



natural advantage:

THE ON-FARM WILDLIFE
AND BIODIVERSITY PLANNING SERVICE.

Producers target wetland restoration

Murray Abel's farm is typical of the new interest and emerging support available for producers restoring wetlands

Ask many producers what's holding them back from restoring wetlands on their property and chances are they will tell you that they do not want to take valuable farmland out of production. It's a major reason why thousands of acres of sloughs and other wetlands have been drained over the years as producers have attempted to get the most value from their land.

At the same time, more and more producers are rethinking wetlands for a number of reasons. Some have realized that these areas are often only marginal as farmland. Others have been motivated by the loss of beneficial species and aesthetic appeal essential to many wetlands. Others, particularly cattle producers, have been driven by the promise of safer, cleaner water supplies. And others, such as Murray Abel, a beef and grain producer from Lacombe, Alberta, are simply tired of fighting a losing battle.

"My father drained a large slough on our property back in 1956. He figured we would gain more cropland, but in reality all we got was a little bit of extra hay. Recently we decided to put it back to the way it was. Since we did, there has been more wildlife on the land and it simply looks better. And although I would have a hard time identifying a precise financial payback from doing it, I can say with confidence that restoring the wetland hasn't taken away from my profitability."

Why restore wetlands?

For most producers, wetland restoration means physically restoring these water bodies to the point where they resemble the state and function they played before they were drained. This usually means installing small dams and control structures.

Interest in wetland restoration has been consistent with how much people know about the benefits of wetlands, says Kim Schmitt, director of Ducks Unlimited Canada's (DUC) Natural Advantage program. Although interest is growing, he says it is still in its infancy. Most interest has been expressed by livestock and mixed farm producers, who generally see a more immediate return on investment because of the positive impact of wetlands on water quality.

"For straight crop producers, the benefit isn't necessarily to their cropping system and, in many cases, wetlands are seen as an obstacle to either work around or drain in order to maximize cropland," says Schmitt. "For them, the challenge is to align the benefits of wetlands with their long-term goals as stewards of the land. However, there are plenty of reasons why most producers with drained wetlands would want to look into wetland restoration."

Flood prevention. In some ways, wetlands are natural insurance against flooding because they retain moisture in the soil, in the process helping to create storage for excess precipitation. This will become more and more important as weather patterns become increasingly volatile, says Schmitt.

“The climate change models for central Alberta, for example, do not indicate big changes in moisture, but they do forecast increased volatility. In other words, rain is going to come faster, harder, and in more abrupt fits and starts. Wetlands can play a key role in providing natural storage and reducing local and downstream flooding in these events.”

They’re the ‘kidneys of the land!’ Wetlands are like the kidneys of the land, purifying its fluids in much the same way kidneys do in the human body, says Schmitt. They slow down the flow of water across the surface, allowing more time for potential pollutants such as nitrogen and phosphorus to adhere to soil particles, fall out of suspension and later enhance plant growth. In the process, they protect water quality, making water supplies safer for human and livestock consumption.

Wildlife diversity. From a crop production perspective, there is growing evidence that wetlands and their margins provide habitat for the natural enemies of a number of crop pests, says Schmitt. “And in an era when producers are becoming proactive about the industry’s overall values and image, the presence of a range of wildlife can help create an image of ecological stewardship which can carry a powerful emotional appeal for a growing number of food consumers and land investors.”

Getting proper help

There is growing financial, technical and moral support available for producers who decide to restore their wetlands. And part of the reason help is available is because most landowners need help with what can be a technically precise process with potential liability issues.

A wetland restoration project can have a negative impact on the landscape if it is not designed and engineered correctly, says Dave Martz, civil engineer with DUC. “Generally, there are potential impacts of any restoration project that are difficult to anticipate. It can easily have an unanticipated impact on upstream or downstream neighbours. You could be allowing some silt to get into a stream which could cause some concerns for the health of aquatic life, for example.”

That’s where resources such as DUC come in. DUC can assist producers through every stage of a restoration project, including bearing project costs if the organization decides to support the project. This decision is usually based on the overall value of the wetland and its capacity to be restored, says Martz.

“Generally, most wetlands, from a biological point of view, would be better off restored. However, we tend to target projects based on overall benefit, with key waterfowl areas being a prime example. On the other hand, a wetlands surrounded by industrial development, for example, may have very little biological function at all. Others might be so heavily impacted that their overall value has been permanently compromised.”

Once a project has been approved, DUC does all of the footwork, including surveying, engineering, construction, and navigating the frequently complex licensing process. “Much of the information required in

the licensing process is highly technical in nature and many people may find it difficult to understand. That's why one of the primary services we offer is application for the required licensing under the Alberta Water Act and any other departmental or municipal licensing required for the project to go forward."

The scale of restoration projects DUC supports ranges from very small projects such as reclaiming small sloughs in farmers' fields using small ditch plugs to larger engineered dams, says Barry Bishop, DUC head of wetland restoration for Alberta. So what's to stop landowners from simply draining the wetland again? In the majority of cases, landowners sign an agreement to not alter the wetland in exchange for DUC's services and resources, says Bishop. These agreements can take the form of a conservation easement, an agreement that stays with the land after the land is sold, or in some cases a shorter-term conservation agreement.

Today's farmers are adept at business and they have a stronger conservation ethic, so entering into agreements, which in the past was often a hard sell, is becoming a much more common element of the farm or ranch operation. The majority of DUC projects are the result of landowners approaching DUC for assistance, meaning they have often already recognized the need for long-term stewardship, says Bishop. "If they don't see that need for conservation, then it's a more difficult sell."

The Natural Advantage service – a key tool

To Julie Pierce, helping producers recognize opportunities and value is one of her key responsibilities. As a biologist for DUC's Natural Advantage service, Alberta's on-farm wildlife and biodiversity planning program, Pierce visits participating farms and ranches to assess wildlife habitat, including wetlands. For producers, the final product of the Natural Advantage process is a written report that can serve as a guideline to improving these areas.

Sixty-two farms and ranches representing over 90,000 acres containing over 7,500 acres of wetland throughout Alberta participated in the pilot version of the program in 2007. The demand for the service continued in 2008 with at least that many participating in the season. Participants for 2009 are now welcome to register.

Producers with questions about participating in the Natural Advantage program can contact biologists Julie Pierce in Edmonton at (780) 930-1255, Sandy Elliott in Red Deer at (403) 872-5839, or Amber Robinson in Red Deer at (403) 342-1314. General information on Ducks Unlimited Canada and its wetland restoration services is available on the DUC Web site at **www.ducks.ca** or by calling **1-866-479-DUCK (3825)**.