

20. Lake Superior Open Waters

Summary/ Description

The final regional unit includes all of the open, offshore waters of Lake Superior. Classifying the open waters as a single unit was recommended by the Aquatic Community Committee/Lake Superior Technical Committee.



Important Biodiversity Features

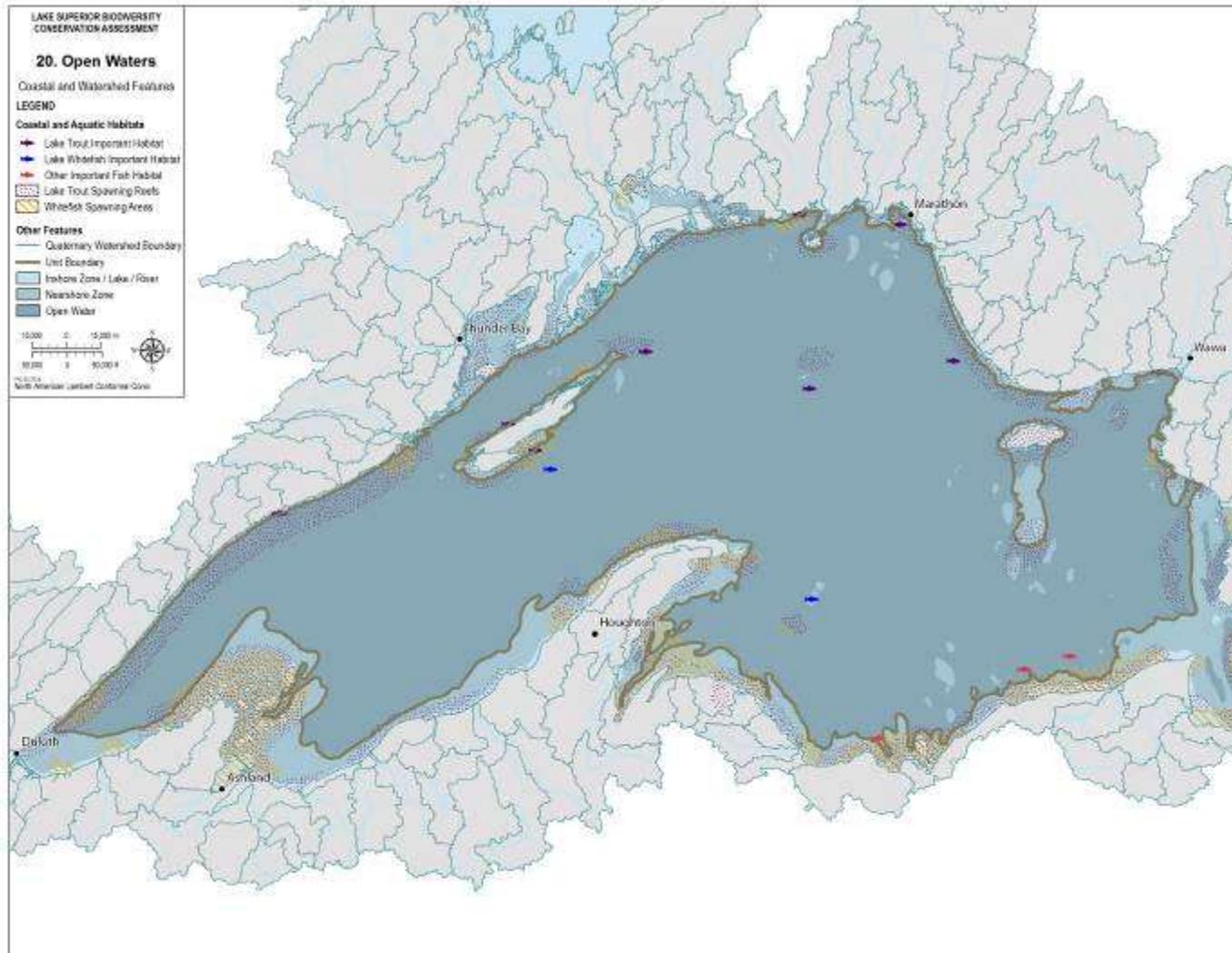
Offshore Waters

- The historic offshore fish community was a coldwater fish community dominated by Lake Trout, Lake Whitefish and Cisco (OMNR 2013d).
- Lake Trout are the top predator in this deepwater ecosystem, and nearly all of Lake Superior provides important habitat. Lake Trout were historically adapted to a wide range of depths in Lake Superior. Siscowet Lake Trout were historically common throughout the offshore waters, while Humpback Lake Trout are present on offshore shoals or banks surrounded by deepwater habitat. Recent work by Muir et al. (2014) has demonstrated quantitative evidence of another Lake Trout morph, the “redfin”, in the waters off Isle Royale. The extent of redfin Lake Trout distribution in Lake Superior has yet to be determined.
- A detailed description of these offshore waters can be found in Volume One of this report in the biodiversity target descriptions.



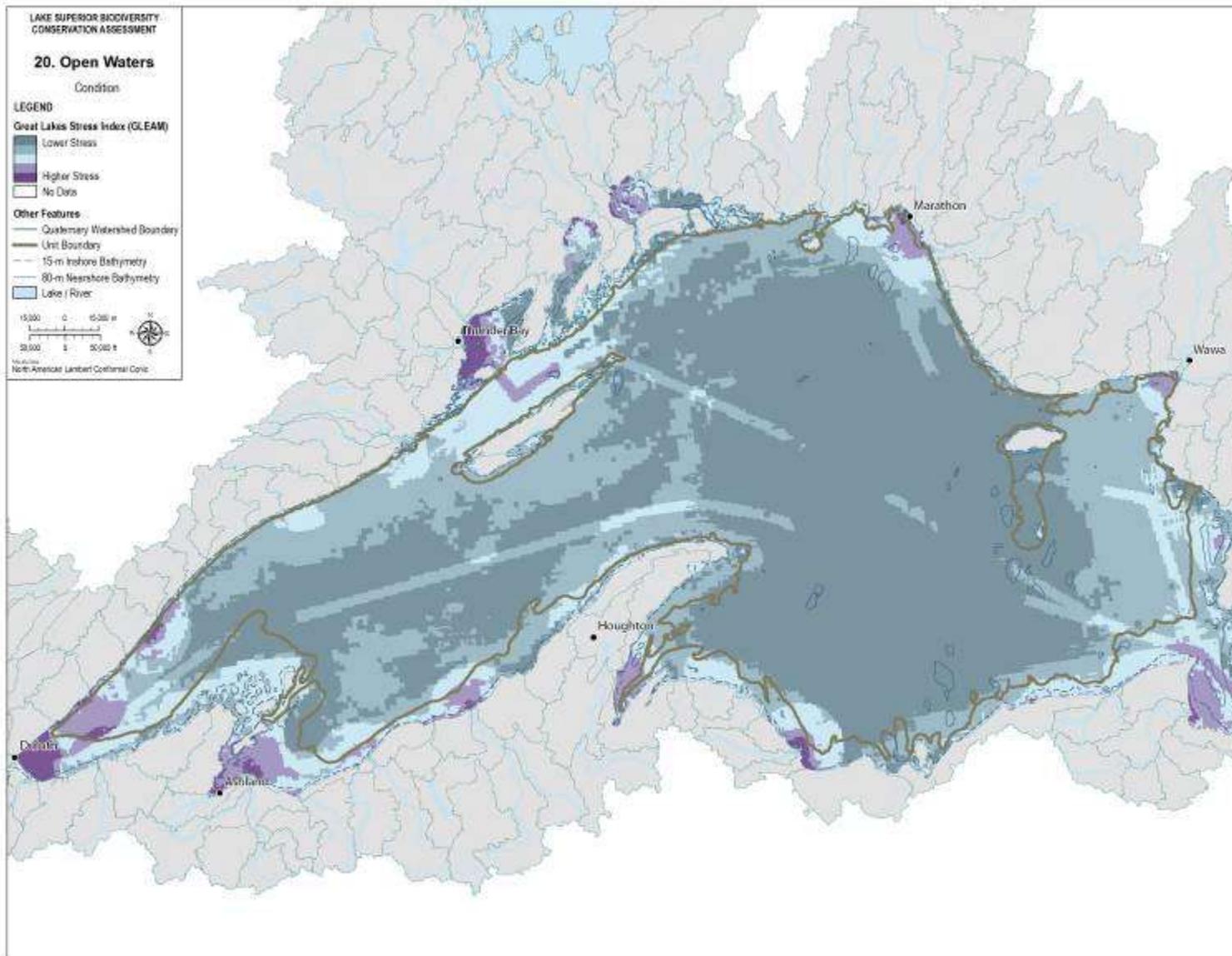
Lake Superior sunset. Taken in the Black Presque Isle Ontonagon regional unit. Photo provided by William Taft. Photo credit: Mat Wesener/ Michigan Department of Environmental Quality.

Figure 20.1: Open Waters - Coastal and Watershed Features



Note: Detailed information on the features and condition of nearshore and inshore waters are included in the other regional summaries.

Figure 20.2: Open Waters – Condition



Important Issues & Threats

- The rehabilitation of lean Lake Trout and Lake Whitefish in the nearshore waters of the east end of the lake has not progressed to the same extent as the remainder of the lake. Ensuring that the unregulated fish harvests in the region are at levels that maintain sustainable populations will provide for the opportunity to resume cooperative rehabilitative fish stocking efforts.
- Invasive species and habitat loss have negatively affected the historic fish communities in FMZ 9. The focus of fisheries management in this zone is now rehabilitation of the fish communities (OMNR 2013d).

Conservation In Action

Parks & Protected Areas

- The Lake Superior National Marine Conservation Area (LSNMCA) of Canada extends from the water's edge, beyond the nearshore water boundaries associated with the Little Pic, Nipigon and Jackpine, and Black Sturgeon regional units, into the offshore waters and to the international boundary with the United States. National Marine Conservation Areas protect and conserve representative marine areas for the benefit, education and enjoyment of the people of Canada and the world. By law, each national marine conservation area must contain at least one zone that fosters and encourages the ecologically sustainable use of aquatic resources and at least one zone that fully protects special features or sensitive elements of ecosystems. Currently, the Lake Superior NMCA has proposed two zones that offer some protection for the Gunilda shipwreck (Nipigon and Jackpine regional unit), and Gapen's Pool Brook Trout Spawning Area (Nipigon and Jackpine regional unit) (C. Vis, pers. comm., December 18 2014).

Existing Programs & Projects

- Cooperative management of Lake Superior and FMZ 9 is coordinated through the Great Lakes Fisheries Commission. Provincial, state, federal and tribal agencies all play a role in this collaborative management (OMNR 2013d).
- The Canadian waters of Lake Superior are contained within Fisheries Management Zone 9 (FMZ 9), and are managed by the Upper Great Lakes Management Unit of the Ontario Ministry of Natural Resources (OMNR 2013d, M. Chase, pers. comm., June 3 2013). This includes the nearshore and inshore waters, including embayments, and the offshore waters. Fisheries Management Zone 9 also includes all of the islands in the zone, except for St. Ignace Island, Simpson Island and Michipicoten Island (OMNR 2013d). FMZ 9 is managed to "rehabilitate and maintain a diverse, healthy and self-regulating fish community, dominated by indigenous species and supporting sustainable fisheries" (OMNR 2013d: paragraph 4).
- Tribes in the United States exercise treaty based fishing rights in the open waters of Lake Superior, based on rights reserved in the Treaties of 1836, 1842, and 1854 (A. McCammon Soltis, pers. comm., January 5 2015).

Figure 20.3: Open Waters - Important Habitat Sites and Areas

