time selling the idea of filter

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Green waterways between cornfields help with directing and filtering water.