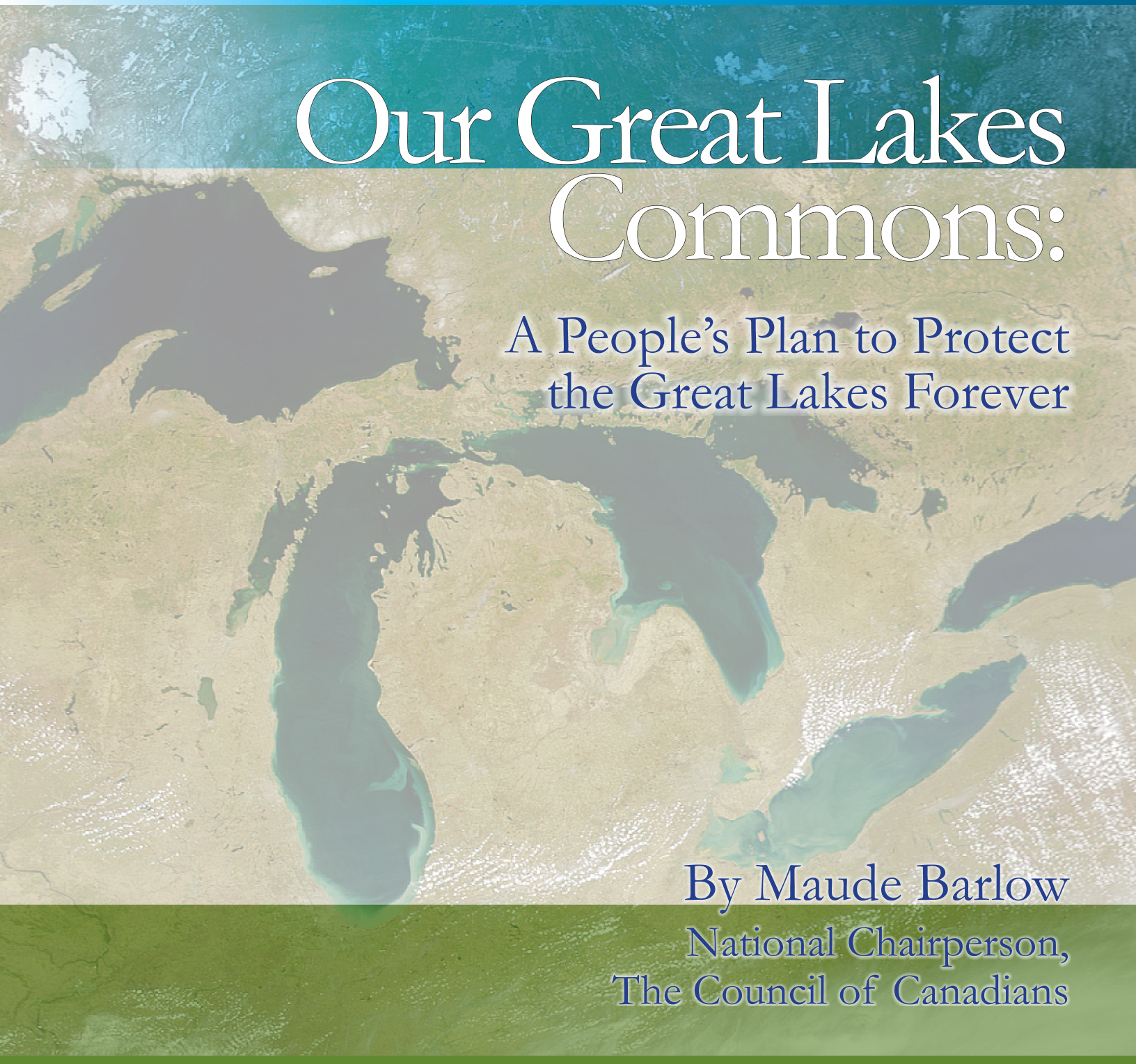
Our Great Lakes Commons:

A People's Plan to Protect the Great Lakes Forever



By Maude Barlow
National Chairperson,
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The Council of Canadians
Le Conseil des Canadiens

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THE COUNCIL OF CANADIANS
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About the Author

Maude Barlow is the National Chairperson of the Council of Canadians and chairs the board of Washington-based Food and Water Watch. She is also an executive member of the San Francisco–based International Forum on Globalization and a Councillor with the Hamburg-based World Future Council. Maude is the recipient of ten honorary doctorates as well as many awards, including the 2005 Right Livelihood Award (known as the "Alternative Nobel"), the Citation of Lifetime Achievement at the 2008 Canadian Environment Award, and the 2009 Earth Day Canada Outstanding Environmental Achievement Award. In 2008/2009, she served as Senior Advisor on Water to the 63rd President of the United Nations General Assembly. She is also the bestselling author or co-author of 16 books, including the international bestseller *Blue Covenant: The Global Water Crisis and The Coming Battle for the Right to Water*.

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"This is not a mystery anymore. We know what needs to be done, ... The Great Lakes has gotten nine studies in four years from this administration, and Iraq has gotten $4.5 billion. Give Iraq the studies, and we'll take the money."

~ Rahm Emanuel
Mayor-elect of Chicago, former White House Chief of Staff to President Barack Obama
October 2005

Introduction

This paper is intended to serve as a background, a call to understanding and a call to action on an exciting new proposal to designate the Great Lakes and its tributary waters as a lived *Commons*, to be shared, protected, carefully managed and enjoyed by all who live around them. The *Great Lakes Basin Commons* would need to be protected by a legal and political framework based on *Public Trust Doctrine,* underpinning in law that the Great Lakes are central to the very existence of those people, plants and animals living on or near them and therefore must be protected for the common good from generation to generation. This means that the Lakes could not be appropriated or subordinated for private gain. It is also our determination that the Great Lakes will be designated as a *Protected Bioregion*, recognizing that while there are many political jurisdictions governing the Great Lakes Basin, it is, in fact, one integrated watershed and needs to be seen and governed as such.

The Great Lakes of North America are in serious trouble. Multipoint pollution, climate change, over-extraction, invasive species, and wetland loss are all taking their toll on the watershed that provides life and livelihood to more than 40 million people and thousands of species that live around it. Once thought to be immune from the water crisis that threatens other parts of the world, the Great Lakes are a source of increasing concern as residents watch their shorelines recede, their beaches close and their fisheries decline. Added to this mounting ecological crisis are growing conflicts as some eye these precious waters for commercial bulk and bottled water export, mining, oil and gas exploration, private control of once public water services, and as an incentive to lure water-intensive industries to locate on them.

Lake Erie bluffs, Lake Erie. Photo by Nicholas_T / Flickr

There are many dedicated environmental and community organizations as well as elected officials around the Lakes, working very hard to restore them, and some real progress has indeed been made. There also exists already a rich history of Commons practices and laws, including the application of the Public Trust Doctrine to the Lakes by the U.S. courts, dating back to a shared vision of the First Nations peoples of the region. We seek to build on this history. However, there are conflicting visions for the Great Lakes. For every victory to extend a Commons framework for the Lakes there is a corresponding setback of exploitation. While many advocate that the Great Lakes belong to the public and must be protected for future generations, others put economic issues above both the health of the Lakes and the lived Commons and common good of those who depend on them.

Alexa Bradley, Great Lakes community activist, puts it this way: "For some, the Great Lakes represent a massive resource grab that takes many forms: privatization, appropriation, the entitlement to use and misuse water, and the prioritization of market economics over ecological and justice considerations. By its nature this resource grab is anti-democratic and undercuts both environmental protection and the equitable sharing of water. This exploitation makes the case for not just better water policy, but for a different kind of governance."

As well, many jurisdictions responsible for the Great Lakes govern with an uneven patchwork of rules, regulations and laws. Most have not mapped the groundwater feeding the Lakes and do not have extensive knowledge of the crises threatening them. All suffer from chronic underfunding, regulatory infractions, and inadequate enforcement of existing rules. It is easy to see why it seems that with every step that takes us forward, another takes us backward.

We believe the answer to this uneven and inadequate governance would be strengthened by the embrace of the narrative of the Commons by the people and communities living on the Great Lakes. It is our fervent hope that the leadership for this project will come from First Nations and local urban and rural communities, as well as existing and new organizations, to fortify a grassroots movement that will protect and nurture these Great Lakes for all the generations to come.

The Great Lakes Are in Trouble

"There is a misconception that the Great Lakes replenish themselves each year with rainwater. This is not true."

The Great Lakes of North America form the largest group of freshwater lakes in the world, holding more than 20 per cent of the world's surface freshwater and 95 per cent of North America's. Add to this the groundwater underlying and feeding the Great Lakes or its tributary streams and lakes, and the percentage is closer to 25 and 97 per cent respectively. The Lakes and the St. Lawrence River, which is their primary flow outlet to the Atlantic Ocean, are bordered by two Canadian provinces: Ontario and Quebec, and eight U.S. states: Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania and New York. The Great Lakes have a unique biodiversity and are home to more than 3,500 species of plants and animals. They were formed over 20,000 years ago when the last glacier continental ice sheet retreated. The Great Lakes provide life and livelihood to more than 40 million people and are the economic centre at the heart of the continent. They are, however, under serious threat from a wide variety of demands and sources.

Over-extraction and climate change

According to a 2004 study by the Great Lakes Commission, communities around the Great Lakes Basin pump 850 billion gallons (3.2 trillion litres) of water out of the Lakes and St. Lawrence River every day. Close to 2 billion gallons (over 7.6 billion litres) are "consumed" every day, meaning that they are not returned to the watershed.[1] There is a misconception that the Great Lakes replenish themselves each year with rainwater. This is not true. These are ancient glacial waters that will be drained if we overuse them. (This figure is likely higher today, as the demands on the lakes have continued to grow since this report was published.) Much of this loss is in virtual water exports, where water used in the production of commodities is exported out of the watershed along with the exported commodity. Around the Basin, 67,000 square miles (174,000 square kilometres) are devoted to agriculture, an area larger than most of the bordering states.[2] Much of the wheat, corn, oats, barley, grapes, cheese, milk, fruits, vegetables and livestock produced on these lands are exported away from the region, depleting the Great Lakes Basin of water. This water is not being replenished. Since 99 per cent of the water in the Lakes is from the glacial era, this water will not be replaced once it is used up. As well, renewable water is in decline. A recent Statistics Canada study showed the renewable water yield in southern Canada has declined 8.5 per cent in just four decades.[3]

On top of a lack of renewable sources, the sources that supply the Lakes are under assault. As with most other bodies of water in the world, the groundwater around the Lakes is being pumped with little oversight. Some communities on Lake Michigan's west coast are pumping so much groundwater they are now drawing water from the lake itself. The U.S. Geological Survey reports that by using deep wells that reach farther into the ground than Chicago's tallest skyscrapers soar into the sky, cities are pumping the aquifers beneath them so hard they are pulling water in through the bottom of Lake Michigan, reversing a flow as old as the lake itself. Chicago has been depending on local groundwater sources since 1864. As a result,

1 Quoted by the Alliance for the Great Lakes, *Muskegon Chronicle*, December 31, 2008

2 U.S. Environmental Protection Agency, Great Lakes Monitoring website, http://www.epa.gov/glnpo/monitoring/great_minds_great_lakes/social_studies/without.html

3 *Freshwater supply and demand in Canada*, 1971 to 2004, Statistics Canada, September 2010

the groundwater levels in the Chicago and Milwaukee areas have dropped at least 1,000 feet (305 metres).[4] The Chicago Diversion from Lake Michigan to the Illinois and Mississippi Rivers results in the withdrawal of 2 billion gallons (almost 8 billion litres) of water every day. The diversion decreases water tables as far away as Port Huron and Georgian Bay. Yet the University of Southern Illinois reports that population and industry in the Chicago area alone will grow so quickly in the next 20 years that demand for water in the area will increase by 30 per cent.

Many scientists attribute these water level drops to both climate change and over-extraction. A major December 2009 report by the International Great Lakes Study Board found that climate change had already had a discernable effect on the drop in water levels of the Lakes. The Union of Concerned Scientists warns that Great Lakes water levels could drop by another two feet (0.610 metres) within decades, particularly threatening Lake Huron and Lake Michigan.[5] The amount of water flowing out of Lake Superior at its outlet, the St. Mary's River, would have to rise by 50 per cent to reach the average of the past century. Over the last 100 years, water levels at the Port of Montreal have dropped six feet (two metres) and the Army Corps of Engineers reports that in 2010, water levels in the Lakes continued a disquieting drop that started in the early 1990s.

The Great Lakes are also warming up. *Canadian Press* reported in July 2010 that surface temperatures in normally frigid Lake Superior had warmed almost 11 degrees Celsius (52 degrees Fahrenheit) higher than normal. Scientists cite declining ice covers and decreased precipitation for the rise in lake temperatures. Jay Austin, a physics professor at the University of Minnesota's Large Lake Laboratory, says that the Lakes are getting to their end-of-summer temperatures weeks before they should, negatively affecting their aquatic chain of life and leading to algae blooms.[6] Lake Erie is undergoing huge ecological changes, all of it bad, says Jeff Reutter, director of Franz Theodore Stone Laboratory, Ohio State University's freshwater biological field station. Pollutants that cling to lake sediment, the flow of contaminants such as phosphorus, and plumes of algal blooms spreading across the southern shore of the lake all tell of a body of water warming faster than it should and contributing to Lake Erie's dead zone, an oxygen-deprived area devoid of life.

Pollution, wetland loss and invasive species

According to the U.S. Toxic Release Index and Canada's National Pollutant Index, there are at least 204 pollutants in the Great Lakes.[7] A total of 15 million kilograms (over 30 million pounds) of such toxins were found in the Great Lakes and St. Lawrence River Basin in the latest survey; another 10 million kilograms were injected underground. (On average, Canadian facilities released almost three times more carcinogenic and reproductive toxins than American facilities.) Although the Great Lakes Water Quality Agreement has helped to reduce levels of some contaminants such as mercury, dioxins, lead and PCBs, a 2007 Environmental Defence report found that fish from the Great Lakes are still loaded with these and other toxins, making many of them unfit for human consumption.[8] Other major concerns are the proliferation

4 Howard Reeves, *Water Availability and Use Pilot: A Multiscale Assessment in the* U.S. *Great Lakes,* United States Geological Survey, February 2011

5 Union of Concerned Scientists, *Confronting Climate Change in the U.S. Midwest*, September 30, 2009

6 Great Lakes warm up, could reach record high, *The Detroit News*, July 23, 2010,

7 Pollution Watch, *Partners in Pollution*, *An Update on the Continuing Canadian and United States Contributions to Great Lakes-St. Lawrence River Ecosystem Pollution*; 2010

8 Environmental Defence, *Up to the Gills, Pollution in Great Lakes Fish,* 2007

of non-point source pollutants including pharmaceuticals, flame-retardants, plasticizers and pesticides, none of which are covered by the Agreement, and the introduction of a whole new class of chemicals including endocrine disrupters. These chemicals do not dissolve in water but rather bind up into particles that float in the water like magnets, latching onto one another and creating a layer of contaminated sediment on the floor of the Lakes.

There are now 43 "Areas of Concern," – sites on the Great Lakes so contaminated, they have been targeted for special remediation. They include Saginaw Bay in Michigan where the tourist industry has been destroyed with the spread of a foul toxic algae called cladophora, and Sarnia, Ontario, nicknamed "Chemical Alley" where twice as many girl babies as boy babies are being born to the local First Nations peoples, the Aamjiwnaang, and where unusual sexual attributes to frogs and other species have been observed by Canadian wildlife experts.

The government toxic release indexes also do not include U.S. and Canadian wastewater plants, which release billions of gallons of untreated sewage and run-off into the Lakes each year and are the Great Lakes' largest source of such pollution. A 2006 Sierra Club report called the sewer systems in many Great Lakes cities "antiquated" and said they routinely dump raw sewage in the Lakes. The study, which examined 20 Canadian and U.S. cities found that they collectively dumped more than 92 billion litres (21 billion gallons) into the Lakes each year.[9] That is the equivalent of dumping more than 100 Olympic swimming pools of raw sewage into the Great Lakes every day. In his 2010 annual report, Ontario's Environment Commissioner added that pollution in the Great Lakes on the Canadian side is getting worse because the province's municipal wastewater discharge rules have not kept up with an exploding population growth.[10]

Nuclear waste poses another threat to the Great Lakes. There are more than 30 nuclear reactors along the shores of the Lakes and shipments of medical isotopes and radioactive materials are increasingly being transported through the Basin. The International Institute of Concern for Public Health has noted that radionuclides found in the Great Lakes water, including tritium, carbon-14, caesium and long-lived iodine-129, pose serious health hazards at even low levels. As if these threats aren't enough, in February 2011, the Canadian Nuclear Safety Commission gave the go-ahead for the first shipments of radioactive waste through the Great Lakes. The Bruce Nuclear Generating Station, located on the shores of Ontario's Georgian Bay, has been granted permission to ship at least 16 bus-sized radioactive steam generators to a recycling facility in Sweden through the waters of Lakes Huron, Erie and Ontario and out the St. Lawrence to the open sea. A coalition of groups from Michigan has estimated that the amount of hazardous waste that could be released into the Lakes in case of an accident is 50 times more radioactive than International Atomic Energy Agency standards. Plutonium-239 remains hazardous for 240,000 years.[11]

Bunker oil is yet another threat to the air and water quality of the Great Lakes. Bunker oil is a marine heavy oil that emits lethal chemicals into the air and kills wildlife when it is spilled into the water, either in accidents or in illegal dumping. Just 16 of the world's largest ships can produce as much lung-clogging sulphur pollutants as all the world's cars.[12] Yet Canada is resist-

9 Sierra Legal Defence Fund, *The Great Lakes Sewage Report Card*, 2006

10 Environmental Commissioner of Ontario, *Redefining Conservation, 2009/2010 Annual Report.*

11 News from Beyond Nuclear, *Groups Warn of Radioactive Waste Shipping Risks on Great Lakes*, September 16, 2010

12 Fred Pearce, *How 16 ships create as much pollution as all the cars in the world*, *Daily Mail*, November 21, 2009

ing even mild regulatory changes proposed by the U.S. Environmental Protection Agency to reduce bunker oil emissions.

Industrial and agribusiness-based chemical contaminants from the North American heartland are killing the Beluga whales of the St. Lawrence Estuary. The St. Lawrence has been named among the top 10 most endangered rivers in the United States by American Rivers. All of the pollutants from Chicago, Detroit, Montreal and Toronto travel down the Estuary to the marine Arctic microenvironment at the mouth of the Saguenay River where these magnificent animals call home. The pollution joins the effluent from the aluminium industry dotted along the shoreline. One quarter of all the St. Lawrence belugas have cancer and are among the most contaminated marine mammals in the world. In just 70 years, 90 per cent of the belugas of the St. Lawrence have disappeared. Tragically, the human population of the Saguenay has substantially higher rates of all types of cancer than the Canadian population.

Wetlands play a crucial role in offsetting pollution, acting as nature's filter. Ninety per cent of the 200 fish species in the Great Lakes depend directly on wetlands for some part of their life cycle. Tragically two-thirds of the wetlands of the lower Great Lakes and the St. Lawrence Basin have been lost and the destruction continues with increased development.

Another threat to the Lakes is a new and vicious stream of invasive species, introduced when foreign ships empty their ballast water, dumping organisms from virtually all over the world. At present there are about 185 invasive species in the Great Lakes. But the U.S. National Centre for Environmental Assessment recently issued a dire warning about 30 virulent non-native species that may soon reach the Lakes, and 28 virulent species that have already established a foothold, saying they pose serious ecological and environmental damage to the watershed and to native species.[13] The region's busiest ports – Toronto, Hamilton, Chicago and Milwaukee – are singled out as strong potential targets for invaders. New species such as the Asian carp and snakehead may soon join established predators such as the sea lamprey and zebra mussels that have clogged the intake pipes of power plants, industrial facilities and public waters systems.

"In just 70 years, 90 per cent of the belugas of the St. Lawrence have disappeared."

Recently, scientists have blamed the proliferation of zebra and quagga mussels for the die-off of large numbers of migratory birds over the Great Lakes. The mussels filter botulism and other naturally occurring toxins from the waters. More than 100,000 birds, many of them threatened species including many thousands of loons, have died in the last decade while migrating over the Lakes, and experts now believe it is as a result of eating goby fish, who in turn have eaten the contaminated mussels. Warming waters are also stimulating more plant growth, thereby increasing the amount of bacteria on the lake bottoms. Several years ago, so many dead loons washed up on the Lake Erie shores of a Pennsylvania state park, officials used a funeral home to incinerate them.

Mining, oil and gas exploration

Oil and gas deposits lay beneath four of the five Great Lakes. While the United States Congress banned drilling in the Great Lakes in 2005, Canada has not yet followed suit. Approximately 2,200 gas wells have been drilled under Canada's portion of Lake Erie since 1913, 550 of which are still producing. A report by the Ohio Public Interest Research Group documented

13 EPA National Center for Environmental Assessment, *Predicting Future Introduction of Nonindigenous Species to the Great Lakes*, July 2009

51 natural gas spills caused by gas drilling in the period studied – an average of one per month. During onshore and offshore drilling, a toxic combination of oil, water, arsenic, cadmium, lead, mercury and naturally occurring radioactive materials, called drilling muds, are dispersed into the well hole. Canada's National Pollutant Release Inventory, which tracks the use and disposal of toxic chemicals, does not require reporting for oil and gas drilling. Before he was defeated in the 2010 midterm elections, Senator Russ Feingold of Wisconsin called on the International Joint Commission – a commission appointed to oversee issues concerning lakes and rivers along the Canada-U.S. border – to ban oil and gas drilling on the Canadian side of the Lakes as well.

But not only does Canada not appear to be open to such a ban, there is great pressure to open up the St. Lawrence River to shale-gas exploration. Geologists believe that up to 50 trillion cubic feet of gas reserves may be locked in hard shale under Quebec's heavily populated St. Lawrence River Valley. Hydraulic fracturing or "fracking" involves drilling and pumping massive amounts of chemical-laced water into rock seams to force the natural gas to the surface. Quebec has already given out 600 permits for shale gas exploration under the St. Lawrence in anticipation of a full-fledged industry.

The pressure to supply the U.S. with Alberta's heavy oil is cause for another concern. Bitumen from northern Alberta's tar sands is increasingly being shipped by pipeline to refineries around the Great Lakes for processing. There is an ever-expanding network of pipelines leading from Fort McMurray to refineries at the tips of Lakes Superior, Michigan and Erie, reports *The Toronto Star.*[14] The refinement of tar sands oil has devastating impacts on water sources and local communities. Bitumen, the form of petroleum found in the tar sands, is the thickest and dirtiest form of petroleum to process and requires digging, heating and water use on extreme scales. Processing bitumen uses four times more water than conventional oil and releases nitrogen oxides and sulphur dioxides into the atmosphere, creating acid rain. As a result of this booming business of bitumen export from deep in the U.S. heartland, new and increased amounts of acid rain are falling on the Great Lakes.

There are currently 17 major refinery projects either being planned or developed around the Lakes.[15] The biggest is the BP refinery in Whiting on the south-eastern shore of Lake Michigan in Indiana, which is in the midst of a controversial expansion project aimed at boosting its capacity to process bitumen from the Canadian tar sands. Already, the plant's unpermitted modifications have resulted in a significant increase in nitrogen oxides, sulphur dioxide, carbon monoxide and particulate matter. An expansion of the Murphy Oil plant in Superior, Wisconsin could damage 300 to 500 acres of wetlands and consume 5 million gallons (almost 20 million litres) of water from Lake Michigan every day.

Mining exploration around the Lakes is yet another area of deep concern. A November 2010 six-part television series by the Public Education Center warned that the Great Lakes are threatened from a rash of foreign mining interests seeking to extract billions of dollars in copper and nickel found in a giant sulphide ore deposit. The deposit runs from the tip of Lake Superior through Minnesota's Arrowhead region and Wisconsin's Native American territorial lands, extends to Michigan's Upper Peninsula, all the way to Ontario. Dozens of companies are seeking exploration approval to mine the rock which, when exposed to air and water, sparks a

14 David Isrealson, *Toronto Star*, September 12, 2010

15 Munk Centre, University of Toronto, *How the Oil Sands got to the Great Lakes*, October 2008

reaction that creates sulphuric acid. Much of the mining activity will come "dangerously close" to the Great Lakes Basin watershed.[16]

In Canada, mining operations now pose an urgent threat to water. An amendment to the Fisheries Act called "Schedule 2" allows healthy lakes and streams to be reclassified as "tailings impoundment areas" so they are no longer subject to the protection of the Act that prevents toxic dumping in healthy fish-bearing waters. A series of 44 ponds and 30 streams near Marathon, Ontario, situated on the northern most point of Lake Superior, are slated for destruction to make way for an open-pit metal-copper mining operation that will dump 5.3 million cubic metres (well over one billion gallons) annually into the local water systems.

As well, the Great Lakes are at deep risk due to the depletion of water for new energy sources often thought of as "clean." *Circle of Blue* Senior Editor Keith Schneider reports that the collision between energy needs and water supplies will have serious implications for all large bodies of water, including the Great Lakes. The massive rush for new domestic sources of energy, backed by government subsidies, requires huge new sources of water. For instance, it takes 1,000 gallons of water to produce one gallon of corn ethanol, and 6,500 gallons of water to produce one gallon of biodiesel from soybeans, forms of energy promoted as fossil fuel replacements. The plan by the U.S. government to produce 60 billion gallons (240 billion litres) of home-grown biofuels by 2030 will have a devastating impact on the nation's water supplies. Generating energy for "clean" alternatives is almost certain to consume much more water than the fossil fuels they are meant to replace.[17] The demand for biofuels, coupled with increased coal, thermal power, natural gas fracking, nuclear and hydropower energy production has led to a "choke" between water and energy says Schneider, one that water will not win.

Could the Great Lakes disappear?

The Great Lakes are in deep distress and under serious threat. For too long now it has been assumed that these magnificent bodies of water could withstand any amount of pollution, extraction, diversion and exploitation, so vast are their stores of water. But in the last two decades, we have started to learn a great deal about the global water situation and old assumptions about the "myth of water abundance" are being proven false. For years, we all believed that we cannot run out of clean water because an infinite amount of water perpetually circulates through the planet's hydrologic cycle and cannot be destroyed. While it is true that the water is still somewhere on the planet, it is often now not in a form we can access. Humans everywhere are taking water from where it is accessible and polluting it, dumping it into the oceans as waste, using it to mass irrigate crops in deserts, and sending it out of watersheds in the form of commodities and other exports in the name of global trade. As the demand grows, the supply diminishes.

A recent study on the global water supply conducted by water intensive industries and coordinated by the World Bank found that by 2030, global demand for water will exceed supply by 40 per cent.[18] Another recent global study of groundwater takings found that the rate of

16 Public Education Center, DC Bureau, Midwest Mining Rush Threatens Water, November 2010

17 Keith Schneider, *ChokePoint U.S.: Understanding the Tightening Conflict Between Energy and Water in the Era of Climate Change, Circle of Blue*, September 2010

18 McKinsey and Company and World Bank, *Charting our Water Future*, 2009

extraction has doubled in the last few decades, causing massive disruptions in communities where water supplies are running out.[19]

Even large bodies of water like the Great Lakes are not immune to our abuse. The Aral Sea was once the world's fourth largest lake and provided water for people in Afghanistan, Iran and five other countries of the former Soviet Union. Through massive dredging and diversions to grow cotton in the desert, the Aral Sea has lost more than 80 per cent of its volume and what is left is salty brine – an ecological tragedy. Lake Chad, once the world's sixth largest lake that served as the water supply for 30 million people in central Africa, has shrunk by 90 per cent and will likely disappear altogether in 20 years, according to the United Nations Food and Agricultural Organization. Researchers studying the crisis found that climate change had little to do with it and blamed human activities, especially poor farming practices, industrial development and diversions from the lake.[20]

The Great Lakes face the same abuses of over-extraction and diversion, pollution, poor agricultural practices, groundwater mining and growing demand. They are also subject to what Canadian environmentalist David Suzuki calls "exponential destruction," the assault on a resource that cannot be charted because it is coming so fast and from so many places. What may look like a mostly full body of water one day may be gone the next when the multiple and multiplying demands are so great.

Can the Great Lakes run out of water? According to the scientists who conducted the recent global study on groundwater extractions, *if groundwater around the Great Lakes is being drawn down at the same rate as it is globally, the Lakes will be bone dry in just 80 years.*

"What may look like a mostly full body of water one day may be gone the next."

19 American Geophysical Union, *Groundwater Depletion Rate Accelerating Worldwide*, Marc Bierkens, Utrecht University, 23 September, 2010

20 National Geographic News, *Shrinking African Lake Offers Lesson on Finite Resources*, April 26, 2001

Current Practices Are Not Saving the Great Lakes

Clearly the governance structures of the various jurisdictions are failing to adequately protect the Great Lakes, in spite of many attempts at joint actions. This does not mean there have been no attempts. In fact, there is a rich tradition of cooperation between the two countries and among the various states and provinces that share responsibility for them. There is also a myriad of state, provincial and federal laws governing water quality as well as highly regulated utilities supplying safe water to millions. Many communities also have watershed councils – citizen groups that champion watershed health, monitor their local waterways and advocate with their local, state and provincial governments to improve protection and equitable access to local water sources. Many of these local facilities, groups and regulations, as well as cross-border cooperation agreements, are based on the principle of protecting a shared Commons.

Cooperative agreements

The Boundary Waters Treaty of 1909 was created at the beginning of the 20th century when the importance of the Great Lakes was dominated by its use to transport goods to market. The treaty provides the principles and mechanisms to help resolve disputes and to prevent future ones, primarily those concerning water quality and quantity along the boundary between the United States and Canada. It was far-sighted enough to include a provision that the boundary waters "shall not be polluted on either side to the injury to health or property to the other side" and that there should be no effect on flows and levels. The Boundary Waters Treaty established The International Joint Commission (IJC) and set out a legal structure for regulating the Great Lakes as boundary waters between the two countries. The treaty requires that the Commission give all interested parties a "convenient opportunity to be heard" on matters under consideration, invites public participation and advice when it undertakes new studies or reports to governments, and provides information to the public on matters pertaining to the Lakes – all good Commons practices. The treaty and the IJC have long been considered global models of cooperation for countries that share boundary waters.

The 1955 *Convention on Great Lakes Fisheries* was created to deal with the decimation of fish stock in the Lakes, particularly trout and salmon. It created the Great Lakes Fishery Commission to coordinate fisheries research, jointly manage the Lakes' fisheries and jointly control invasive species, especially the sea lamprey. *The Great Lakes Water Quality Agreement,* first signed in 1972 and renewed in 1978 and again in 1987, expressed the commitment of the two countries to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin ecosystem and has become a major focus of the IJC. As the agreement was renewed, persistent toxic substances and phosphorus were added as targets to the original goal of industrial pollution control. The agreement is presently under review.

The Great Lakes Water Quality Agreement also established a Lakewide Management Plan for every lake so that each lake could have a specific plan drawn up for its unique situation and government structure. Every Lakewide Management Plan includes a Remedial Action Plan to

deal with the 43 "Areas of Concern" – areas of intense environmental contamination singled out for remedial action.

In 1985, the countries, states and provinces of the Great Lakes signed the *Great Lakes Charter*, which recognized the limits of the 1909 treaty and sought to establish new mechanisms for co-managing the Great Lakes. The signatories were worried about the deterioration of the Lakes and wanted to assert an understanding that they form one integrated watershed that must be managed as such. Priority goals were to conserve the levels and flows of the Great Lakes and to protect and conserve the environmental balance of the Basin. A year later, the U.S. Congress passed the *Water Resources Development Act* requiring unanimous consent of the Governors of the Great Lakes states prior to any new diversion out of the Basin.

Concern about commercial exports from the Great Lakes suddenly arose in 1998 when the then Premier of Ontario granted a licence to a private Canadian company to export six hundred million litres (about 150 million gallons) of water from Lake Superior per year and ship it by tanker to Asia for bottling. The outcry from both sides of the border forced the Premier to cancel the licence. The U.S. added the word "export" to the ban on diversions in the *Water Resources Development Act*, and the governments of the United States and Canada placed a temporary moratorium on new takings while the IJC studied the issue further. The result of this study was the 2005 *Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement*, which called the lakes "precious" and "interconnected," reaffirmed the Great Lakes Charter vision of an integrated system that looks at ground and surface water as a unified whole, and set a floor for regulating water withdrawals in the Great Lakes. All eight states and both provinces have since adopted legislation ratifying the agreement. In 2002, the Canadian Parliament amended the International Boundary Waters Treaty to ban bulk water transfers from the Great Lakes, and in 2008, the U.S. Congress adopted it as the *Great Lakes-St. Lawrence River Basin Water Resources Compact.*

Some progress

Over the years, these cross-border agreements have resulted in some very important initiatives. One was a great reduction in the amount of phosphorus dumping in the Lakes, a result of both these cross border agreements and the 1977 *Clean Water Act* in the U.S. Phosphorus is a nutrient that in excess, will cause algae to grow out of control. Algae blooms can lead to biological death, called eutrophication. Measures to limit the nutrient included removing phosphorus in detergents and sewage treatment plants.

This in turn led to the (perhaps only temporary it may now appear) recovery of Lake Erie and the shrinking of its "dead zone." Lake Erie, the shallowest of the Lakes, was clearly in trouble as far back as the 1930s, as a result of intensive industrial and farm activity, as well as wetland and habitat destruction on its shores. In 1970, its commercial fisheries were closed due to mercury contamination. With the warming of Lake Erie came oxygen depletion, eutrophication and shorelines covered in cladophora, a green, slimy rotting moss that forced the closing of beaches and recreational areas. The recovery of the Lake Erie fishery was rightly seen as a model for cross-border environmental cooperation.

Another partial but important success story was the reduction of DDT and PCBs found in fish and humans living on the Lakes in the decade between 1995 and 2005, a drop that has

"The recovery of the Lake Erie fishery was rightly seen as a model for cross-border environmental cooperation."

been attributed to the banning of these substances in the 1970s.[21] DDT was widely used in agriculture and insect control from the 1950s for at least 20 years. The fire resistant class of oils called polychlorinated biphenyls (PCBs) were widely used in transistors, capacitators and other electronics in the same decades. The return of the bald eagle is a moving part of this story. When the bald eagle was chosen as the national bird of the United States in 1782, there were about 100,000 nesting pairs; by the mid-sixties, that number was down to less than 500 nesting pairs. With the ban of DDT plus a recovery plan, there are now more than 10,000 pairs again, many of them living in the Great Lakes region. In 2007, the bald eagle was removed from the endangered species list.

The signing of the *Canada-United States Air Quality Agreement* in 1991 was largely meant to address transboundary air pollution leading to acid rain that was particularly harmful to the Great Lakes. Both countries agreed to reduce emissions of sulphur dioxide and nitrogen oxides, the primary precursors to acid rain, and to work on other acid related scientific and technical cooperation. Both governments claim that much progress has been made to reduce acid rain-causing emissions, a claim environmental groups acknowledge, but with caution. Pollution Probe says that while "great progress" has been made to meet reduction targets, the acid rain story is still unfolding, with new sources of pollution still being constructed and new science telling us that even reduced levels are not good enough to save our lakes and rivers from the scourge of acid rain.[22]

Working alongside governments to implement these agreements are a number of hardworking and dedicated environmental organizations such as the National Wildlife Federation and the Canadian Wildlife Federation, Sierra Club U.S. and Sierra Club Canada, Great Lakes United, Healing Our Waters Coalition, Alliance for the Great Lakes, the Canadian Environmental Law Association, various manifestations of Waterkeepers and hundreds of state, provincial and local citizen groups fighting to protect their portion of the basin. These groups advocate for the Lakes, conduct research, lobby for better laws and serve as watchdogs to governments at all levels. Yet despite these important cross-border agreements, the many cross border-working groups tasked with their implementation and the relentless energy and commitment of these and other non-governmental organizations, and despite the successes listed here, the threat to the Great Lakes continues to grow and the alarm bells continue to sound.

"The reason that so little real progress is being made is that there are really duelling notions about what the Great Lakes are, and whom they should serve."

Conflicting priorities

The reason that so little real progress is being made is that there are really duelling notions about what the Great Lakes are, and whom they should serve. The story of the global water crisis sets the stage all over the world: to feed the increasing demands of a consumer-based system, modern humans have seen water as a great resource for our personal convenience and profit, not as the most essential element in a living ecosystem. So we have built our economic and development policies based on a human-centric model and assumed that nature would never fail to provide, or that, where it does fail, technology will save the day. We have polluted, diverted and mismanaged the planet's finite supplies of water to the point that they are now dangerously close to collapse in many parts of the world. We have moved water from where it is needed to protect a healthy hydrologic cycle, to where we want it. Increasingly,

21 L. Knobeloch, M. Turyk, P. Imm, C. Schrank, and H. Anderson, *Temporal changes in PCB and DDE levels among a cohort of frequent and infrequent consumers of Great Lakes sportsfish*, Environmental Research, 109.66-71, 2008

22 Pollution Probe, *Acid Rain Primer*, Second Edition, 2006

humans see water as a commodity to be used for personal profit. Many in the private sector view the world water crisis as a great business opportunity. Judson Hill, investment analyst for NGP Global Adaptation Partners, recently told a Geneva agriculture investment conference that water scarcity is turning water into a bankable commodity and will generate "buckets and buckets of money" for smart investors.[23]

The waters of the Great Lakes are no exception to this rule. The history of the Lakes exposes deep threads of exploitation – from early settlement to the present day. From the time of European settlement, forests and wetlands were destroyed with impunity and extractive-industries such as pulp and paper dumped their effluent directly into the Lakes. The St. Lawrence Seaway was created in 1959 to open up the Great Lakes for international shipping and trading. It required much dredging and blasting, the building of massive hydroelectric power dams as well as the creation of a complicated series of canals and locks. (It also included the submersion of a number of villages and shorelines along the route, particularly on the Canadian side. Most of the lands and villages destroyed belonged to the Mohawk First Nations people of Akwesasne, who also witnessed the destruction of their fishing grounds, wetlands, arable farming land and access to the river.)

For the first time, deep draft ocean-going international vessels were able to come right into the heartland of North America. The creation of the Seaway opened the way for a huge expansion of industrial activity right on the Lakes in order to take advantage of the new shipping and trading opportunities, which in turn dramatically increased effluent dumping into the Lakes. Major manufacturing industries such as steel, paper, chemicals and automobiles, all attracted by plentiful water, set up shop in the Great Lakes region. Today, 36 per cent of U.S. cars and 38 per cent of Canadian cars are produced in the Basin. And of course, with the ocean-going vessels came the first of the invasive species that would destroy so much of the local native aquatic life of the Great Lakes.

That the Seaway served economic goals from the beginning almost to the exclusion of all others was evident with the mandate of the Moses-Saunders hydropower dam (built in the 1950s as part of the Seaway project), which required it to control the flow of the water levels in order to promote marine traffic and trading. Before the installation of the dam, water levels on the St. Lawrence and Lake Ontario water levels were dynamic and the natural flow enabled wetlands to survive by allowing shoreline seed banks to grow during periods of low water levels. Natural flows also protected access to inner marshes for fish spawning and served as protection for near shore animal activity during winter months. The new artificial controls of the water levels led to 50 years of environmental degradation of coastal wetlands says the Upper St. Lawrence Riverkeepers, and is a partial cause of the declining levels of the Lakes themselves.

Even the many agreements between the various government jurisdictions noted above are often based on the assumption of growth for the region, and one can see the duelling views of the Great Lakes right in the documents themselves. For instance, one of the official purposes of the 1985 Great Lakes Charter, aimed at joint reduction of environmental degradation, is "to provide a secure foundation for future investment and development within the region." The Canadian Environmental Law Association (CELA) notes that, in the current consultations leading up to a mandated review of the *Great Lakes Water Quality Agreement*, some industry interests are lobbying to move away from a focus on toxics to "other issues" and worries

23 *Private equity sees "buckets of money" in water buys*, *Reuters*, November 9, 2010

that the IJC may be open to this line of thinking. "Has the ecosystem fallen off the negotiating table?" CELA demands to know, noting that it is difficult to discern if the ecosystem is still central to those responsible for updating the agreement.[24]

As well, the *Great Lakes Water Quality Agreement* only outlines a need for research on the threat of invasive species, but does not recommend a program to control or contain them. In 2006, Canada introduced regulations to set new ballast standards but with a loophole for ships with "No Ballast on Board" (NOBOB), that is, loaded with goods. Lack of ballast is not a fool-proof protection however. While NOBOB ships are heavy with cargo and little ballast water, they do still carry unpumpable water and sediment and can therefore harbour invasive species. New York State recently adopted regulations that would require all ships entering the Great Lakes to be outfitted with ballast treating systems that exceed current international shipping standards, but New York State Senator Darrel Aubertine and the Canadian Department of Foreign Affairs and International Trade have joined the powerful shipping lobby in opposing them, citing their possible negative impact on Seaway commerce.

Even the 2008 *Great Lakes Compact* that came about to prevent new water diversions from the Lakes has a serious flaw that benefits industry, serving as another example of the duelling visions for the Lakes. As Michigan environmental legal expert Jim Olson explains, the Compact (and therefore all the implementing legislation by the states and provinces) contains a loophole that allows for water withdrawals of up to 20 litres (5.7 gallons) in unlimited quantity, which in turn allows big water-bottling companies such as Nestlé, Pepsi and Coca-Cola to remove large amounts of water from the Lakes for export. (For example, Nestlé secured a permit to withdraw 150 gallons – nearly 600 litres – per minute from wells in Evart, Michigan *after* the Compact was signed.)[25] It also contains an exemption that includes water in any sized container without limit so long as the container is labelled "product," and the water is used in agricultural, manufacturing or industrial processes. This creates a giant precedent that water exporters can use to transfer water out of the Basin and to undercut the diversion ban, which is the intent of the law in the first place. Olson warns that once water is seen as a good, it is subject to tough new business rules under the under the terms of the North American Free Trade Agreement (NAFTA).

Open for business?

This view of the Great Lakes as primarily a commercial enterprise should come as no surprise. According to the Brookings Institute, if it stood alone as a country, the Great Lakes economy, with a gross regional product of $4.2 trillion, would be the second biggest in the world, next only to that of the United States. Politicians and business leaders are keenly aware of the business opportunities this vast body of water offers.

In 2010, as part of its new *Open for Business Act*, Ontario passed the *Water Opportunities and Water Conservation Act,* which, while setting some good (albeit voluntary) standards for water conservation, clearly aims to make the province "a leader in the development and commercialization of innovative technologies for the treatment and management of water and wastewater" and use Ontario's abundant water resources as an "economic incentive" for

24 Canadian Environmental Law Association, *Re-negotiation to Amend the Great Lakes Water Quality Agreement: Response to the Binational Webinars*, June 7-9, 2010

25 Jim Olson, Navigating the Great Lakes Compact: Water, Public Trust and International Trade Agreements, Michigan St. Lawrence Review, 1103, 2007

businesses to locate there. The same Bill weakened the requirements for public scrutiny of pollution permits.[26] The duelling visions of trying to care for the Lakes, while at the same time exploiting them, can be clearly seen in this legislation and where it might lead. Environmentalists are concerned with plans to open up a whole sub-basin of the Great Lakes to Greater Toronto-scale urban sprawl and industrial development, which will necessitate building huge water pipelines traversing the countryside from Lake Simcoe or Georgian Bay to inland communities.

Milwaukee's City Council is planning to entice water-intensive industries such as semiconductors, meatpackers, paper, pharmaceuticals and fabricators, to the city with deeply discounted water from the Great Lakes. "This is our comparative advantage," says Mayor Tom Barrett, who clearly favours the vision of the Great Lakes as an economic engine over that of a shared and protected watershed. He suggested poaching jobs from water-parched Atlanta. Local business leaders see this as an example for other Great Lakes cities and suggest the project be called WAVE – "Water Attracting Valued Customers." Critics point out that water intensive industries dispose of a lot of wastewater, which will be cleaned at public expense by public treatment plants, and are usually highly energy intensive as well, creating additional air and water burdens in the surrounding communities. As well, cheap water rates may lure the kinds of businesses that do not want to take measures to reduce their water footprints. The Alliance for the Great Lakes notes that if Great Lakes cities and their leaders do not recognize the intrinsic value of being situated near the world's largest concentration of freshwater lakes, how can they convince others of their value?

Chicago Mayor Richard Daley is proposing to bottle municipal tap water to sell for profit. As it is, commercial and bottled water users have access to the groundwater of the Great Lakes at cut-rate prices. Ontario charges large commercial water users only $3.71 per million litres (250,000 gallons). In Michigan, Nestlé pays just for the service charge of the municipal tap water it uses. The company pays the City of Evart 9.4 cents per 1 million gallons (4 million litres) and pays nothing for the 100 million gallons (4 million litres) of water it removes every year from the Sanctuary Springs Mecosta because these are private high capacity wells. In Detroit, as in many other Great Lakes cities, the rate charged per gallon of water decreases the more water is used. For instance, industry in Detroit uses more that 33,000 cubic feet a month, but pays almost 20 per cent less than both industry and residents using less than that amount. The bottled water industry is of course very interested in the water of the Great Lakes and pumps three hundred million gallons (more than 1 billion litres) out of the systems that feed the Lakes every year with the blessing of local governments.[27]

As well, many governments are now promoting the sale or contracting out of their public water systems to private companies, either because they are cash strapped and need private investment funds to upgrade neglected and aging infrastructure, or because they believe in private services ideologically. Public-private-partnerships are being promoted by many municipal, provincial and state governments as an alternative to public delivery of water and wastewater services and in some cases, funding for new initiatives such as water treatment plants, favour private sector involvement. Chicago is one of a number of Great Lakes cities seriously considering privatizing its water services. (Others include Toledo, Detroit, Grand Rapids, and Bay City.) A report by U.S.-based Food and Water Watch found that if Chicago moves to a

"Public-private-partnerships are being promoted by many municipal, provincial and state governments as an alternative to public delivery of water and wastewater services."

26 Lake Ontario Waterkeepers, *Waterkeeper's Weekly*, October 27, 2010

27 From an April 2008 speech by former Great Lakes Fisheries Commission member Dave Dempsey at Michigan State University Alumnus Theatre

Chicago, Lake Michigan. Photo by Marius M. / stock.XCHNG

private model, consumers will pay for the original investment many times over.[28] Privatization brings not only higher rates for consumers but also a loss of public oversight to manage and protect watersheds. Commodifying public water services of the Great Lakes renders a Great Lakes-centred vision for the Basin unattainable.

And despite the intent of the Compact to ban commercial water exports from the Great Lakes, pressure is growing to open up the Lakes for water trading. The influential policy think-tank, the Montreal Economic Institute, is proposing a $20 billion plan in annual bulk water sales that would take massive amounts of water from Northern Quebec and ship it by canals down to the southwestern United States through the St. Lawrence and the Great Lakes. While there has been no response yet from the Quebec government on this proposal, it has generated a fair bit of media and some support in Canadian business circles. This would not surprise the National Wildlife Federation, which warns of the growing demand on the waters of the Great Lakes as climate change decreases water and aquifer levels in other parts of the United States.[29]

Consistently underfunded

In the end the proof is in the funding. For decades, funding for the various joint agreements and reclamation projects for the Great Lakes has been so meagre, their recommendations have been impossible to implement. Many groups appearing before the current review of the *Great Lakes Water Quality Agreement* expressed widespread concern that inadequate and

28 Food and Water Watch, *Water Privatization Costly for Chicago*, 2010

29 National Wildlife Federation, *Climate Change and Great Lakes Water Resources*, November 2007

inconsistent funding has hampered the overall success of the Agreement. A 2008 report by the Great Lakes and St. Lawrence Cities Initiative showed that local governments in Canada and the United States invest the lion's share of Great Lakes rehabilitation costs, an estimated $15 billion annually.[30] The U.S. government had cut federal funding for the Great Lakes to the bone to just over half a billion dollars annually in 2004, and the Canadian government allots a mere $8 million a year for Great Lakes clean-up and protection.

While the Obama administration has promised to increase federal funding for the Great Lakes to $2.2 billion over the next five years, this money is not adequate to the demand and the funds have not been forthcoming at the expected rate. The Environmental Protection Agency estimates that $73 billion is needed in the U.S. just for infrastructure repair and upgrade and the Canadian Water Network, a group of scientists and researchers across the country, places Canada's need for immediate infrastructure upgrading at close to $40 billion. As a consequence of this severe underfunding, not only are the remediation goals of the *Great Lakes Water Quality Agreement* not able to be realized, neither are the proper implementation of the Compact and its goal of controlling diversions.

It is clear then, that the measures taken to date are not adequate to the enormous task before us of rescuing and permanently protecting the Great Lakes of North America. If we truly saw the Great Lakes as a shared Commons to be protected for all time, we would have invested heavily in their reclamation and created powerful laws to prevent further harm. While no one would deny that there is an important economic dimension to the waters of the Great Lakes, the dominant tendency to see them primarily as an engine of growth and prosperity has placed them in grave and growing danger. A new narrative, widely held and acted upon, is needed now to save the Great Lakes.

30 Great Lakes and St Lawrence Cities Initiative, *Local Investment in the Great Lakes and St Lawrence*, February 2008

We Need a New Narrative to Protect the Great Lakes

What might happen if the citizens living around the Great Lakes decided to collectively protect them based on some of the very principles and practices that informed the First Peoples of the region, namely that the Great Lakes must be shared equitably by all who live around them and protected for seven generations into the future? What do we mean by a Commons? What is the Public Trust Doctrine? How could we protect a Bioregion?

A Commons approach

The notion of the Commons is a very old one. A Commons narrative asserts that no one owns water. Rather it is a common heritage that belongs to the Earth, other species and future generations as well as our own. Because it is a flow resource necessary for life and ecosystem health, and because there is no substitute for it, water must be regarded as a public Commons and a public good and preserved as such for all time in law and practice. Embracing the Commons helps us to restore to the centrestage a whole range of social and ecological phenomena that market economics regards as "externalities." A language of the Commons would restore more democratic control over the Great Lakes and establish their care and stewardship the joint responsibility of citizens and their elected governments based on the notions of social equity, ecological survival and governance by the people most impacted.

The Commons approach is based on the belief that just by being members of the human family, we all have rights to certain common heritages, be they the atmosphere and oceans, freshwater and genetic diversity, or culture, language and wisdom. In most traditional societies, it was assumed that what belonged to one belonged to all. Many indigenous societies to this day cannot conceive of denying a person or a family basic access to food, air, land, water and livelihood. Many modern societies extended the same concept of universal access to the notion of a social Commons, creating education, health care and social security for all members of the community. There are many working examples of Commons in North America today that include systems of national, state and provincial parks, cooperative fishing compacts to protect local stocks from depletion, and public libraries.

A *Great Lakes Basin Commons* would reject the view that the primary function of the Great Lakes is to promote the interests of industry and the powerful and give them preferential access to the Lakes' bounties. It would embrace the belief that the Great Lakes form an integrated ecosystem with resources that are to be equitably shared and carefully managed for the good of the whole community. In a Commons framework, water is a fundamental human right that must be accessible to all. Private control of water cannot address itself to the issues of conservation, justice or democracy, the underpinnings of a solution to the crisis of the Great Lakes. Only citizens and their governments acting on their behalf can operate on these principles. Under a Commons regime, all private sector activity would come under strict public oversight and government accountability, and all would have to operate within a mandate whose goals are the restoration and preservation of the waters of the Basin and water justice for all those who live around it.

"A Commons narrative asserts that no one owns water. Rather it is a common heritage that belongs to the Earth, other species and future generations as well as our own."

At the same time, it is *not* a return to the notion that the Great Lakes are indestructible due to their size,[31] or what has come to be known as "the tragedy of the commons."[32] It is rooted rather in a sober and realistic assessment of the true damage that has already been unleashed on the Great Lakes as well as the knowledge that they must be managed and shared in a way that protects them now and for all time.

Public Trust Doctrine

The Public Trust Doctrine underpins in law the universal notion of the Commons that certain natural resources, particularly air, water and the oceans, are central to our very existence and considered to be the property of the public, which cannot be denied access. The trust resources must, therefore, be protected for the common good and not appropriated for private gain. Under the public trust, governments, as trustee, are obliged to protect these trust resources and exercise their fiduciary responsibility to sustain them for the long-term use of the entire population, not just the privileged few who could buy inequitable access.

The Public Trust Doctrine was first codified in 529 A.D. as Codex Justinianus, after the emperor of that period who said, "By the laws of nature, these things are common to all mankind: the air, running water, the sea and consequently the shores of the sea." This "common law" was repeated many ways and in many jurisdictions, including the Magna Carta, and has been a powerful legislative tool in many countries to provide for public access to seashores, lakeshores and fisheries. U.S. courts have referred to the Public Trust Doctrine as a "high, solemn and perpetual duty"[33] and held that the states hold title to the lands under navigable waters "in trust for the people of the State." The Public Trust Doctrine has been used in recent decades to protect both the right of public access to water and water itself.

Oliver Brandes and Randy Christensen of the Polis Water Sustainability Project of the University of Victoria in British Columbia add that at its core, Public Trust Doctrine is a background principle of property law that serves to strike an appropriate accommodation between the public interest and private development rights through requiring continuous state supervision of trust resources. Public trust is a recognition, they say, that private rights to use water are not granted in a completely unencumbered fashion, but are obtained through an appropriation system administered by government and with implicit restrictions to not unduly and irreparably harm the resource and associated values. This public trust is a safeguard that prevents the monopolization of trust resources and promotes decision-making that is accountable to the public.[34]

The Public Trust Doctrine is an important tool in the movement to fuse solutions to both the ecological and human water crises. Under a public trust regime, all competing uses of Great Lakes water should have to pass a test, not just of fairness of access, but also that they will

31 As noted by a decision of the Michigan Supreme Court, nibbling effects can impair the public trust as much as one major event., People v Broedell, 112 NW 2d 517, Mich 1961

32 *The Tragedy of the Commons* is an essay written for the journal *Science* in 1968 by Garrett Hardin and is widely taught and referenced as an argument for private control of resources. It is now widely criticized for failing to distinguish between well managed and regulated common property and "open access" resources that can be accessed by anyone at any time without restraint.

33 Michigan Supreme Court, Collins v. Gerhardt, 1926

34 Oliver M. Brandes and Randy Christensen, *The Public Trust and a Modern BC Water Act,* Polis Water Sustainability Project, June, 2010

not draw down the future capacity of the watershed. Public trust offers a body of principles that combine public good, public control and public oversight with the long-term protection of the watershed. It also sets the stage for an agreed upon "hierarchy of use," whereby some uses of the water, such as the human right to water and water for ecosystem protection, will take precedence over others.

Protected Bioregion

As important as it is, the Public Trust Doctrine does not extend to the concept that the Commons themselves have the inherent right to protection. In the eyes of most Western law today, most of the community of life on Earth remains mere property, natural "resources" to be exploited. Where there is challenge to this exploitation, it is usually to protect a natural Commons so that it can still be of use to humans, usually for economic purposes. The main form of environmental protection of the Great Lakes has been based on the regulatory system, legalizing the discharge of large amounts of toxins into the Basin in the name of curbing the worst practices.

South African environmental lawyer Cormac Cullinan has written extensively on the need for "wild law" to regulate human behaviour in order to protect the integrity of the Earth and all species on it.[35] If we are members of the Earth's community, then our rights must be balanced against those of plants, animals, rivers and ecosystems, he argues. In a world that recognizes the rights of nature, the destructive, human-centred exploitation of the natural world would be unlawful and humans would be prohibited from deliberately destroying the functioning of ecosystems or driving other species to extinction. Humans have bought into the "myth of abundance" and used, abused and moved water as if it is unlimited. The time has come to reverse this pattern and learn to live within the cycles and systems of water that give us life.

Creating a *Great Lakes Protected Bioregion* would require a change in the relationship of the humans who depend on the watershed from one of exploitation to one of respect. A Great Lakes Protected Bioregion would require legislation that recognizes the inherent rights of the ecosystem and aquatic life of the Great Lakes Basin outside of their usefulness to the humans who live around it. Law and practice would protect all the waters of the Great Lakes Basin, and the restoration of its ground and surface waters would be a priority.

Existing Public Trust Law

Technically, as environmental lawyer Jim Olson points out, all the waters of the Great Lakes, connecting waters and all tributary lakes and streams (with the exception of groundwater) are subject to Public Trust law in the United States by virtue of the U.S. Supreme Court decision in *Illinois Central Railroad v Illinois* (1802), where the Court ruled that even though the state held title to the lands under navigable waters, it is a title held in trust for the people. Olson says, "The principles of governance, democracy, and public control already apply and exist; we, as recognized beneficiaries, need to educate and exercise."[36]

Knowledgeable environmental groups such as Midwest Environmental Advocates, a Wisconsin-based non-profit environmental law centre, agree, saying that because of these trust laws,

35 Cormac Cullinan, *Wild Law, A Manifesto for Earth Justice,* Green Books, Second Edition, *2011*

36 Jim Olson, personal correspondence, January 2011

the Great Lakes are already "the quintessential shared Commons" and need to be recognized as such.[37]

There is a rich history of public trust in U.S. law. The state Supreme Court of Idaho has stated "the public trust doctrine at all times forms the outer boundaries of permissible government action with respect to public trust resources." In 1983, the California Supreme Court used the Public Trust Doctrine to curtail the diversion of water to Los Angeles from fragile Lake Mono. The Audubon Society successfully argued that even though the tributaries feeding Lake Mono were not navigable (up until then only navigable waters were subject to public trust protection), the public trust was still violated because diverting from those streams jeopardized the public trust value of the lake. Two decades later, Olson used the Public Trust Doctrine to argue for limits to tributary groundwater access with dramatic effect on an adjacent stream, in a 2004 court challenge against a Nestlé bottling operation in Michigan. He said that groundwater and surface water are one and the same, and therefore the effects are the same whether the pipe is in the stream or in the groundwater that feeds it – both must be equally protected for the common good.

In 2008, concerned about major groundwater extractions, the State of Vermont passed the *Groundwater Protection Act* that declared the groundwater to be a public trust resource legally belonging to all Vermonters that must be managed in the best interest of all Vermonters. A permitting system has been set up for users over a certain limit per day, and the state has the right to revoke these permits if they are abused. Recently, the Vermont Natural Resources Council used the State's public trust legislation to challenge a tritium leak from nuclear power plant Vermont Yankee, saying that a violation of the integrity of the water is a violation of the rights of the owners – the people of Vermont. Maine has introduced a law that would require a majority vote of the local community before a large groundwater withdrawal or large-scale transport of public water could take place.

The Great Lakes states have some good public trust law and history as well. In 2005, the U.S. Supreme Court ruled that Michigan residents have the right to walk along that state's more than 5,000 kilometres of shoreline. Michigan, Wisconsin and Ohio all have the right of public access under the Public Trust Doctrine extending to all navigable lakes and streams. In a dispute between a Wisconsin property owner and the public, the Supreme Court established that streams and wetlands are interconnected and a private homeowner does not have the right to destroy a wetland because of the common ownership of the stream.

There is less of a history of public trust in Canadian law because, as distinguished Canadian water advisor Ralph Pentland explains, Canada's *Constitution Act* recognizes the on-going role and authority of the Crown as the owner of all public lands.[38] So the responsibility to preserve the Commons was vested more in government than in citizens. As Brandes and Christensen of the Polis Project point out however, just because no court in Canada has explicitly recognized or adopted the Public Trust Doctrine with respect to freshwater resources does not mean there is not some history of Commons protection in Canadian law. Public rights to shared resources have been affirmed in court cases involving the use of public rivers and oceans, including the rights of fishing and navigations; the use of lands dedicated for public use includ-

"Creating a Great Lakes Protected Bioregion would require a change in the relationship of the humans who depend on the watershed from one of exploitation to one of respect."

37 Midwest Environmental Advocates, *Realizing the Promise of the Great Lakes Compact: A Policy Guide for State Implementation*, *Vermont Journal of Environmental Law*, 2006-2007

38 Ralph Pentland, *Public Trust Doctrine – Potential in Canadian Water and Environmental Management*, Polis Project on Ecological Governance, June 2009

Picture Rocks, Lake Superior. Photo by Cece Chen / stock.XCHNG

ing parks and public commons; and the maintenance of key environmental features including clean air and water, healthy fish stocks and wildlife and publicly-owned forests.

More recently, limited public trust language has found its way into Canadian law. The Yukon and Northwest Territories have incorporated trust principles into recent environmental laws, the latter defining the public trust as "the collective interest of the people of the Territories in the quality of the environment and the protection of the environment for future generations." As Pentland notes, these Acts not only establish the public trust concept, they also provide means for the trust to be enforced by citizens who feel that it is threatened. British Columbia passed the *Islands Trust Act*, which, as the Polis Project points out, identifies lands vulnerable in the Gulf Islands to development pressure and provides that land use planning and decision-making must be done in a manner that "preserves and protects" the resource. And the Canadian environmental justice law group Ecojustice has filed an application on behalf of the Aamjiwnaang First Nation of Sarnia that the on-going approval of pollution of their local watershed by the Ontario Ministry of the Environment, and the resulting imbalance in their ratio of boy and girl babies, violates their basic human rights under the *Canadian Charter of Rights and Freedoms*.

One of the two Great Lakes provinces, Ontario, has yet to commit to key public trust law to protect the Great Lakes. Water in Ontario is governed under Common Law and is public. The beds of the Great Lakes belong to the Crown (the government). But the law also allows for "reasonable use." The many private claims to waterfront have meant that public access to the shoreline of the Great Lakes on the Canadian side is not secure. In April 2010, the Member of the Provincial Parliament from Niagara Falls introduced the *Great Lakes Shoreline Rights of Passage Act*, in the hope of gaining support from the Ontario government for this public trust

access, but has had little success to date. Quebec however, adopted a law in 2009 recognizing that "both surface water and groundwater, in their natural states, are resources that are part of the common heritage of the Québec nation." The Act states that every person has a duty to prevent or at least limit the damage done to water resources. The government of Quebec can now sue individuals and companies for damaging water resources.

Limits of existing Public Trust Law

Clearly then, the notion of a limited public trust are becoming more established on both sides of the border. However, there are still gaping holes in the legislative process, such as Ontario's reluctance to provide public access to shorelines on its side of the Lakes. The public trust is deeply undermined by the terms of the "investor-state" provision of NAFTA, which gives corporations from another NAFTA country the right to sue for financial compensation if governments change the rules of business even to protect the environment or the health and safety of their citizens. Canadian bottling, agriculture, mining and other private interests that have set up shop in the U.S. and their American counterparts operating in Canada have legal claims to the water they use for their business and can sue for millions – even billions of dollars – if governments use their authority to try to set limits on their water takings. In October 2010, the Canadian government set a dangerous precedent by "compensating" U.S. pulp and paper giant Abitibi Bowater for $130 million after it claimed it has ownership of the water rights from the Newfoundland operation it deserted. The government of Newfoundland and Labrador argued that the company only had the right to access the water as long as it was creating jobs in the province but that the water belongs to the people. Abitibi Bowater used NAFTA to argue that the water it used for business was its private property, not a public trust, and won.

"The public trust is deeply undermined by the terms of the 'investor-state' provision of NAFTA."

As well, neither the public trust nor the Commons framework are widespread notions, really understood, or lived in practice. Further, there are on-going challenges to existing Commons protections by those who have a very different vision of the purpose and future of the Great Lakes. As Midwest Environmental Advocates note, this "quintessential shared Commons" is under pressure from within and without: "There are no uniform and comprehensive rules for management of water uses within the Great Lakes Basin and there are increasing pressures to export and exploit the Great Lakes by private industries."[39] They point out that while in their opinion, the public trust laws render the Great Lakes a Commons, their management of the Lakes would suggest otherwise.

Furthermore, existing definitions of the Commons in North American do not much address themselves to the issues of social or environmental justice. The lack of access to clean water is increasingly seen as a violation of fundamental human rights. Around the world, lack of access to clean water is now the largest killer of young children, and these deaths are directly related to the inability of their parents to pay for water services. In July 2010, the United Nations General Assembly adopted an historic resolution that recognizes the human right to safe drinking water and sanitation, and several months later, the UN Human Rights Council adopted a similar resolution. Because the Human Rights Council's resolution is an interpretation of two existing treaties, it strengthened the interpretation of the General Assembly resolution, making it binding. Both Canada and the United States worked to derail the resolution of the General Assembly although in the end, they abstained rather than vote against it. However,

39 ibid, Midwest Environmental Advocates

in a surprise and welcome move, the United States, which sits on the Human Rights Council, supported the second right to water resolution.

The human right to water is being violated in a number of communities around the Great Lakes. In Canada, First Nations communities are far more at risk of water contamination than the average population. In 2010, 49 First Nations communities had high-risk drinking water systems and more than 100 face on-going boil water advisories (out of about 600 First Nations reserves in Canada.) Many of these deplorable conditions have been dragging on for years and in some cases, decades.[40] Compared to other Canadians, First Nations' homes are 90 times more likely to be without running water. Several of the more seriously contaminated communities live on or near the Great Lakes and several others draw from source water seriously compromised by chemicals, pathogens, E. coli, giardia and cryptosporidium. The Walpole Island First Nation located at the head of Lake St. Clair on the Ontario side of the international boundary, for instance, has dealt for decades with contamination from the petrochemical industry and to this day lives with strict restrictions on eating local fish and wildlife.

On the U.S. side, high water rates have been responsible for water cut-offs in some poor communities. At least 45,000 residences in Detroit, Michigan have had their water disconnected, according to the Detroit Water and Sewerage Department[41] (although local activists put the number much higher). Water rates have climbed as industrial activity has declined, causing a steep drop in population and municipal revenues. Communities affected are largely African-American, poor, elderly, or single parents. As a result, a number of families have had their children taken from them by social services. Reminiscent of the townships of South Africa, some Highland Park families haul water from public venues or run hoses from neighbours' yards into their kitchens to survive. As water rates climb across the states, provinces and countries, there will be other communities affected in this way unless access to clean water is redefined as a human right and is guaranteed, regardless of ability to pay.

And what of the people living around the Lakes in proximity to the toxic cesspools so bureaucratically named "Areas of Concern?" What are their rights? Will Great Lakes residents be able to challenge mining, energy, chemical, pharmaceutical and other companies for discharging poisons into their drinking water as a violation of their human right to safe drinking water? Will people in a community where a bottled water company has drained their aquifer be able to challenge the company or the government for allowing the theft of community water? Why should the public keep paying for the clean-up of industrial and agribusiness pollution while so many corporations get to make large profits from this supposed Commons resource? How will we ever have a true definition of the Commons if we do not give citizens the right to challenge these and other violations of their rights?

40 David R. Boyd, *No Running Water, First Nations and the Constitutional Right to* Safe *Water in Canada*, November 2010

41 Circle of Blue Waternews, *In Detroit: No Money, No Water*, April 19, 2010

The Time has Come for the Great Lakes Basin Commons

We are hoping that this paper serves as a "call to understanding and action" to create the *Great Lakes Basin Commons*. The time has come for a cohesive analysis of the crisis facing the Great Lakes, a new narrative to guide us on this journey, and a common set of goals to unite us as we move forward to take remedial action. What we are proposing is different in kind, context, reach and framework from what exists now, although some of the foundation has surely been laid. There is a strong need for Basin-wide consistent laws, regulations and definitions to protect and expand the existing Commons groundwork if we are to save the Great Lakes. And for this to work, the public must understand and embrace the Commons concept and demand its supremacy in the governance of the Great Lakes. A new Commons narrative bound by a Commons set of principles and a new governance structure truly subject to citizen accountability could provide a path toward sustainable and equitable stewardship of the Great Lakes.

Commons principles

To help guide this process, a group of legal experts from both Canada and the United States met to set out some draft key concepts and approaches that are needed to form the basis for the kind of Commons regime that is needed to protect the Great Lakes and can serve as a guide to groups and communities wanting to move this agenda forward. "In theory," say the legal experts, "a Commons approach is simple – it requires only that we envision water as a shared resource and so recognize our shared responsibility to carefully steward our water resources. The goal of a Commons approach to water is to ensure that there is sufficient water to meet human and ecological and community needs for many generations to come."[42] The authors underline the need to identify key principles to guide the process and situate them within a good and strong governance structure.

Ten principles for the *Great Lakes Basin Commons:*

1) ***The waters of the Great Lakes belong to everyone and every living being that live on or around them***. The waters are inherently a public resource, the same as the air we breathe. This principle derives from the physical nature of water, the fact that having access to water to drink is a biological imperative of all life, and because of the fact that water is critical to the water and ecosystems that sustain us.

2) ***Private interests of those with claims to the Great Lakes are subordinate to public rights***. The concept of water as a Commons stands in stark contrast to the concept being advanced by some that water rights are a form of property equivalent to a permanent and exclusive entitlement that precludes any public use of the appropri-

42 *Water Commons Legal Framework*, A working document that came out of a 2009 Wingspread meeting of legal and policy experts. The principles that follow are a combination of ones proposed from this gathering and my own work.

ated water without public compensation. Individual water rights allocations must not interfere with collective and Earth rights.

3) ***The waters of the Great Lakes are a human right and must be equitably and justly shared.*** Every person living around them has the right to clean drinking water and sanitation consistent with the new human right to water obligations under the United Nations, regardless of ability to pay. Every person has the right not to have the water of their local watershed contaminated by industrial, agribusiness, mining, energy or other activities.

4) ***Governments have an affirmative obligation to manage and protect the water of the Great Lakes as a Commons***. Not only does the public trust provide a basis for enforcement of the rights of people in the Commons, it demands respect. Governments must protect the water and its uses for all generations in a way that ensures that clean water is available for drinking, fishing, healthy ecosystems, as well as for agriculture, transportation, industry, and power generation. Water management, regulation and pricing must be consistent with principles of the public good and respect for human rights and Earth rights.

5) ***The Great Lakes Basin Commons recognizes the ecological rights of the watershed.*** Water belongs where nature put it. We must recognize the ecological integrity of water itself and the need to leave it as intact as possible in watersheds. As well, water is part of a cycle; one cannot disrupt any part of the cycle of the Great Lakes without disrupting the entire cycle. Groundwater and surface water of the Basin are linked. All water allocations and water management must support a balanced hydrological cycle where water withdrawals and contamination do not exceed the water sources ability to replenish and restore.

6) ***The Great Lakes Basin Commons will require constant and careful management.*** A central characteristic of a true Commons is its careful, collaborative management by those who use it, and allocation of access based on a set of priorities set by the community. As well, those living around the Lakes have a responsibility to prevent harm and must take responsibility to care for the watersheds for future generations. Good stewardship needs good law and will require the extension of public trust law in many areas and in a consistent manner.

7) ***The Great Lakes Basin Commons must encourage and empower decision-making at the local level.*** A water Commons should empower community-based investment, but subject to strong oversight by regional, state/provincial, and national interests in making sure that local groups are not captured by economic interests, or driven to compete for economic development by lowering water resource protections in a race to the bottom.

8) ***The water systems of Great Lakes communities should remain under public management.*** Where water systems have been privatized, they should be brought back under public control. Full cost recovery should not be the goal of water services; water should be seen as a public service like health care or education. Higher service rates can be set for industry and agribusiness.

9) ***Public participation is key to the Great Lakes Basin Commons.*** The availability of good information about the local watershed is crucial to its success and governments

have an obligation to collect baseline information on water quality and quantity (including "virtual water" that leaves the watershed) and disseminate it. A true Commons is based on a co-management model and requires true collaboration between community and government and ability of regulatory agencies to implement public recommendations.

10) ***All decisions about the Great Lakes should be made with the involvement of all recognized nations and people, including local First Nations/American Indian tribes***. Indigenous peoples have lived around the Great Lakes for centuries and continue to do so today. These aboriginal communities are sovereign governments with strong traditions and cultural ties to the waters of their historic lands and must be recognized as having fundamental rights to these traditional lands and waters. They must be fully involved in the creation of a water Commons.

"A Great Lakes Basin Commons Watershed Plan would establish the Commons principles that no one owns the waters of the Great Lakes."

Commons legal framework

A Commons framework needs good law. As explained in this report, water is inexorably bound up in custom and the law. The law governs the control, use, disposal, protection and ownership of water and that law around the Great Lakes is currently a "colossal morass." Rarely, for instance, does water law conform to hydrological realities; rivers and aquifers transcend state and provincial boundaries but many water laws do not. Change is necessary in our legal regime before a Commons approach to water can be achieved and it must be based on a proactive, positive approach to the context, governance, and boundaries beyond which no

Mackinac Island, Lake Huron. Photo by Jill Smith / stock.XCHNG

private interest or person can go because of the nature of these magnificent waters and the ecosystem that surrounds them.

The Great Lakes Basin Commons needs a uniform and comprehensive set of rules for the good governance and protection of the Lakes. A *Great Lakes Basin Commons Watershed Plan* would establish the Commons principles that no one owns the waters of the Great Lakes; they must be equitably shared; the watershed itself has rights; and all the governments around them have an affirmative responsibly to govern in such a way that they are protected for all time.

Components of a Plan should include:

- A declaration that all the waters of the Great Lakes, including their groundwater and tributaries, are a public trust;
- A declaration that safe drinking water and sanitation is a basic human right of all the people living around the Basin;
- A process for citizens and communities living on the Basin to sue corporations and governments knowingly polluting their local water sources for violation of their human right to clean water;
- A declaration that water and wastewater services are public services to be equitably and affordably provided by governments;
- Integrated watershed planning and management; understanding that the Lakes, their tributaries and groundwater are all connected regardless of political jurisdiction and need watershed-wide governance;
- Collective watershed-wide assessment of the region's water resources and an assessment of the demands on the system, both short and long term;
- Intensive groundwater mapping and regulation to protect the long-term sustainability of current supplies;
- A process for priority allocation of the existing supplies based on a set of Commons values that must include ecosystem protection and the right to clean drinking water for all;
- The principle of local self-sufficiency; that no region will use more of the water resource than it supplies and will try to provide for the water footprint of its population with local water sources;
- Research on virtual water exports out of the Basin and new restrictions on water-intensive commodity production for export;
- Priority support for local sustainable food production to keep local water in the watershed basin;
- A plan for the capture and storage of water now leaving the watershed and long-term restoration of the Great Lakes watershed;
- Tough new restrictions on chemical, toxic and sewage pollution with serious enforcement standards and mechanisms;

- Strict new regulations on industrial food production to curb chemical run-off, including the input streams feeding the Lakes;
- Clear adoption of the precautionary principle in all federal, state and provincial laws pertaining to the Great Lakes;
- A program for wetland protection and restoration;
- A serious financial commitment to water and wastewater infrastructure to prevent the current loss of massive volumes of water due to old or non-existent systems;
- A moratorium on all oil and gas exploration in or near the Lakes and clear restrictions on all mineral exploration and extraction to ensure no damage to the Basin and its waters;
- A ban on all nuclear shipments on the Great Lakes;
- A ban on all bunker oil in ships travelling the Great Lakes;
- A ban on more tar sands pipelines carrying bitumen to the Great Lakes and the refining of it by industry near the Basin;
- Inflow protection for shorelines, not shipping, which will require allowing sufficient seasonal and year-to-year fluctuations in water levels to repair coastal wetlands in Lake Ontario and the upper St. Lawrence River;
- A moratorium on all ocean-going vessel access to the Great Lakes until a fool-proof plan is put in place to stop the influx of invasive species into the Basin;
- Open public access to all Great Lakes' shorelines to the public;
- A full ban on all commercial export of water from the Great Lakes;
- A full ban on bottled water extraction around the Great Lakes;
- Closure of the loopholes in the *Great Lakes Compact* so that water cannot be exported either in commercial bottled water operations or as containers marked "product";
- Removal of all references to water as a "good, investment or service" from all trade and investment agreements.

Commons governance

How might the *Great Lakes Basin Commons* be governed? First is the adoption of the notion and the need to protect the Lakes as a Commons, a Public Trust and a Protected Bioregion. Key to this of course, would be the widespread adoption of the principles outlined above as well as a *Great Lakes Basin Commons Watershed Plan* and legal framework by both the federal governments of Canada and the United States and all of the states and provinces that border the Lakes. Basin-wide regulatory agencies with the authority to enforce the law and who are accountable to local communities would be essential. This would have to be worked out between the two countries, neither of which would likely be willing to cede sovereign authority over their right to enforce their own laws. But as we have seen when big business

lobbies and governments from both sides of the border get together to promote common trade policies and standards for goods crossing the border, it is entirely possible to successfully cooperate on a larger project. Municipal buy-in would also be crucial and necessary for any success of the project.

Citizen participation is a cornerstone benchmark for success or failure. Active, meaningful public involvement is a critical component of a water Commons approach. Users of the resource must monitor public and private use of the water resource and publish the results of their monitoring.

Governments would need to provide local citizens with the tools they need to co-manage their water together with public authorities and empower citizen watershed councils with resources and coordination and provide tools for community capacity building. This means active encouragement, facilitation, funding, expert assistance, public education, information sharing, and outreach by public authorities for the purpose of citizen involvement. Empowering citizens must include providing legal standing for citizen watershed councils in their co-management and watchdog function. Given the broad range of interested parties, all interested sectors of civil society, including water operators, upstream water users, stewards within adjacent watersheds, and First Nations communities, should participate in citizen water councils. However public participation should not be seen as a substitute for strong regulatory agencies, but rather serve as a tool to strengthen them.

There are many current projects and examples that serve as models for the kind of local, state/provincial and federal cooperation that would be needed for the Great Lakes Basin Commons to succeed. The Detroit Peoples' Water Board was set up as a reaction to the water cutoffs and very effectively serves as a parallel citizen's board to the municipal board, advocating for access, protection and conservation of water. The Akwesasne Task Force on the Environment is a community-based, grassroots organization formed to address the water and other environmental issues of the Mohawk Nation. Its mandate is to conserve, protect and restore the natural and cultural resources of the community. The Tip of the Mitt Watershed Council of northern Michigan has organized local citizens for 30 years to monitor their water resources and advocate for their protection. Members use an extensive network to activate their base, educate the local community on water issues, and work with local governments to design comprehensive management plans for lakes and rivers.

The Hamilton Bay Restoration Council is a community non-profit group that works to clean up the Hamilton Ontario harbour and its watershed. It works with government, delivers school programs, and coordinates community planting and restoration events. The council has been credited with a major renewal plan to reclaim this once devastated harbour. The Ladies of the Lake is a dynamic organic grassroots organization made up of more than 100 women intent on bringing the community together to save Lake Simcoe, a sick body of water in the Lake Huron watershed, north of Toronto. Every year, they pose "in the buff" in a natural setting for a calendar that raises funds for their work. The ladies have become a household name in the region. The Blue Communities Project in Canada calls on local governments to adopt a Commons framework by passing municipal resolutions to ban the sale of bottled water in municipally-owned facilities and at municipal events, reject private-public partnerships for water and sanitation services, and recognize water as a human right. The Council of Canadians, Eau Secours and the Québec arm of the Canadian Union of Public Employees launched the project in Québec in November 2010.

Similar projects are active at the state/provincial and federal levels. More than 90 environmental groups on the U.S. side of the Lakes came together on the 50th anniversary of the Seaway to call for a ban on ocean-going tankers from entering the Great Lakes. Communities from all around the Lakes are coming together to stop the pending shipment of Bruce Power radioactive waste. U.S. public advocacy group Food and Water Watch is spearheading a campaign for a Clean Water Trust Fund that would finance badly needed municipal infrastructure repairs, allowing municipalities to keep their water services public. Food and Water Watch worries that cash-strapped municipalities are selling off their utilities to the private sector in the absence of federal funding to protect public services. Governments and non-governmental organizations such as the Stewardship Network of Ontario are working together to reclaim the almost 90 per cent of the Great Lakes wetlands that have been lost in that province. The Ontario government sponsors an introductory training course in wetland restoration for community volunteers who then act as partners with the government in a wetland restoration program that is very popular and has had some real successes.

The Obama administration has launched its Great Lakes Restoration Initiative, which, while not being adequately funded, does build on the Great Lakes Regional Collaboration Strategy, a wide-ranging cooperative effort among the Great Lakes states and the U.S. government to restore and protect the Great Lakes. The major focus areas of the initiative are toxic substances; invasive species; near shore health and nonpoint source pollution; habitat and wildlife protection and restoration; and accountability, educational monitoring, evaluation, communications and partnerships. This project could be greatly enhanced by a Commons framework.

Sandbanks Prov. Park, Lake Ontario. Photo by C. Löser / Wikimedia Commons

Conclusion

Clearly there is much goodwill to move to a new level of consciousness to save the Great Lakes of North America. But to be successful, these and other activities must take place as part of a cohesive whole, backed by strong and meaningful laws. It is the long-term goal of the network proposing the *Great Lakes Basin Commons* to eventually see a full treaty between Canada and the United States that declares the Great Lakes to be a lived Commons, Public Trust and Protected Bioregion, one that is also adopted by the states, provinces and First Nations of the Basin. We also believe that a high level summit will be necessary to ensure the full commitment and participation of all those levels of government needed to make this shared vision a reality.

However a treaty is not our starting point. Our starting point is in the cities, towns, villages, hamlets and farms that ring the Great Lakes, and with the people and communities that live on and love them. Our organizational goal is to get communities around the Great Lakes, as well as the myriad of existing community and environmental groups, to become better linked to one another through the connecting narrative of a Commons discourse. We need to create a vocabulary to connect the many millions of people who are not experts on the details of the environmental threats to the Great Lakes, but who care about them and are ready to feel "ownership" of them. We need to strengthen peoples' cultural and visceral connection to the Great Lakes and promote their "right to care." And we need to build on the great work of countless national, state, provincial and community groups that have toiled for decades to protect the Lakes and let them know they are not alone.

We invite you to join us in this great task to forge a participatory, legally-based process that is commensurate with the challenges to the Great Lakes region and the communities that depend on them. In the end, we, the people of the *Great Lakes Basin Commons* are the real hope for their survival.

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