

## **Protecting freshwater resources**

### **Lakes, rivers, groundwater celebrated in 'Year of Water' declaration #10**

No matter who we are, where we are, and what we do, we are all dependent on water. We need it every day, in so many ways. We need it to stay healthy; we need it for growing food, for transportation, irrigation and industry. We need it for animals and plants, for changing colors and seasons.

However, despite the importance of water resources in our lives and well-being, we are increasingly disrespectful of them.

"We abuse them. We waste them. We pollute them, forgetting how essential they are to our very survival, said Patrick Goggin, county conservationist with the Vilas County Land and Water Conservation Department.

In an attempt to increase awareness of the need for everyone to have clean water resources, he said the United Nations (UN) has declared 2003 as the International Year of Freshwater.

"Lack of access to water, for drinking, hygiene and food security, inflicts enormous hardship on more than a billion members of the human family," said United Nations Secretary-General Kofi Annan.

"Water is likely becoming a growing source of tension and fierce competition between nations, if present trends continue, but it can also be a catalyst for cooperation. The International Year of Freshwater can play a vital role in generating the action needed--not only for governments but also civil society, communities, the business sector and individuals all over the world," he said

According to the UN, water scarcity is also a critical issue in future world development. Water use grew at more than twice the rate of population during the 20th century. A number of regions, such as the Middle East, North Africa, and South Asia, are chronically water-short. Already, four out of every ten people worldwide live in areas experiencing water scarcity conditions.

It is projected that by 2025 as many as two-thirds of the world's population -- estimated 5.5 billion people -- may be living in countries that face a serious water shortage problem.

Wisconsin has also declared 2003 to be the "Year of Water." Statewide, people are celebrating and recognizing how important freshwater resources are to our well-being.

"Water is essential to life, and is at the heart of what makes Wisconsin unique, with our 15,000 lakes, 44,000 miles of rivers, and 1.2 quadrillion gallons of groundwater," said Shaili Pfeiffer, Waters of Wisconsin associate with the Wisconsin Academy of Sciences, Arts and Letters.

"Wisconsin's Year of Water celebrates our waters and their importance to us all, and raises awareness about the challenges and threats our waters face. This year is a time for us to highlight our successes in conservation, protection, and restoration. And it's a time to ensure our water's future by working harder to protect our watersheds, make our waters cleaner, and conserve our bountiful but finite water supply," said Pfeiffer.

For more information see the Wisconsin Year of Water web site at [www.wisconsinyearofwater.org](http://www.wisconsinyearofwater.org).

## **Path to cleaner water**

Goggin said the Clean Water Act has done a good job of reducing pollution from "point" sources, like a factory wastewater discharge pipe. However, another challenge to tackle is trying to control pollution from what is called "nonpoint sources", according to Goggin.

"Nonpoint sources of pollution do not come from a single place, but instead are washing off the landscape or blowing in the wind and getting into lakes and rivers when it rains or the snow melts. A nonpoint source of pollution might be fertilizer from a person's lawn or sediment from improperly managed construction sites, crop and forestlands, and eroding stream banks washing downstream into a lake after a rainfall," suggested Goggin.

"For example, you can recycle motor oil from your car or other vehicles. Old motor oil can be reprocessed and used again. Never pour old oil down a storm drain or leave it in a container near to a lake or stream where it can find its way to the water."

For people living on or near a lake, he said washing vehicles at a commercial car wash can reduce the amount of soapy water heading into your local lake or stream.

"Soap can act like a fertilizer when it gets into a lake, causing weed and algae growth," he said. "If you really need to wash your car at home, do it on the lawn or on a gravel drive."

In the winter time, he suggests more shoveling and less use of salt.

"Throwing down salt may be an easy way to get rid of snow and ice, but it pollutes lakes, streams and groundwater. It also isn't good for trees and grass. If you can shovel your driveway and sidewalk before the snow gets packed down and icy, you won't have to use salt. If the pavement is still icy, use sand or sand mixed with salt to provide traction and melt snow, said Goggin.

### **Conserving water resources**

Goggin said people can follow several simple steps to conserve water resources. "Turn off the tap in your bathroom while you brush your teeth or take a shorter shower. Don't let the water run constantly while you're washing or rinsing dishes. You can fill a pitcher with tap water and put it in the fridge, rather than running the tap every time you want a cold drink," he said. "Around the house, clean sidewalks and driveways with a broom--not the water hose!"

He said gardeners, group your plants into high- or low- water users so that you can design a watering pattern that will prevent wasted watering on plants that don't need it.

"Always water your plants during the early morning hours or in the evening, when temperatures are cooler, to minimize evaporation. Capture rainwater to water your plants in cans or other containers. Using drip hose is another way to conserve water, as is placing a layer of mulch around trees and plants to retain water," said Goggin.

### **Beware fertilizers**

When the nitrogen and phosphorus from fertilizer washes into lakes and streams they create harmful algae blooms and aquatic weed growth. They also lower the dissolved oxygen levels in the water and they may release ammonia, which is toxic to fish. So what can you do?

Before planting a garden or fertilizing your lawn, Goggin suggests having your soil tested.

"That way you're not guessing about what nutrients you need and you won't add too much fertilizer. It is best to fertilize in the fall in order to promote healthy lawns with deep roots," he said.

He suggests people who live on a lake use lake water to fertilize your lawn and plant beds. He said lake water often has nutrient levels sufficient to grow healthy vegetation.

He said property owners should sweep up from sidewalks or driveways any spilled fertilizer, soil, grass clippings or leaves, which also contain nitrogen and phosphorus.

"Be careful with pesticides -- if they must be used at all -- as they can also hurt pets and other plants and animals that you don't want to kill. Pesticides can be herbicides which kill plants, insecticides which kill insects and fungicides which kill fungi," he said.

To cut down or eliminate the use of pesticides, Goggin suggests planting disease-resistant varieties of plants and planting enough vegetables expecting to lose some to disease. He advises that people do their best to keep birds and other natural pest predators visiting your yard.

"In addition, it is important that you take care when disposing of pet waste. If pet waste is washed into lakes or streams, the waste decays, using up oxygen. It also contains nutrients that cause weeds and algae to grow. Overly fertile water becomes cloudy and green and is not someplace you would want to swim. And, pet waste can carry diseases which make water unsafe for swimming and drinking," he said.

### **Composting**

Goggin suggests composting as another way to help protect water quality, including what to do with those piles of leaves each fall.

"State law bans yard waste--leaves, grass clippings, garden debris, and brush from our landfills. Burning them is not the best idea either. Backyard burning pollutes the air, creates a fire hazard, and can bother your neighbors. Wisconsin air quality and fire control rules restrict backyard burning, and many communities prohibit it altogether," said Goggin.

He said composting is nature's way of turning yard "waste" into a valuable soil conditioner. It's best to chop your leaves up with a hoe, shovel, or mower, which will help them decompose more quickly. Compost improves soil structure, holds in moisture and plant nutrients, and promotes strong, healthy root systems for plant growth. It can be mixed into garden soil or lawn soil before planting or seeding.

"To compost leaves, in a heap, layer your yard waste as it accumulates. Water so compost is kept as moist as a wrung-out sponge. In a year to 18 months, the material at the bottom and center of the pile will be dark, crumbly compost. Sift, and use the uncomposted material to start a new batch," he said.

### **Septic checkup**

Most Wisconsin residents who live in rural areas realize that they are responsible for managing a sewage treatment system on their property, usually a septic tank and drain field. They are required to provide their county with evidence every three years that their septic system has been inspected.

"A state requirement that every septic system in the state be maintained was enacted in July 2000," said Jim Peterson of the UW-Extension Public Relations Department.

"The drain field must be checked every three years. The tank needs to be checked every three years, but only needs to be pumped when pumping is needed," he said.

The law states that any septic system that existed prior to July 1, 2000, and uses a treatment or dispersal component must be inspected visually at least once every three years to determine if wastewater or effluent is ponding on the surface of the ground.

To help residents learn more about how to maintain a system, University of Wisconsin-Extension offers the publication, "Care and Maintenance of Residential Septic Systems", a practical and easy-to-read guide to sewage management duties.

"The publication describes how residential septic systems work and explains what you should and should not feed your septic system. It provides advice to help you prolong the life of the system, as well as listing danger signs of a failing system," noted Peterson.

For a copy contact your county UW-Extension office or go to [www1.uwex.edu/ces/pubs/index.cfm](http://www1.uwex.edu/ces/pubs/index.cfm) on the Web.