

Working with Partners to Research and Monitor Changes to Great Lakes Ecosystems and Species



Fisheries technicians haul in nets used to collect fish samples.

Photo: Jason Merrilock

The Great Lakes Basin is a unique ecosystem that is home to an incredible diversity of plant, fish and wildlife species.



Photo: Matt Garvin

Adult lake trout.

The Ministry of Natural Resources works with many people and organizations to help protect and restore the rich biological diversity of the Great Lakes Basin ecosystem. One of the ways the ministry accomplishes this is by participating in the 2007 *Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem* (COA).

Under COA, the ministry is currently working with more than 240 partners on 200 projects across the Great Lakes Basin. More than 20 of these projects focus on

collecting information to improve our understanding of how Great Lakes ecosystems, food webs and fish communities interact and change over time. Some projects also research and monitor how climate change and invasive species affect Great Lakes fish species and ecosystems.

Projects include:

- Collecting biological information about all of Ontario's Great Lakes nearshore fish communities, and using the results to assess and report on the relative health of fish species and populations.

- Conducting fisheries research and monitoring in the nearshore and offshore areas of Lakes Ontario, Erie, Huron and Superior to support Canadian and U.S. Great Lakes cooperative research and monitoring priorities.
- Partnering with U.S. environmental scientists on all Great Lakes to conduct hydro acoustic surveys monitoring the health of offshore fish populations that provide food for important sport fish species.



Photo: Jason Mortlock

Electrofishing for Atlantic salmon.

- Developing computer models that enhance our understanding of the impacts of environmental stressors on ecosystems, such as predicting how climate change will affect reproduction in walleye and yellow perch populations.
- Developing computer models to help us better understand the impacts of aquatic invasive species on Lake Erie and Lake Ontario food webs and fish communities.
- Developing new standards for sampling fish that help fisheries biologists more readily detect aquatic invasive species and identify subtle changes in the composition of Great Lakes nearshore fish communities.

Other fact sheets in this series:

- Working with Partners to Protect and Restore Great Lakes Habitats
- Working with Partners to Rehabilitate Native Great Lakes Fish and Wildlife Species
- Working with Partners to Prevent the Spread of Aquatic Invasive Species
- Working with Partners to Improve the Health of Great Lakes Areas of Concern

Learn More

Visit ontario.ca/greatlakes for more information about the ministry's partnerships and its efforts to protect and restore the Great Lakes Basin Ecosystem through COA.

ontario.ca/mnr

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