



Great Lakes: Offshore

Description

Offshore areas of the Great Lakes are 30 meters and greater in depth. Great Lakes are considered to be the Michigan waters of Lake Superior.

General Condition of Feature

This habitat is considered 95% in good to excellent condition, 4% in fair condition, and 1% in degraded to very degraded condition.

Associated Species of Greatest Conservation Need

FISH

cisco or lake herring (*Coregonus artedii*)
kivi (*Coregonus kivi*)
shortjaw cisco (*Coregonus zenithicus*)
pygmy whitefish (*Prosopium coulterii*)
slimy sculpin (*Cottus cognatus*)

FISH cont.

spoonhead sculpin (*Cottus ricei*)
deepwater sculpin (*Myoxocephalus thompsonii*)

AMPHIBIANS

Specific associations with this landscape feature were not found in the literature

Associated Threats

POLLUTION

- Altered nutrient inflows: (low threat)
- Altered sediment loads: (low threat)
- Pesticides and herbicides: (low threat)
- Urban, municipal, and industrial pollution: Industrial contaminants; Abandoned fishing gear; Litter; Mercury

HABITAT CONVERSION

- Dredging and channelization: Dumping of dredge materials (low threat)

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Invasive species can affect forage base or life cycle

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Removal of wildlife: Commercial fishing not as active (low threat)

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGEMENT

- Control and prevent aquatic invasive species introductions and establishments (invasive plants and animals)
- Develop integrated pest management plans (invasive plants and animals)

LAW & POLICY

- Avoid open water disposal of uncontaminated materials (dredging and channelization)
- Continued vigilance and cooperation on preventing aquatic invasive species establishments (invasive plants and animals)
- Implement and continually improve storm water and non-point source best management practices (urban, municipal, and industrial pollution)
- Restrict dredging and channelization activities, especially during spawning and migration seasons and around mussel beds (dredging and channelization)
- Strengthen existing environmental laws including air quality (urban, municipal, and industrial pollution)

EDUCATION & AWARENESS

- Educate landowners and shoreline users on preventing the spread of invasive aquatic species (invasive plants and animals)

Research and Survey Needs

- Determine effective prevention, control, and survey techniques for aquatic invasive species
- Continue to work with GLFC Lake Superior Technical Advisory Group implementing Lake Superior aquatic community objectives
- Determine ways to expand education efforts to the public on their stewardship role, especially towards litter
- Survey erosion sites within watersheds and develop strategies to reduce identified problems

Monitoring

- Aquatic invasive species
- Effluent discharges: municipal, industrial
- Fish community dynamics and ecosystem functions