



Reducing Risks from Harmful Chemicals in the Great Lakes

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Chemicals Annex Purpose

Protect human health and the environment through cooperative and coordinated measures to reduce the anthropogenic release of chemicals of mutual concern into the Waters of the Great Lakes

The Great Lakes are Important

- A wealth of natural resources to the citizens of Canada and the U.S.
- Supports a higher population density and concentration of industrial activity than many other regions:
 - Industry
 - Agriculture
 - Recreation
 - Drinking Water



Chemicals Continue to Impact the Lakes

Higher population density and industrial activity have brought increased risks from chemical pollution

- Certain toxic chemicals can
 - Potentially harm aquatic ecosystems
 - Be persistent and accumulate within the food web
 - Disproportionately affect susceptible subpopulations



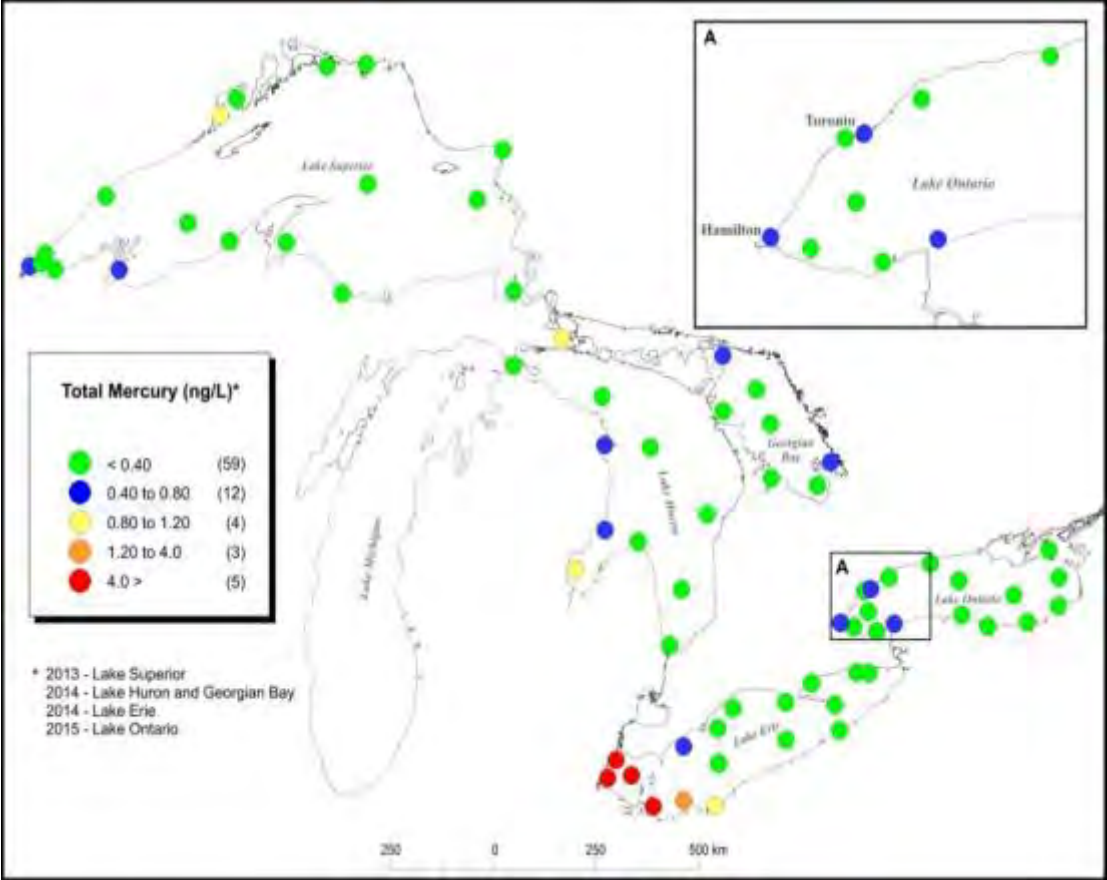
Canada and the U.S. Continue to Cooperate to Address Great Lakes Chemical Pollution

- Impacts to wildlife were common due to toxic chemicals
- The 1987 Great Lakes Water Quality Agreement listed target chemicals for action
- Decreases in production, use and discharge of chemicals
 - domestic legislation and programs
 - coordinated regional and binational activities

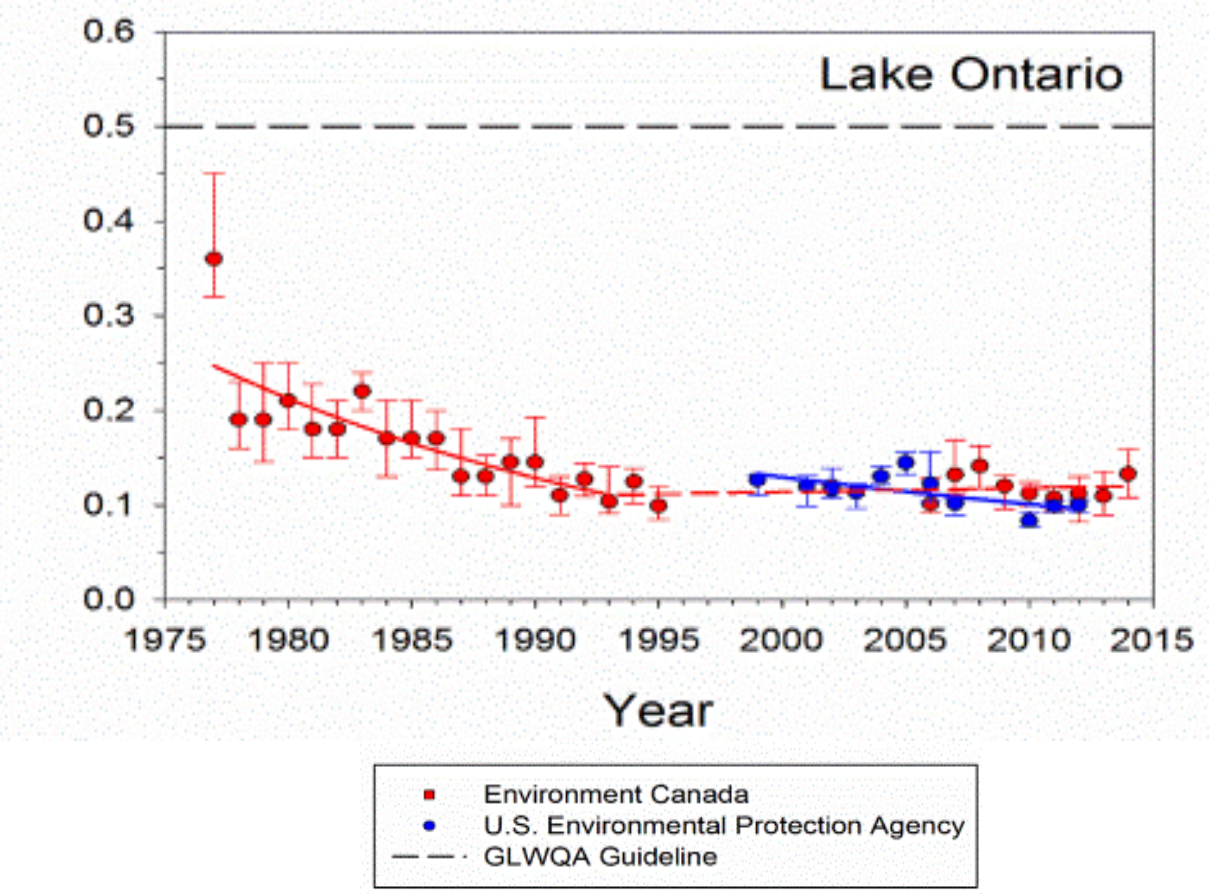


Canada

We Have Reduced Chemical Pollution



Mercury concentrations in Water (ECCC)

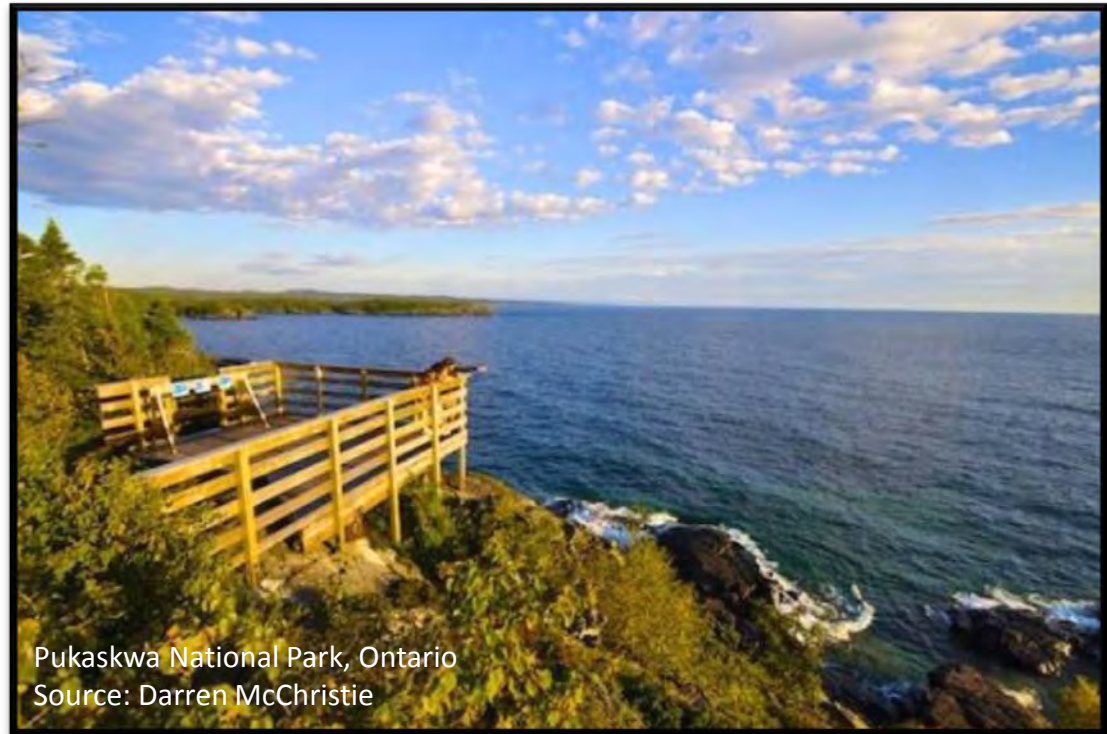


Temporal changes

from the Great Lakes (1976 – 2014) (USEPA & ECCC)

Chemical Pollution Remains a Significant Issue

- Annex 3 – Chemicals of Mutual Concern
 - Address chemical pollution still present
 - Led by Canada (ECCC) and the United States (EPA)
 - Other federal (national and regional) provincial, state, tribal/First Nation and local programs and initiatives



Pukaskwa National Park, Ontario
Source: Darren McChristie

We are Taking Action on Chemicals

Topic	GLWQA Annex 3 Commitments
Identifying Chemicals of Mutual Concern (CMCs)	Develop and implement a dynamic and science-based process to identify and designate CMCs on an ongoing basis
Binational Strategies	Develop and implement binational strategies for CMCs, which may include research, monitoring, surveillance, the development of water quality standards, criteria, objectives or guidelines and pollution prevention and/or other risk management actions
Science	Deliver science activities, as identified in binational strategies for CMCs, in order to provide 'early-warning', through research and surveillance, for chemicals which could become CMCs
Information	Regularly exchange information on monitoring, surveillance, research, technology and measures for managing CMCs
Reporting	Report on progress toward Annex implementation every three years, through the Progress Report of the Parties

Coordination and collaboration with partners and stakeholders is critical

- In meeting commitments, we engage and work with many government partners and non-government stakeholders

Government	Other Partners
<ul style="list-style-type: none">▪ Ontario Ministry of Environment and Climate Change▪ Indiana Department of Environmental Management▪ Minnesota Department of Health▪ Wisconsin Department of Natural Resources▪ Great Lakes Indian Fish and Wildlife Commission	<ul style="list-style-type: none">▪ Canadian Environmental Law Association▪ National Wildlife Federation▪ Great Lakes Green Chemistry Network▪ Council of Great Lakes Industries▪ Chemical Industry Association of Canada▪ Pollution Probe▪ International Joint Commission

Eight Chemicals of Mutual Concern Designated

- *Mercury*
- *Perfluorooctanoic acid (PFOA)*
- *Long-chain perfluorinated carboxylic acids (LC-PFCAs)*
- *Hexabromocyclododecane (HBCD)*
- *Polychlorinated biphenyls (PCBs)*
- *Perfluorooctane sulfonate (PFOS)*
- *Polybrominated diphenyl ethers (PBDEs)*
- *Short-chain chlorinated paraffins (SCCPs)*

We have taken Binational Actions on Chemical Pollution in the Great Lakes (2014 – 2016)

- Launched CMC nomination process
- Conducted monitoring and/or surveillance for chemicals
 - Existing programs
 - Cooperative Science and Monitoring Initiative
- Initiated Binational Strategies
 - Begin with Polychlorinated Biphenyls (PCBs) and Hexabromocyclododecane (HBCD)
 - Remaining strategies in 2017



U.S. Actions on Chemical Pollution in the Great Lakes (2014 – 2016)

- Monitoring and Surveillance
- Funded research through Great Lakes Restoration Initiative
- Coordinated efforts through Toxic Substances Control Act
- Binational Strategies



Canadian Actions on Chemical Pollution in the Great Lakes (2014 – 2016)

- *National Chemicals Management Plan (CMP)*
- *Risk management for CMCs under the Canadian Environmental Protection Act, 1999, for example:*
 - **The Polychlorinated Biphenyl Regulations;**
 - **The Prohibition of Certain Toxic Substance Regulations;**
 - **The Products Containing Mercury Regulations;**
- **Federal Environmental Quality Guidelines**
- **Monitoring and Surveillance (national and regional)**

Moving Forward: Binational Priorities for Science and Action

Action Priorities

- Continue the development of *Binational Strategies*
- Identify and assess additional CMCs (Radionuclides)

Science Priorities

- Continue research, monitoring and/or surveillance activities
- Coordinate efforts to provide an early warning system



**You can get more
information at
www.binational.net**