



A Suncor refinery in Sarnia where tar sands bitumen is processed.

## Liquid Pipeline: Extreme energy's threat to the Great Lakes and the St. Lawrence River **by Maude Barlow**

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 fresh water 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. Two Canadian provinces – Ontario and Quebec – and eight U.S. states – Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania and New York – border the Lakes and the St. Lawrence River, which is their primary flow outlet to the Atlantic Ocean. As well, there are many Indigenous territories with governance and treaty rights. The Great Lakes have a unique biodiversity and are home to more than 3,500 species of plants and animals.

The Great Lakes were formed more than 20,000 years ago when the last 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.

The Great Lakes are in serious trouble. Multi-point pollution, climate change, over-extraction, eutrophication, invasive species and wetland loss are all taking a terrible toll on the watershed that provides life to so many people and species. Once thought to be immune to the water crisis that threatens other parts of the world, the Great Lakes are a source of growing concern as residents watch their shorelines recede, their beaches

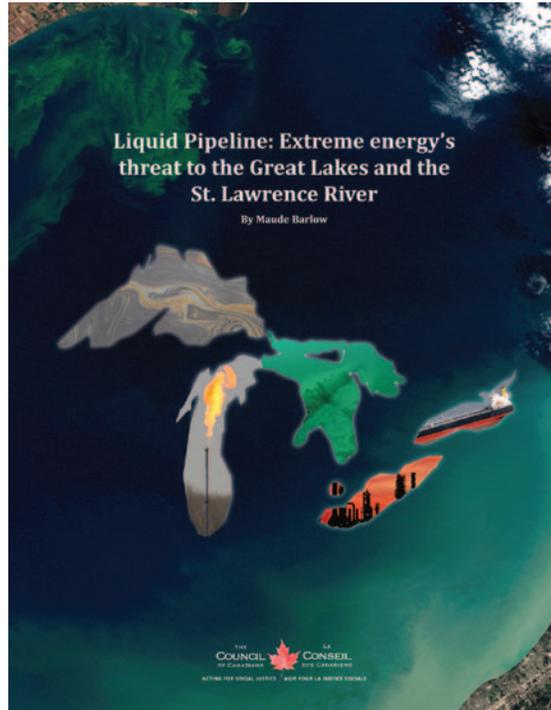
close and their fisheries decline. There are many environmental and community groups as well as elected officials in all the various political jurisdictions sounding the alarm about these threats. The International Joint Commission (IJC), established to regulate shared water and uses of the watershed, and to investigate and solve transboundary disputes, oversees the Great Lakes Water Quality Agreement which establishes management plans for each lake. The IJC closely monitors water quality, water level fluctuations and invasive species.

While the IJC and the Canadian and American governments have all been criticized for not taking strong enough action on these well-known and very serious threats to the Great Lakes and the St. Lawrence River, the threats are on their radars and are well established in the public consciousness. However, there is a newer threat to the Great Lakes that has not received anywhere near the attention or concern it deserves: the increased production and transport of unconventional or “extreme” energy sources on, under or around the Great Lakes.

My 2011 report, *Our Great Lakes Commons: A Peoples’ Plan to Protect the Great Lakes Forever*, called for 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. Since then, an increasing number of people and communities have taken up the call to become stewards of the Great Lakes and the St. Lawrence River. Plans to use this watershed as a carbon corridor for the dirtiest forms of energy on Earth threaten this Commons as never before.

Production of unconventional energy in North America is exploding and so are the transport routes to carry it. The tar sands of Alberta are producing

far more bitumen than can be sold in Canada. If current expansion plans are realized, the tar sands could one day be producing 5 million barrels (800 million litres) of heavy crude – the dirtiest oil on Earth – a day. This would eventually require an additional 14,000 kilometres of pipelines to carry the oil to export markets. Refining of tar sands crude in American



refineries has also exploded; there are now 66 U.S. refineries processing Alberta bitumen, the majority of which are located in states within the Great Lakes Basin.

Equally expansive is the practice of fracking. Since 2005, more than 82,000 fracking wells have been drilled or permitted in the United States. If the shale gas reserves in the land areas of just four Great Lakes states are developed, total water withdrawals to service these operations could exceed 37 billion gallons (148 billion litres) a year. The chemicals used in these fracking operations pose a direct threat to the water of the Great Lakes as well as to the health of millions of people who depend on them for drinking water.

The energy industry has huge plans to move these energy supplies. Canadian rail shipments of crude oil grew from 6,000 carloads a day in 2009 to more than 14,000 in 2013. In 2012 alone, there was a 300 per cent increase of oil transport by rail in the United States. The American Petroleum Institute says that there are over 18,000 miles (29,000 kilometres) of new crude pipelines planned in the U.S. by 2018, much of it in the Great Lakes region. And planned expansions of existing pipelines are such that even if the Keystone XL pipeline is not approved, Alberta bitumen will still flow south in unprecedented amounts. Line 67, the Alberta Clipper, will carry more crude than Keystone if its plans for expansion are approved. Even the aging Line 5 – twin underwater pipelines that run under the Straits of Mackinac – are to carry Alberta crude in growing amounts.

The newest way to transport bitumen, fracked oil, fracking wastewater and nuclear waste is by water. Plans are in the works to transport these forms of extreme energy on barges and tankers across the Great Lakes to refineries in the south

or down the St. Lawrence River to refineries there, for export. The American Petroleum Institute predicts that capital investment in marine transport of crude oil will jump 73 per cent by 2025. The U.S. Coast Guard has recently come out in favour of marine transport of fracking wastewater.

Events are moving rapidly to establish the Great Lakes and the St. Lawrence River as a carbon corridor for a newly aggressive North American energy industry. This poses the greatest threat yet to these waters.

Read more of Maude Barlow’s new report *Liquid Pipeline: Extreme energy’s threat to the Great Lakes and the St. Lawrence River* on our website at [www.canadians.org/greatlakes](http://www.canadians.org/greatlakes).