



WETLANDS & WATER QUALITY

The next time you mop up a spill with a sponge, think of a wetland. And then, think of your tap water. Wetlands act as huge ecological sponges by soaking up pollutants and filtering water before it reaches your tap. They also store water for later use.

The problem is North America is running out of these sponges. Despite the extensive efforts of groups like Ducks Unlimited to conserve wetlands, these areas continue to be lost or degraded across the continent.



Ducks Unlimited Canada

WETLANDS ARE VITAL TO YOUR TAP WATER

On the Canadian Prairies, more than 70 per cent of the wetlands have been altered or lost. Over 85 per cent of the destruction can be attributed to agricultural activities. In eastern Canada, urban sprawl has taken a heavy toll on wetlands. In the continental U.S., less than half of the original wetlands remain.

Why are wetlands being destroyed at such an alarming rate?

The answer is simple. Farmers believe it's more profitable to drain wetlands for crop cultivation. And the pressure to expand urban areas is constant. So while you are out shopping for water purifiers, the natural filters we call wetlands are being lost.

As people begin to understand the broader values of natural wetlands and what they mean to us, society needs to find ways to compensate farmers and developers rather than punishing them in lost profits and taxes.

Henry Murkin, senior research scientist at DU's Institute for Wetland and Waterfowl Research, says a radical change in thinking is needed to halt further devastation. Canadians can no longer afford to go with the flow.

"We're still losing wetlands even in spite of the efforts of conservation groups," Murkin said.

For more than 60 years, DU has known about the wealth wetlands have to offer in terms of providing habitat for waterfowl, fish and countless other aquatic species and land mammals. But researchers are only now starting to understand the role wetlands play in keeping our drinking water clean.

"With the wildlife focus in the past, we haven't really done a lot of research in these other areas," Murkin said. "We're only now beginning to identify these other wetland functions. And that's why we have to put effort into understanding them—now."

In addition to providing homes for plants and animals, wetlands also:

- Help to purify surface water by breaking down, removing, using or trapping nutrients, agricultural herbicides and pesticides, organic waste and sediment that is carried to them by runoff water.
- Reduce the severity of floods downstream by retaining water and releasing it slowly during drier periods.
- Protect shorelines from erosion by slowing the flow of water and lowering the crest of rivers and streams during spring and storm runoff peaks.
- Recharge groundwater supplies by soaking up surface water and allowing some of it to seep back into the ground where it is filtered even further.

Not all wetlands are closed basins. The water in them eventually flows out into our water supplies, Murkin explained.

"As it passes through that wetland it gets cleaned up. The plants take up the nutrients. Soils and microbes in the wetland break down the

contaminants like the agricultural chemicals and convert them into a less harmful state. So when it leaves that wetland your water is much cleaner."

The IWWR has been working on clean water issues in Canada, the United States and Mexico as concern emerges about North America's impending fresh water shortage.

"It's becoming better understood that there's a crisis looming on the horizon," he said.

The Freshwater Initiative, an IWWR program, is taking a closer look at water quality issues in the Great Plains regions of the U.S. and Canada where significant wetland damage has occurred.

Surveys indicate water quality is high on the public priority list, yet most people don't know how wetlands figure into the equation.

That's why DU is renewing its appeal to conserve wetlands for waterfowl, wildlife and people.

Murkin stresses that more expensive water and sewage treatment facilities are not the answer. The solution is conserving wetlands that perform the same function.

"There is a lot of activity right across North America now where they are using wetlands to treat wastewater," he said. "Quite often a community will release water following tertiary treatment into a wetland where it is polished even further before being released into the receiving water body."

Wetlands that were once lost are now being restored with promising results for treating water naturally.

In the coming years, the IWWR wants to explore exactly what other natural water treatment services that wetlands have to offer.

Unless Canadians begin to treat wetlands with respect, we can expect to drink more bottled water and see algae and toxin filled rivers and lakes, increased flood damage and shoreline erosion. And if that isn't enough, consider the loss of wildlife and plant species and billions of dollars in lost revenue from hunting, fishing, outdoor recreation and tourism.

Just as the world's rainforests are the key to fresh oxygen, wetlands are the key to fresh water. The difference is wetlands can be found right in our backyard.

For more information contact:
Ducks Unlimited Canada
1-800-665-DUCK
webfoot@ducks.ca
www.ducks.ca

