

**PROTECTING ONTARIO'S WATER.** Conservation Ontario and its 36 member Conservation Authorities, along with their industry and non-profit partners, work hard every day to monitor our environment, conduct research, influence public policy and, most important, deliver programs and services that guard Ontario's water today for a better, healthier tomorrow.

# H<sub>2</sub>Ontario



Water conservation in Ontario is based on a watershed management model. Each watershed – an area of land where every lake, river, stream and groundwater source drains to a common larger body of water – is unique. The watershed management model seeks to balance the protection and rehabilitation of the environment with the benefits of orderly growth and development.

Ontario's many watersheds are each self-contained and part of an interconnected ecosystem.

They carry and contain the life-giving water that we rely on in so many aspects of our lives; everything from cultivating crops to enjoying gardens in our yards, from having healthy water to drink to sending healthy water downstream for someone else to drink.

It all depends on managing our watersheds well.

And thanks to Ontario's 36 Conservation Authorities and their network association – Conservation Ontario – residents of this beautiful province are working together to protect our watersheds.

"People understand the importance of water conservation and protection," says Don Pearson, general manager of Conservation Ontario. "They are taking individual responsibility for our water more seriously."

While treating our water with care is always said to start at home – with the individual – no one is alone in their efforts.

Ontario's Conservation

*90 per cent of Ontario's population – over 10 million people – live in a Conservation Authority watershed.*

Authorities rely on science to protect our environment. These agencies deliver programs and services totalling approximately \$210 million and employ over 3,000 people including engineers, wildlife experts, planners, biologists and hydrologists.

Ontario is unique in its approach to watershed management, according to Mr. Pearson. "We are the only province with the Conservation Authorities Act – legislation enacted in response to a growing concern among many that

there were serious environmental and resource depletion issues that needed to be addressed," he says.

What is most impressive is that this legislation was enacted in 1946 – very much ahead of its time.

Conservation Authorities are known globally for their stewardship of Ontario's rivers, lakes and streams through the development and delivery of watershed-based programs that work with nature to protect, restore and effectively manage Ontario's water resources.

Conservation Ontario's work to promote a watershed approach in the new Clean Water Act serves as a great example of the Conservation Authorities' efforts on behalf of Ontario's residents.

"Preventing contamination and making sure we have enough water for everyone's use is a big focus of ours right now," says Mr. Pearson. "Source water protection is a first step in protecting our drinking water through understanding what land uses harm our water and devising a plan to minimize those."

Because what we do on land is reflected in our water and ecosystems, Conservation Authorities protect, manage and restore Ontario's woodlands, wetlands and natural habitat – promoting practices that lead to healthy, sustainable communities and industries.

"We work to balance the uses of land across the landscape," says Mr. Pearson, adding that urban development and agriculture are balanced with wildlife and recreational spaces if a watershed is looked at from a holistic viewpoint.

Rather than focusing piecemeal on individual problems, an integrated watershed approach takes a holistic view, exploring the cause-effect relationships of human activities on our environment and finding solutions that minimize negative environmental impacts.

Key to the success of the Conservation Authorities is their close relationship with local municipalities and landowners.

In addition to other sources of revenue, municipalities provide funding to Conservation Authorities, which, in turn, is

pumped back into land and water management programs. As well, Conservation Authorities work in partnership with municipalities to protect life and property by developing programs that minimize or prevent the impact of disasters such as flooding and erosion.

Working with landowners and encouraging them to adopt watershed stewardship practices is also very important to Conservation Authority programs.

One such example is work that Conservation Ontario does with Ontario Soil and Crop Improvement Association (OSCIA) – a farm organization directly involved in the delivery of government-funded environmental programs for agriculture. OSCIA is quick to encourage farmers to take advantage of complementary programs at Conservation Authorities that can provide technical direction and cost share opportunities to conserve soil, water, air and biodiversity.

"With the free technical advice of the Conservation Authorities' trained techni-

cians, a farmer can gain valuable on-site advice to plan projects. Tree windbreaks, for example, can be effectively designed to satisfy far more objectives than just erosion control," says Andrew Graham, program manager with OSCIA.

Stewardship education is a key component of Ontario's Conservation Authorities' work. Through the lands they manage and own, as well as the educational programs they deliver, Conservation Authorities provide opportunities for all citizens to understand and appreciate the value of their natural environment as well as the social and economic benefits of protecting that environment.

"Conservation Authorities have done a great job of helping people think beyond farm boundaries and look at the entire watershed of which they are a part," says Mr. Graham. "As a result, people are considering the importance of sustainable practices to minimize any direct effect they may be having on downstream properties and water." ■

## What is a watershed?

We hear about the need to protect our water all the time. And lately, we've been hearing a lot about watersheds. But not everyone knows what a watershed is.

A watershed is actually our home. We all live in one.

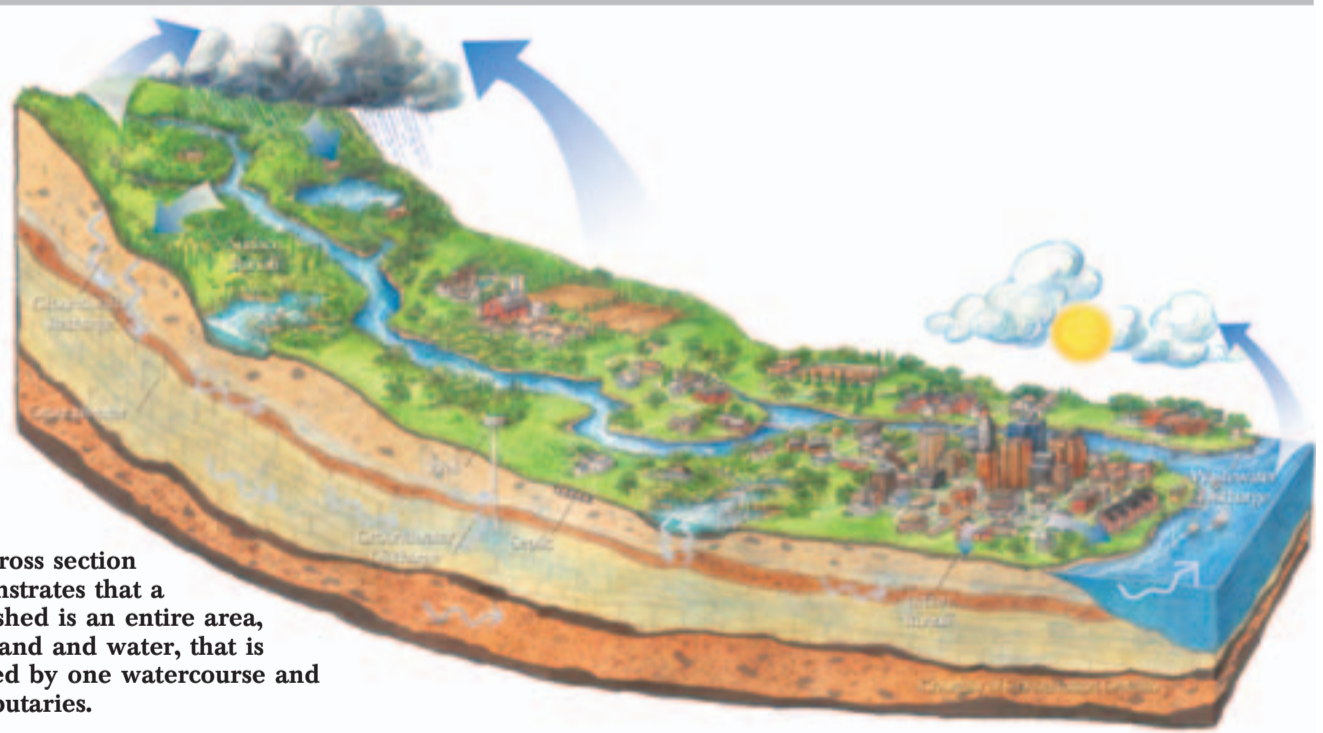
What exactly is a watershed?

A watershed is an area of land where, eventually, every lake, river, stream and groundwater source drains to a common larger body of water such as a pond, lake or ocean. In other terms, it is the entire area, both land and water, drained by a watercourse and its tributaries.

A watershed is made up of a unique mixture of habitats that are all connected and impact on one other. Because of this, what happens upstream affects conditions downstream.

Watersheds include forests, wetlands, wildlife, creeks, rivers and lakes, farms, and even towns and cities. As water travels over and through the landscape, it is affected by both natural and human activities. For example, our actions can have a very harmful affect on our water if we pollute it or use too much of it.

A precarious but precious balance to strike. ■



**This cross section demonstrates that a watershed is an entire area, both land and water, that is drained by one watercourse and its tributaries.**

## INSIDE: PROTECTING OUR COTTAGE SHORELINE

Ontario's waterfront property owners encouraged to tread lightly on the waterfront they enjoy. C02

## NOTTAWASAGA INN RESORT

A family-run business with an environmental conscience. C03

## CONSERVATION AUTHORITIES

Protecting and improving water quality in Ontario's rural areas. C04



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## H<sub>2</sub>Ontario: Protecting Ontario's Water

Environmental Farm Plans

# Through the eyes of Wallace Black

Through most of his long career as an Ontario cattle farmer, Wallace Black has had a great deal of respect for watershed stewardship.

He became very concerned in 2004 when a creek that runs through his Simcoe County farm suddenly dried up, leaving Mr. Black and his wife Isabelle without a vital source of drinking water to supply a herd of 30 cattle.

It was a wake-up call to participate in the Canada-Ontario Environmental Farm Plan (EFP), a program that encourages farmers to identify areas of environmental concern on their properties and establish a plan to fix them.

"I used to catch trout in this part of the creek before Hurri-

cane Hazel," says Mr. Black. He's not seen trout in the creek since. The after-effects of the flood damage, and the effects of sediment from an upstream municipal drain installed later, are likely responsible.

Restricting cattle access to the creek and planting trees will speed up the naturalization process and it will benefit the water quality feeding downstream reaches of the watershed.

In order to protect the creek, the Blacks built a high-tension electric fence as well as a pathway to allow cattle and machinery to get across the creek without causing any further damage.

They were able to get financial assistance by applying for cost-share funding through the

Greencover Canada (GC) program and Nottawasaga Valley Conservation Authority (NVCA).

The objectives of GC include improved land management practices, protection of water quality, and enhanced biodiversity. NVCA is a provincial agency, set up to facilitate resource management programs.

Project approval for cost-share funding via GC is delivered through the Guelph-based Ontario Soil and Crop Improvement Association (OSCIA).

Working with its farm associations, as well as government and farm organization partners, OSCIA has allocated about \$47-million worth of environmental cost-share dollars – available through the Agricul-



PHOTO: SUPPLIED

**Riparian Buffer Strips – a transition zone between a watercourse and adjacent agricultural land – are just one of many initiatives included in an Environmental Farm Plan that help farmers reduce the environmental risk of their agricultural practices.**

tural Policy Framework (APF) – to fund Ontario-based projects. Agriculture and Agri-Food Canada and the Ontario Ministry of Agriculture, Food and Rural Affairs support APF.

"About \$26 million has already been paid out," says Andrew Graham, project manager with OSCIA.

The Environmental Farm Plan was created by farmers, along with their government and stewardship partners, over 15 years ago. Over 33,000 farmers in Ontario, 70 per cent of the province's farmers, have voluntarily participated in the EFP program.

"It was an added bonus to find that funding was available for this kind of work," says Mr. Black. He just may catch trout in his creek again some day. ■



PHOTO: SUPPLIED

**Mark Cullen, broadcaster and best-selling author, teaches that farming strategies such as crop rotation and mulching, as well as environmentally responsible farming practices, come in handy even for the backyard gardener.**

An interview with Mark Cullen

## Farm tips to help gardeners

When it comes to conservation, green-fingered gardeners should pay close attention to what the farming community is doing to save water and preserve the soil for future generations.

That's the view of Mark Cullen, broadcaster and best-selling author, who has spent the last 25 years giving advice on how Canadians can achieve better results in the garden.

In his latest book, *A Sandbox of a Different Kind: Personal Reflections on the Cana-*

dian Gardening Experience, Cullen devotes an entire chapter to the things he has learned since moving to a farm near Markham, Ontario, two years ago.

Instead of using traditional chisel plough methods, he finds that farmers are opting for low-till techniques, which improve the microbial life of the soil, while causing much less erosion.

"It's a technique that can easily be applied by backyard gardeners who want to be environmentally responsible,

while at the same time reducing their workload," Mr. Cullen says.

Gardeners are also advised to rotate the crops they plant each year and cover the soil of vegetable gardens with straw or, in the case of perennial beds and shrub borders, finely ground tree bark. This process is known as mulching.

"Gardeners who mulch on a regular basis can tell you that this reduces their weeds by more than 90 per cent," Mr. Cullen says. It also conserves moisture by insulating soil

from the heating effects of the sun.

The farming community is very pleased that Mr. Cullen promotes the good news stories about the stewardship efforts of farmers and the Environmental Farm Plan program to his gardening audiences. The program is supported through the Agricultural Policy Framework by Agriculture and Agri-Food Canada; the Ontario Ministry of Agriculture, Food and Rural Affairs and the Ontario Farm Environmental Coalition. ■

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## Protecting our cottage shoreline

Anyone who has spent their childhood years catching frogs and going for walks in Ontario's cottage country knows the value of freshwater lakes and the need to protect them.

It is the reason why a volunteer organization like the Federation of Ontario's Cottagers' Association (FOCA) is working harder than ever to provide education and leadership on issues such as environmental stewardship and sustainable rural living.

Since it was established in 1963, FOCA has made the ethic of land and water stewardship much more topical and more broadly understood among the estimated 500 community groups it represents – including over 50,000 waterfront property owners.

With the support of community volunteers, and in partnership with the Ontario Trillium Foundation, Environment Canada, and Fisheries and Oceans Canada, FOCA programs, such as Docktalk, are designed to support positive action by rural waterfront property owners. The aim is to encourage them to tread lightly on the waterfront.

"We want to remind waterfront property owners that everyone has a role to play in environmental stewardship," says Terry Rees, FOCA's executive director since 2004.

This is especially important as the province's precious freshwater lakes come under increasing pressure from urbanization and the spread of invasive species such as zebra mussels and the round goby.

Another concern is the impact of human nature itself. "We just seem to have a human psychological need to control our surroundings," says Wendy Engel, president of Round Lake Property Owners Association in



PHOTO: SUPPLIED

**The future use and enjoyment of Ontario's precious waters depends on the actions we take today. Every waterfront property owner can contribute to healthy water with simple steps.**

Renfrew County, Ontario.

"The decline of a lake can be insidious," she says. "People often don't appreciate the damage they are doing to a sensitive environment until it is in obvious trouble, and by then it may be too late."

Getting an effective message across to landowners can be a daunting task for organizations with limited resources.

In a bid to get its message out to lakefront residents, FOCA's Docktalk outreach program provides confidential expert advice on environmental stewardship to individual lakeside dwellers.

Ms. Engel says this program has been welcomed by people who might otherwise be overwhelmed by the volume of information they receive on land stewardship. "It's encouraging for them to see that they can take some practical steps, large and small, toward making a positive difference for the lake they value," she says. ■

Visit the FOCA website at [www.foca.on.ca](http://www.foca.on.ca) for more information on how you can support a sustainable future for Ontario's waterfronts. FOCA – 40 years helping you keep your lake great.

The Federation of Ontario's Cottagers' Associations delivers waterfront stewardship programs with the support of our members and the following organizations:



Environment Canada

Environnement Canada



Fisheries and Oceans Canada / Pêches et Océans Canada

H<sub>2</sub>Ontario: Protecting Ontario's Water

Nottawasaga Inn Resort

# Nurture by nature

When Lou Biffis looked out over the banks of Ontario's Nottawasaga River, he had a dream: He would build a hotel on this land, "in the middle of nowhere," thus allowing visitors to enjoy the stunning nature around them. There were just two problems.

"Everyone told him he was crazy," says son Peter Biffis, now one of the owners of the Nottawasaga Inn Resort. "The other problem was that in this area, the river was just a big swamp."

The senior Mr. Biffis remained undaunted. After dredging, draining and piling the earth, the Nottawasaga River took to meandering nicely through the area, and the dreamed-of hotel was soon born. So was the beginning of the family's relationship with the land and water, which has blossomed into a world-class conservation and recycling program that has only expanded with the now 269-room resort.

With Ontario's only 45-hole golf course, a 70,000-square-foot sports and leisure dome, convention facilities and a new Centre Ice Sportsplex (featuring an NHL-sized rink), the need for conservation practices is paramount. Now, by utilizing futuristic water conservation methods, prudent recycling and reduction techniques, Nottawasaga Inn Resort stands out as one of the most ecologically responsible resorts in the world. The foundation of the resort's water conservation is its water treatment, distribution and sewage treatment facility.

and streams are better preserved.

"We are one of only two or three in the province who have a permit and who are using this effluent water for their golf course," Mr. Biffis explains. "We keep asking 'what else can we do for this environment?'"

How about relocating 1,500 local trees, (instead of importing from outside the province, as is the norm), to beautify the grounds? Or ensuring there are low-flush toilets and energy-efficient bulbs both in the hotel and the surrounding homes (a total of 1,700 units)? Then there is recycling of all plastics and cardboard, and taking kitchen waste off-site to be converted into secondary fuels. Oh, and

what about using R-60 insulation in the ceiling and R-40 in the walls of the arena, creating significant energy savings in a world where R-20 and R-12 is standard?

"It cost quite a bit more to put in these measures and use these building materials up front, but the money savings in the long run is worth it. And we get to pass that savings on to our guests and residents," says Mr. Biffis. "Because of our conservation efforts, we are able to keep our costs down to roughly half of what the municipality would charge us."

"It feels great, and it's the way it should be. It's the way of the world, and we can all do our part."



PHOTO: SUPPLIED

**Nottawasaga Inn Resort is a great example of a business with an environmental conscience. Not only does the family-run resort recycle and use low-flow toilets, it has its own water treatment, distribution and sewage treatment facility.**

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*"We are completely self-contained. We do not access any services from the municipality, which is one unique thing about us. We keep asking 'what else can we do for this environment?'"*

"We are completely self-contained," explains Peter Biffis. "We do not access any services from the municipality, which is one unique thing about us."

The way in which the golf course and surrounding gardens are watered is also unique. Traditionally, potable (drinking) water is used to water golf courses and grounds, but the Biffis family sees that as an intolerable waste of energy and water. This method also requires phosphorous fertilizers to be added to grounds for optimum plant growth.

Instead, by using phosphorous-rich effluent at the tertiary stage of treatment for watering, energy is saved, drinking water is not wasted, and tributaries



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- a newly expanded Exhibitors' Gallery.

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Conservation ONTARIO  
Natural Champions

H<sub>2</sub>Ontario: Protecting Ontario's Water

Conservation Authorities

## Preserving water in rural areas

When it comes to watershed stewardship, the work of Ontario's Conservation Authorities is widespread.

Watershed stewardship means caring for our water, land, air and biodiversity on a watershed basis. All this, while recognizing that everything is connected within a watershed and affected by natural and human activities.

The Upper Thames River

Conservation Authority (UTRCA) has a long and successful history of working with landowners to protect and enhance their properties, and it shows no sign of slowing down.

Its Clean Water Program offers technical and financial assistance to protect and improve water quality on rural properties. Six municipalities and nine conservation authorities share the cost and knowledge of using best management

practices on agricultural lands.

Brad Glasman, conservation services co-ordinator at UTRCA, says, since 2001, this program has implemented projects worth \$10 million. Some of the projects eligible for these grants include: decommissioning unused wells; erosion control; restricting livestock access to water; and well-head protection.

Mr. Glasman says UTRCA is proud to be doing leading-

edge work with universities and other groups to find new and better ways to protect water quality. UTRCA partnered with the University of Waterloo to develop a natural water treatment system called a "dispersion sandwich" that uses wood chips to remove nitrates in runoff water or groundwater. In the case of fragile land retirement, the authority purchased a native grass seed planter to use when returning sensitive land to its natural state.

Ontario boasts 36 Conservation Authorities such as UTRCA, which work in co-operation with outside agencies

and community groups, coordinate watershed planning, implement resource management projects and promote water conservation awareness.

A valuable partner in this extensive mission is Conservation Ontario, the Conservation Authorities' association, which promotes the work of this long-established network.

Jo-Anne Rzadki, watershed stewardship co-ordinator at Conservation Ontario, says one of the organization's goals is to build relationships in order to effectively bring watershed stewardship programs to landowners.

"We are tapped into a large pool of specialists who advise both landowners and policy-makers, says Ms. Rzadki. "We continually meet with a wide variety of experts such as ecologists, economists, planners and volunteers and pair them up with landowners, developers and ordinary citizens. Working in partnership with government, local agencies and landowners avoids duplication and provides more resources for the landowner."

Ms. Rzadki says Conservation Ontario's watershed model is internationally regarded as a resource management success. ■

Trees and forests are the natural and essential filters of the air we breathe and of the water we drink.

The Trees Ontario Foundation – a gathering of experts from science, forestry, government, community groups and the business world – is pleased to work with Conservation Ontario and other environmental organizations to help protect and preserve Ontario's water.

Visit our new website at [www.treesontario.on.ca](http://www.treesontario.on.ca) to see how you can help plant trees and forests, and help ensure clean water for our children and grandchildren.



**TREES  
ONTARIO  
FOUNDATION**

*For a Healthier Tomorrow.*



PHOTO: SUPPLIED

Ontario's 36 Conservation Authorities all work with the province's rural landowners in protecting downstream water contamination caused by things such as soil erosion and livestock access to water.

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### Consultation — Collaboration — Implementation



**The Niagara Water Strategy:** The Niagara Water Strategy (NWS) has brought upper and lower tier municipalities, environmental agencies, and public stakeholders together in an organized collaboration. The NWS is to share information and use financial and human resources more efficiently and effectively across the field of water resource management. It also provides an information clearing house for the sharing of data, reporting, and mapping information. Public communication is also a cornerstone of the strategy, with numerous components, including newsletters, web releases, a Watershed Report Card, and various opportunities to obtain feedback from the public.



"If the NWS deals with source protection and watershed management... and is out in front of what the (provincial) government is currently doing... the strategy will serve as a model for other jurisdictions who are wrestling with the same monstrous water quality issues."

Gord Miller  
Environmental Commissioner  
of Ontario

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## H<sub>2</sub>Ontario: Protecting Ontario's Water

Protecting our drinking water through well informed policy

# Bringing science to the table

The deadly Walkerton water tragedy of May 2000 is a grim reminder that we can't take the safety of our drinking water for granted. Dr. Rob de Loë, a University of Guelph professor and Canada Research chair in Water Management, says

although Walkerton was a local tragedy, "it sent a shock wave across the country that kick-started much-needed changes in many provinces." And applying relevant science is fundamental to working around these new issues. "All life depends on water,"

says Rick Findlay, director of the Water Program at Pollution Probe. "It's a real issue of survival." Mr. Findlay says water policies need to be continually reviewed to factor in emerging environmental concerns and the science needed to

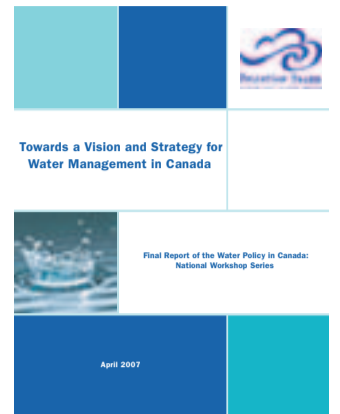
solve them. "We really need good science for good policy, and good policy should allow for good science to always be considered; the two should be completely integrated," he says. And that's where policy such as Ontario's Clean Water Act comes in.

The act was passed in October 2006 and is awaiting full enactment. It incorporates many of the Walkerton Inquiry Report recommendations, including a multi-barrier process that begins with protecting the water supply source. The act also requires local people to work together to protect the entire watershed in which they live. Dr. de Loë says the teams in each source protection planning region will create their own science-based plans to address threats to the quality and quantity of source waters.

Source water protection planning, as required by the Clean Water Act in Ontario, brings many benefits. Not only will drinking water be more secure, but local communities will be charged with protecting their own water resources. This emerging and innovative partnership, co-ordinated by Ontario's Conservation

Authorities, is expected to foster and nurture a widespread appreciation and stewardship of the natural environment that sustains us. Climate change is one of the many pressures on our water supply faced by those planning for its protection. From lower lake levels, longer and hotter dry spells, and more extreme weather events, climate change will impact our economy, environment, health and everyday life. Dr. de Loë urges policymakers to build the effects of climate change into their planning. He and Dr. Aaron Berg, also from the University of Guelph, co-authored "Mainstreaming Climate Change in Drinking Water Source Protection Planning in Ontario" for Pollution Probe and the Canadian Water Resources Association. "Climate change affects you, but you're not powerless," says Dr. de Loë. "This report outlines ways in which people at the local level can deal with climate change through drinking water source protection planning."

The report can be downloaded from the Pollution Probe website ([www.pollutionprobe.org](http://www.pollutionprobe.org)).



**In 2006, Pollution Probe ran a series of five multi-stakeholder workshops in five regions of Canada to examine and discuss the current state of water management. The goal was to develop a critical path forward to protect Canada's freshwater resources. The workshop series included 70 expert presentations during the eight-month period, allowing 300 participants to share knowledge and perspectives as the process unfolded. The final report "Towards a Vision and Strategy for Water Management in Canada" is available at [www.pollutionprobe.org/Happening/Events.htm](http://www.pollutionprobe.org/Happening/Events.htm).**



PHOTOS: SUPPLIED



The Canadian Water Network (CWN) is a National Centre of Excellence that builds networks to develop opportunities related to the provision of safe water. Partnering with universities, government and industry, CWN develops multidisciplinary scientific projects that address key water-related issues facing Canadians. For more information, go to [www.cwn-rce.ca](http://www.cwn-rce.ca).



Pollution Probe is a leading not-for-profit environmental organization actively engaged in initiatives to address air quality, water quality and climate change, including conducting research, engaging partners, implementing projects, holding events and contributing to the development of new policies to honour Canada's commitment to reduce air and water pollution and greenhouse gas emissions. For more information, go to [www.pollutionprobe.org](http://www.pollutionprobe.org).



The Canadian Water Resources Association (CWRA) is a national organization that promotes effective management of Canada's water resources. CWRA raises awareness and understanding of the value of water and provides a forum for the exchange of information and opinion. For more information, go to [www.cwra.org](http://www.cwra.org).

## Great Lakes water: Moving towards a culture of conservation

Viewing the Great Lakes on any map of North America, it's hard to believe that fresh water could ever be in short supply. Stretching from the northern tip of Lake Superior past Chicago, and east from Minnesota to the St. Lawrence River of Quebec, the Great Lakes account for 20 per cent of the Earth's fresh surface water. Water that many of us take for granted.

"Canadians look around

Not only are the Great Lakes a finite resource, but the pending realities of population growth, climate change and an increasing thirst for water diversion make it clear that water conservation by citizens, business and government can no longer be ignored.

"Canadians need to move from a myth of water abundance towards a culture of conservation," says Mr. Morris. "There's a real need for aggressive water conservation measures right now."

Nothing underscores the need for Great Lakes water conservation more than declining lake levels on Lake Michigan, Lake Huron and Georgian Bay, known collectively as the "middle lakes."

"In 1999, water levels dropped dramatically in the middle lakes, and it has been stuck there ever since," says Bill Bialkowski, an engineer and volunteer director with the non-profit Georgian Bay Association (GBA). "Since 2003, we have been losing three centimetres a year due to ongoing erosion in the upper St. Clair River. That is equivalent to removing 2.5 billion gallons of water every day. It is time our governments took the necessary action to stop this diversion."

To compound matters, Environment Canada predicts that climate change will lower Michigan/Huron levels by another 1 to 1.5 metres by 2050, due to loss of ice cover and warmer temperatures.

McMaster University biology professor Dr. Pat Chow-Fraser is also concerned about the impacts of drought on wetlands. "At the current sustained low water levels on Georgian



The wetland above, as shown in 1998 (left) and 2001 (right), has now converted to a grass meadow. As wetlands such as this one on the coast of Georgian Bay decline, significant aquatic habitat loss reduces the ability of Great Lakes fish to spawn and puts numerous species at risk.



PHOTOS: SUPPLIED

Nothing underscores the need for Great Lakes water conservation more than declining lake levels on Lake Michigan, Lake Huron and Georgian Bay.

the Great Lakes basin and see so much water, but we don't realize that much of it is not renewable," says Tim Morris, water campaigner for the Sierra Club of Canada. "People don't know that only one per cent of the Great Lakes water is renewed each year through natural processes like rain and snow. The rest was a one-time gift from the last ice age when the glaciers melted."

Bay, many wetlands have not only dried up, but have converted to grass meadows. This has resulted in significant aquatic habitat loss as wetlands are needed by 80 per cent of Great Lakes fish for spawning and nursery habitat."

Wetlands found on glacial silt deposits among Georgian Bay's 30,000 islands are particularly vulnerable. GBA Foundation's advisor, Mary Muter, says, "The aquatic life forced out of eastern and northern Georgian Bay wetlands cannot survive on adjacent steep granite shorelines. And if fish cannot find their natural spawning areas, they just do not spawn. About 70 per cent of wetlands on Lakes Erie and Ontario

have been lost forever, due to pollution and or development infilling. We need to protect what good wetlands we have left."

Concerns that mass water diversions, by regions outside the Great Lakes, could further drain the lakes have spurred efforts to strengthen basin-wide regulations.

In December 2005, Ontario, Quebec and eight U.S. states signed a good faith agreement to prevent the diversion of lake water to thirsty regions outside the basin. A separate, legally binding agreement was also signed by those states, but still has to be passed by each state's Congress as well as at the federal level. So far,

only Minnesota has achieved congressional approval.

Concerns persist that large water diversions are still possible because the agreements still permit water transfers from one Great Lakes watershed to another. For example, London, Ontario, is interested in expanding an existing diversion of water from Lake Huron to Lake Erie. Waterloo, Ontario, has suggested it may also need to draw its future municipal water from Lake Huron, diverting it into Lake Erie. While these diversions are not to regions outside the Great Lakes basin, impacts on the level of the middle lakes would be just as damaging.

Glen Pleasance, chair of the

Water Efficiency Committee for the Canadian Water and Wastewater Association, says, "Aggressive, full-scale water conservation programs have the potential to render diversions unnecessary. There are untapped opportunities to conserve Great Lakes water, which can reduce spending, energy use, and CO<sub>2</sub> emissions at the same time."

The first step towards a culture of conservation begins in every home and office across the basin. By using less potable water through water-efficient toilets, showerheads and appliances, as well as rethinking how we garden, we can leave more of the Great Lakes' water right where it belongs. ■





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