

Black Sturgeon Regional Plan

This is one of twenty Regional Plans that support implementation of the Lake Superior Biodiversity Conservation Strategy (Strategy). The Strategy, prepared and overseen by the Lake Superior Partnership, contains information and 62 sub-strategies to provide guidance to restoring and protecting biodiversity (www.natureconservancy.ca/superiorbca).

Regional Plans are intended to be adaptive documents that support and respond to local conservation efforts and contribute to lakewide biodiversity goals. To contribute an update to this Regional Plan, please contact: greatlakes-grandslacs@ec.gc.ca.

7. Black Sturgeon



Lake Sturgeon, Cisco, Lake Trout, and Lake Whitefish all rely on portions of the Black Sturgeon regional unit for habitat. Nearly 90% of the landmass in the Black Sturgeon regional unit is forested, and over 91% of the coastal area is in natural cover. Parks and protected areas protect over 9% of the total regional unit and over 19% of the coast. The inshore and

nearshore waters of this unit, along with some of the coastal lands, are part of the proposed Lake Superior National Marine Conservation Area (NMCA). At least 83 species and communities of conservation concern have been documented in this regional unit, including Northern Brook Lamprey and Wolverine^{1,2}. The rocky shores of Porphyry Island, the last in a chain of islands stretching southwest from the Black Bay Peninsula, support arctic species like Encrusted Saxifrage and insectivorous Butterwort. The presence of Devil’s Club in the forest here, and on adjacent islands, is the only known occurrence east of the Rocky Mountains.

Report Card³, Overall Grade: A-

Conservation Target	Grade	Conservation Target Notes
Nearshore	C	Black Bay was once home to the largest population of Walleye in Lake Superior; the population collapsed in 1968 and efforts to rebuild have been largely unsuccessful.
Embayments and Inshore	B	Stressors to this target include Sea Lamprey abundance in the Black Sturgeon River, the collapse of the Walleye fishery in Black Bay, and close proximity to two Areas of Concern.
Islands	A	A large archipelago extending from the western end of Black Bay Peninsula towards Marathon includes a portion of the outer shore of Black Bay Peninsula. Many representative and unique landform vegetation types occur here, along with significant historical and archaeological sites.
Coastal Wetlands	A-	Black Bay Bog Conservation Reserve contains a provincially significant bog complex situated at the eastern end of Black Bay. This site contains representative landform and vegetation types, including deciduous and mixed conifer forests on lacustrine deposits as well as open wetlands.
Coastal Terrestrial Habitats	A+	Black Bay Peninsula is a remote and relatively roadless area that contains significant Moose habitat, rare arctic-alpine disjuncts, Provincially Significant Wetlands, endangered species habitat, and historic sites.

¹ Data provided by the Ontario Ministry of Natural Resources and Forestry. Copyright Queen’s Printer for Ontario, 2012.

² For a full list please see the corresponding [regional unit chapter](#) in Vol. 2 of the Lake Superior Biodiversity Conservation Assessment.

³ Report Card grades are intended to denote relative (within Lake Superior basin) condition/health and stresses for each biodiversity target in the region based on available condition and stress indices. A more detailed explanation and expert comments on grades are available in the Lake Superior Biodiversity Conservation Assessment – Volume 2: Regional Unit Summaries.

Tributaries & Watershed	A	Black Sturgeon River provides habitat for resident and migratory fishes and is one of only nine Lake Superior tributaries currently used for spawning by Lake Sturgeon.
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Overview of Conservation Opportunities

Black Bay was once home to the largest population of Walleye in Lake Superior, supporting a sizable commercial and recreational fishery. The Walleye population collapsed in 1968, due to a combination of factors, including overfishing, habitat loss, and predation of juvenile Walleye by Rainbow Smelt. Providing fish access to naturally

occurring habitat is considered essential for the large scale rehabilitation of the native fish community in Black Bay and the Black Sturgeon River. The proposed Lake Superior National Marine Conservation Area is also within this regional unit and once established, will be the largest freshwater protected area in the world. Parks Canada in collaboration with the Province of Ontario, First Nations, Métis, north shore communities, and stakeholders will then work on strategies to protect the biodiversity of this area.



Conservation Actions

The Lake Superior community has a strong an ongoing history of action to restore and protect the lake’s extraordinary biodiversity. Actions are already occurring at all scales – from national, state, provincial, tribal, First Nations, Métis, and municipal programs, to lakewide initiatives and local projects by communities, businesses, and households. Some important habitats currently have a conservation designation with a corresponding management strategy, and active supervision of these areas is essential to sustaining biodiversity. The table below presents next steps for conserving and protecting biodiversity in this regional unit. Other existing plans relevant to conserving habitats and species in this region should continue to be implemented. A list of existing plans relevant to the next steps presented below is presented at the end of this document.

Regional Plan Next Steps

There is some variation among Regional Plans in how future actions from existing plans were incorporated into this document, based on advice from the implementers of those plans in the region. Similarly, implementation approaches vary greatly among regional units. The Lake Superior Partnership serves an important role in facilitating cooperation among agencies to support on-the-ground action. Priority implementation actions developed through the Partnership are identified in the Lake Superior LAMP, Lake Partnership committee work plans, and agency specific action plans.

Regional Objective	Next Step	Conservation Target	Primary Lakewide Strategy ⁱ
Lakewide Strategy 1: Restore and protect a system of representative, high quality habitats.			
<i>Common Actions For All Region Plans</i>			
	Maintain or enhance areas where large blocks of land with natural cover exist or could be expanded.	Multiple	1.1
	Preserve sites that have high species diversity and/or critical habitat for fish or wildlife.		
Protect the habitats of biological significance with special consideration of important fish spawning sites in tributaries.	Track seasonal movement patterns of Lake Sturgeon and Walleye in Black Bay and the lower Black Sturgeon River in order to identify and protect critical habitat.	Tributaries and Watersheds	1.1
	Assess tributaries where lake-run Brook Trout historically occurred and determine feasibility and priority for habitat restoration.	Tributaries & Watersheds	1.3

Regional Objective	Next Step	Conservation Target	Primary Lakewide Strategy ⁱ
	Determine the highest quality cold water habitats and prioritize projects to protect and connect habitats.	Tributaries & Watersheds	1.3
	Identify and protect terrestrial groundwater recharge areas that provide cold groundwater upwellings to Brook Trout spawning sites.	Tributaries & Watersheds	1.1
Restore and protect self-sustaining, forest-dwelling woodland caribou where they currently exist.	Preserve calving and summer habitat on islands in Lake Nipigon for woodland caribou.	Coastal Terrestrial Habitats	1.1
	Continue tracking studies on woodland caribou to understand movement patterns and habitat use as these may change as the habitat changes.	Coastal Terrestrial Habitats	1.9
Protect Provincially Significant Wetlands from development.	Identify, map, and evaluate remaining wetlands within the region in order to provide protection.	Coastal Wetlands	1.9
Protect habitats of biological and cultural significance in the Black Sturgeon regional unit.	Inventory islands, including Clark and Shangoina Islands, that contain historic records of rare habitats.	Islands	1.9
	Support the establishment of special protection designations at sites identified as significant to biodiversity, where appropriate.	Embayments and Inshore	1.1
Lakewide Strategy 2: Manage plants and animals in a manner that ensures diverse, healthy, and self-sustaining populations.			
<i>Common Actions For All Region Plans</i> Review lists of regional species of conservation concern and identify gaps in monitoring, planning, and related conservation actions.		Multiple	2.7
Restore and protect self-sustaining Brook Trout populations in as many of the original, native habitats as is practical.	Assess the status and distribution of Brook Trout populations in Lake Superior and in tributary streams within this regional unit	Multiple	2.4
Achieve and maintain genetically diverse self-sustaining populations of Lake Trout that are similar to those found in the lake prior to 1940.	Continue monitoring the commercial fishery in Black Bay.	Nearshore	2.4

Regional Objective	Next Step	Conservation Target	Primary Lakewide Strategy ⁱ
	Conduct annual surveys to determine Lake Trout population status and trends.	Nearshore	2.3
Restore and protect self-sustaining Walleye populations in their historic range.	Determine population status of Walleye in Black Bay.	Embayments and Inshore	2.3
Restore and protect self-sustaining Lake Sturgeon populations.	Determine status of Lake Sturgeon population in the Black Sturgeon River.	Tributaries & Watersheds	2.4
Restore and protect self-sustaining Lake Whitefish populations at or above abundances observed in 1990-9.	Conduct annual surveys to determine Lake Whitefish population status and trends.	Nearshore	2.3
Lakewide Strategy 3: Reduce the impact of existing aquatic invasive species and prevent the introduction of new ones.			
<i>Common Actions For All Region Plans</i> Control high priority infestations of aquatic invasive species, including continued control of Sea Lamprey.		Multiple	3.2
Prevent the introduction and spread of aquatic invasive species within this regional unit.	Develop and implement education program for public, local tourist operators, and commercial fishermen on how to prevent the introduction and spread of AIS.	Multiple	3.3
	Continue partnership between the OMNRF and Ontario Federation of Anglers and Hunters to deliver province-wide Invading Species Awareness Program, focusing on education and outreach and programs designed to monitor the occurrence and distribution of invasive species.	Multiple	3.3
	Prevent the introduction and spread of aquatic invasive species to the upper reaches of the Black Sturgeon River (above Camp 43 Dam) and into Lake Nipigon.	Tributaries and Watersheds	3.3
	Continue annual AIS early detection assessments and develop rapid response protocols to deal with new invasives.	Multiple	3.3
Lakewide Strategy 4: Adapt to climate change.			

Regional Objective	Next Step	Conservation Target	Primary Lakewide Strategy ⁱ
<p><i>Common Actions For All Region Plans</i> Incorporate climate change model projections and adaptive management measures into natural resource management plans.</p>		Multiple	4.1
<p>Lakewide Strategy 5: Reduce the negative impacts of dams and barriers by increasing connectivity and natural hydrology between the lake and tributaries.</p>			
<p><i>Common Actions For All Region Plans</i> Address barriers to fish passage created by dams, hydroelectric generation, or misplaced or wrong sized culverts. Maintain flows and water levels on managed streams, rivers, and lakes that emulate natural conditions (i.e., magnitude, duration, timing, and pattern).</p>		Tributaries and Watersheds	5.2
<p>Inventory, assess, and prioritize barrier removal or adaptation projects to restore aquatic habitat connectivity and provide for self-sustaining native populations of aquatic organisms in the region.</p>	<p>Inventory road/rail stream crossings and identify barriers to upstream fish passage for migratory salmonids.</p>	Tributaries and Watersheds	5.1
	<p>Efforts should be made to restore or enhance the natural migration patterns of fish along the Black Sturgeon River, while preventing the introduction of exotic species.</p>	Tributaries and Watersheds	5.2
<p>Restore habitat connectivity and fish access on the Black Sturgeon River.</p>	<p>The Ministry of Natural Resources and Forestry initiated an assessment of the proposed decommissioning of the Camp 43 dam and construction of a multi-purpose sea lamprey barrier at Eskwanonwatin Lake under the <i>Class Environmental Assessment for Provincial Parks and Conservation Reserves</i> in 2012. The next step of this process is the development of the Draft Environmental Studies Report, which will fully explore the feasibility, costs, and benefits associated with the preferred option, as well as select alternatives to the preferred option.</p>	Tributaries and Watersheds	5.1

Regional Objective	Next Step	Conservation Target	Primary Lakewide Strategy ⁱ
Lakewide Strategy 6: Address other existing and emerging threat that may impact important habitat or native plant and animal communities.			
Prevent the introduction and spread of terrestrial invasive species.	Develop outreach and citizen science monitoring programs to communicate and collect information on terrestrial invasive species in this regional unit.	Multiple	6.7

Regional Plan Development

Regional Plans are informed by a technical assessment, including maps of: 1. Coastal and Watershed Features; 2. Condition, and; 3. Important Habitat Sites. This information is available at: www.natureconservancy.ca/superiorbca.

The public and stakeholders who are connected to these areas provided input to the Next Steps in each Regional Plan. Oversight was provided by a Steering Committee from the Lake Superior Partnership. All input was considered and incorporated whenever possible and when relevant to lakewide biodiversity conservation targets and threats. To contribute an update to this Regional Plan, please contact: greatlakes-grandslacs@ec.gc.ca.

Existing Plans

Other existing plans relevant to conserving habitats and species in this region should continue to be implemented, including but not limited to:

- Provincial Parks and Conservation Reserve Policy direction for the protection, development and management of provincial parks, conservation reserves and their resources
- Great Lakes Fishery Commission - Fish-community objectives for Lake Superior.
- Great Lakes Fishery Commission - A lake sturgeon rehabilitation plan for Lake Superior
- Great Lakes Fishery Commission - A brook trout rehabilitation plan for Lake Superior
- Great Lakes Fishery Commission - A lake trout restoration plan for Lake Superior
- Great Lakes Fishery Commission – A rehabilitation plan for walleye populations and habitats in Lake Superior
- Ontario Ministry of Natural Resources and Forestry – Black Bay and Black Sturgeon River Native Fisheries Rehabilitation
- Ontario’s Provincial Fish Strategy: Fish for the Future
- Lake Superior Aquatic Invasive Species Complete Prevention Plan
- Ontario Invasive Species Strategic Plan, 2012

ⁱ To access the full Biodiversity Conservation Strategy, other Regional Plans and supporting technical information and maps, please visit the project website: www.natureconservancy.ca/superiorbca