



Lake Ontario Committee

REPRESENTING THE FISHERY MANAGEMENT AGENCIES OF LAKE ONTARIO

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Lake Ontario Committee Fish Habitat Priorities

As detailed in a *Joint Strategic Plan for Management of Great Lakes Fisheries* (Joint Strategic Plan), degradation of water quality, destruction of physical habitat, and loss of ecosystem components essential to the well-being of fish remain a major impairment to Great Lakes fish communities and fisheries. Strategic procedures identified in the Joint Strategic Plan direct lake committees to identify environmental issues that may impede achievement of their Fish-Community Objectives and to work within governmental initiatives, such as the Great Lakes Water Quality Agreement, that provide opportunities for achieving, refining, and assessing progress toward environmental and fish community objectives.

In 2016, the Council of Lake Committees (CLC) adopted its *Environmental Principles for Sustainable Fisheries in the Great Lakes Basin* to help guide individual lake committees as they identified and prioritized environmental issues that impede achievement of their Fish-Community Objectives. The CLC recognized that diverse functional habitats are required for sustainable fish production; protection and improvement of fish habitat should occur systematically, cumulatively, and collaboratively; fishery value should be accommodated in decisions that affect functional habitats; and manageable sources of anthropogenic stress are pathways for addressing impediments to functional fish habitats.

The Lake Ontario Committee (LOC; New York State Department of Environmental Conservation [DEC] and the Ontario Ministry of Natural Resources and Forestry [OMNRF]) strongly endorses protection of existing functional fish habitat including key aquifers and has developed a series of priorities intended to improve or restore lost or degraded fish habitats to enhance fish production and help achieve the Lake Ontario Fish Community Objectives (FCOs). Fish habitat is protected in both Canada and the US through legislation, regulations and policy (in Canada see <http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>; in New York State see NYS Environmental Conservation Law Articles 15 & 24).

A technical working group from US and Canadian agencies systematically identified fish habitat impediments thought to be impacting the status of FCO species at the lake level, as well as potential actions to address them. A fulsome list of opportunities for habitat action was identified, with several common themes of habitat improvement across broad geographic scales. The LOC initiated a prioritization exercise to identify priority habitat actions based on several criteria including their alignment with FCOs, how actionable the

work was, as well as confidence in a successful outcome. Prioritization also considered potential benefits to other species or interests (e.g. water quality) as well as risks of negative outcomes or trade-offs for other valued species.

The LOC's fish habitat priorities are limited to those important actions that could be undertaken over the near term (5 years), and include:

- Enhance or restore effective upstream passage for adult Atlantic Salmon on select streams to allow access to spawning and juvenile rearing habitat.
 - Restore passage for adult Atlantic Salmon around Pratt Dam on Cobourg Brook
 - Improve fish passage efficiency on the Credit River
- Restore nearshore open coast, cold-water spawning and nursery habitat for Lake Trout, Whitefish and Cisco.
 - Restore/enhance the ecological function of degraded or lost spawning and nursery habitat along the Greater Toronto Area shoreline
- Restore degraded stream habitat to improve reproductive capacity in streams that are managed for wild fish production.
 - Install riverbank stabilization/fish habitat improvement structures and instream flow enhancement features for Atlantic Salmon and Rainbow Trout on the Salmon River (system-wide) including Trout and Orwell brooks
 - Add spawning substrate (gravel) for Walleye and Lake Sturgeon downstream of Dexter Dam on the Black River
 - Atlantic Salmon stream habitat restoration in the Credit River, Duffins Creek and Cobourg Creek as identified in the OMNRF Lake Ontario Atlantic Salmon Restoration Program, Phase 3 Habitat Plan
- Restore the ecological function of coastal wetlands to enhance Northern Pike, Muskellunge and other members of the wetland-dependent fish community.
 - Complete level ditching and potholing to increase fish spawning and nursery habitat in coastal wetlands, including Lakeview Wildlife Management Area, Port Bay, and Sodus Bay.
 - Promote restoration and rehabilitation of lost coastal wetlands.
- Reduce hydroelectric turbine mortality of outmigrating American Eel at the Moses/Saunders Dam on the St. Lawrence River

The identified habitat priorities are intended as recommendations to help influence and align the work of funding organizations and habitat practitioners with Lake Ontario's bi-national Fish Community Objectives. The priorities will be updated as new information becomes available. LOC envisions an adaptive approach for tracking progress on habitat action implementation and future updates to habitat priorities.