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Farmers use dams to keep water on land

Model for future practices

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WAYNE GLOWACKI / WINNIPEG FREE PRESS Bryan Osborne (left) and Les McEwan of the Tobacco Creek Model Watershed stand near a reservoir along the Tobacco Creek.

DEERWOOD, Man. -- For the past 26 years, about 150 property owners around this tiny south-central Manitoba hamlet have chosen to add something to their land most farmers are trying to remove.

Since 1985, members of the Deerwood Soil and Water Management Association have built 50 small dams on the Manitoba Escarpment in an effort to prevent water from flowing off their properties and racing to the bottom of the escarpment, about 200 metres below.

Some of the structures are simple earthen berms designed to hold snowmelt or runoff from summer rainstorms for a few days.

Others are back-flood dams designed to submerge large acreages at a shallow depth for a few weeks, in order to increase soil moisture.

Still others are more permanent dams that act as artificial

wetlands -- complete with marsh vegetation -- as well as water sources for cattle or orchards.

In a province where the vast majority of farmers are under financial pressure to drain as much of their land as possible, the deliberate effort to hold water back is unusual.

But it may be a glimpse of a future where small dams -- officially, "headwater retention structures" -- are the norm on agricultural land near the top of watersheds.

"There's no real incentive for farmers to avoid draining their land," said Les McEwan, a grain farmer who serves as both the chairman of the Deerwood association and of the Tobacco Creek Model Watershed, a scientific research project that covers the broader drainage basin.

"What are farmers being paid for? What do they get for storing water? It has to be easier for them to store water than to drain it."

Back in 1985, producers in the Deerwood area began building dams in an effort to prevent erosion downstream and spare the rural municipalities of Thompson, Dufferin, Roland and Morris the expense of repairing flood-damaged infrastructure.

Today, the small dams -- half of them built with a single \$250,000 investment -- are also being used to study the benefits of a variety of sustainable-agriculture practices.

McEwan hopes they will serve as a model for similar structures across southern Manitoba.

But there's still a gap between the cost of the dams and the benefits farmers receive.

In fact, incentives aimed at convincing agricultural producers to hold on to their wetlands in Manitoba have met with mixed success, despite the fact most farmers endorse the concept of storing water.

"We strongly believe farmers can play a role in storing water and alleviating flood pressures, but there's no economic model for farmers to follow that in the practical world," said Doug Chorney, a St. Clements grain farmer who serves as president of Keystone Agricultural Producers, Manitoba's largest farm policy organization.

"They're under financial pressure to be as productive as possible with the land they own. They can't let their land remain idle."

All a farmer in Manitoba has to do in order to drain wetlands is apply for a drainage licence, which are routinely issued for sloughs or potholes that only hold water for several months a year. The province will not allow drainage of wetlands that store water for more than half the year, said Dwight Williamson, assistant deputy minister of Manitoba Water Stewardship.

Landowners seeking drainage licences must lay out what will be drained, how the drain will be built, where the water will go and who will be affected downstream, Williamson said.

The province has not offered incentives to drain land since the early 20th century, when some of southern Manitoba's largest wetlands were drained systematically.

Conversely, Manitoba Water Stewardship has tried to reclaim some wetlands over the past decade. In 2008, the ministry set aside \$2 million to restore drained wetlands. Since then, \$1.2 million has been paid out to reclaim 8,000 acres, Williamson said. Another 2,600 acres were protected through a tax-credit program that ran from 2003 to 2010.

The RM of Dufferin, meanwhile, offers farmers \$40 an acre to store water on low-lying areas.

Dufferin's program has been successful in spite of the fact prime potato and corn-growing plots within the municipality can easily sell for more than \$2,000 an acre.

"The farmers don't need to get retail value for that land," Chorney explained. "They're not taking their best land and storing water on it. They're taking land that was probably drowned out one out of every three years."

Chorney said he prefers to see programs that provide a benefit to farmers than policies that simply add to the regulations they face. A blanket moratorium on drainage -- a concept supported by Ducks Unlimited -- would only lead to illegal drainage, he said.

Ultimately, the province is trying to find the tricky balance between preserving wetlands and supporting agriculture, said Williamson, who praised the small dams at Deerwood but also noted they are artificial structures.

"We need to return as many wetlands back to their natural state and retain as many as possible, but also recognize the incredible productivity of this part of the landscape for producing food for the world," he said. "These are not easy public policy issues to work through."

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