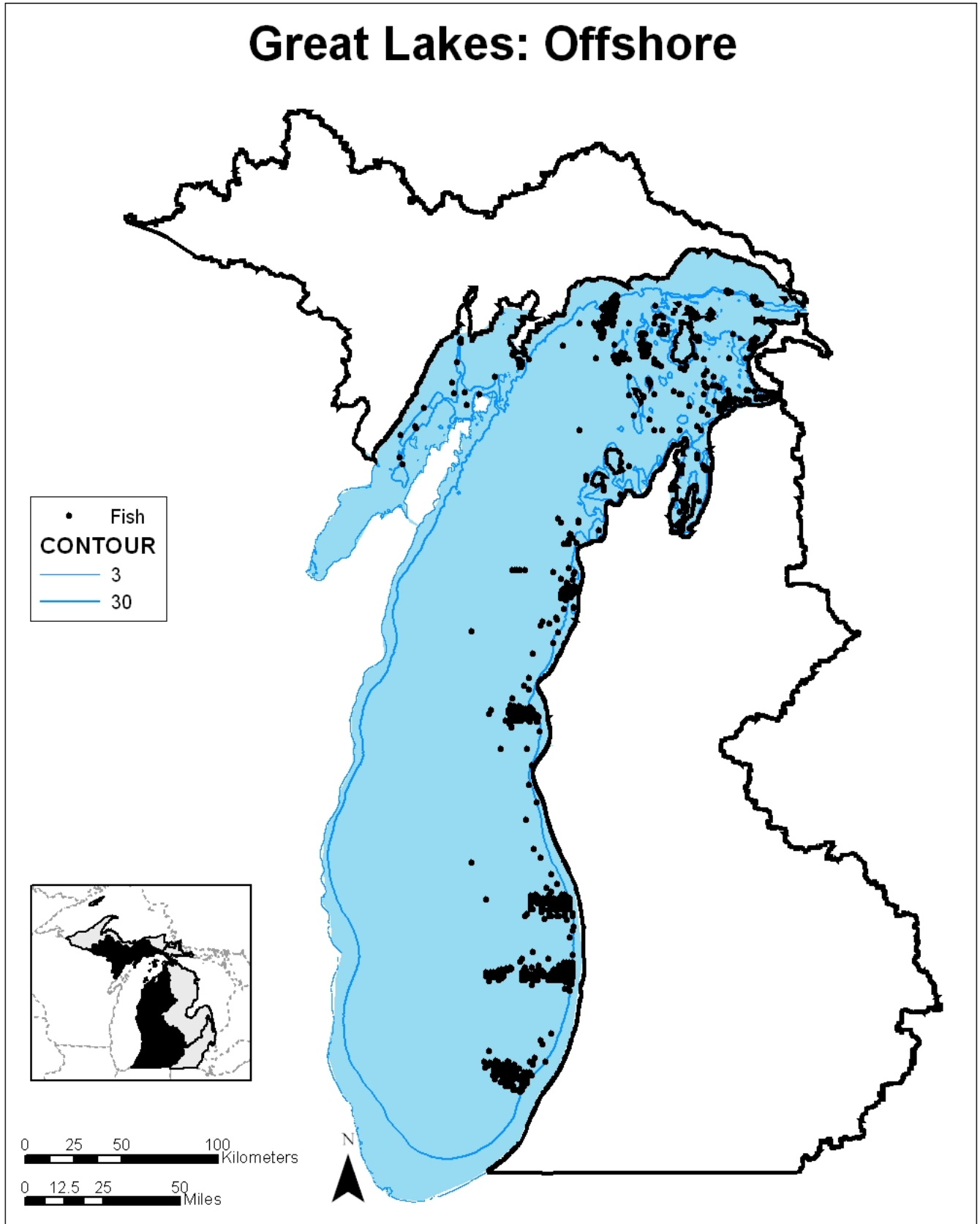


Great Lakes: Offshore



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 Michigan.

General Condition of Features

This habitat is considered 90% in good to excellent condition, 5% in fair condition, and 5% 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*)

FISH cont.

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

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Climate change: (low threat)

POLLUTION

- Altered nutrient inflows
- Altered sediment loads: Sedimentation; Upland erosion
- Pesticides and herbicides: (low threat)
- Urban, municipal, and industrial pollution: Especially airborne pollutants such as mercury, builds in fish tissues

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Round goby; Sea lamprey.

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Forestry practices: Log salvage (low threat)
- Removal of wildlife: (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)
- Facilitate the shift from a transient food web dominated by exotic species to one dominated by native species (invasive plants and animals)

LAW & POLICY

- Continue clean-ups of contaminated sites using proven innovative methods (Urban, municipal, and industrial pollution)
- Continue to use the most current information and innovative methods in cleaning up chemical spills (Urban, municipal, and industrial pollution)
- Continued vigilance and cooperation on preventing more aquatic invasive species establishments (invasive plants and animals)
- Enforce the use of sediment barriers and best management practices during road siting, construction, and maintenance (altered sediment loads)
- Implement and continually improve storm water and non-point source best management practices (Urban, municipal, and industrial pollution)
- Implement ballast control regulations (invasive plants and animals)
- Reduce effluent flows (Urban, municipal, and industrial pollution)
- Strengthen and enforce air pollution laws (Urban, municipal, and industrial pollution)
- Strengthen existing environmental laws and enforcement of permits controlling effluent discharge (Urban, municipal, and industrial pollution)

EDUCATION & AWARENESS

- Educate the public on the use of and reasons for maintaining septic systems (altered nutrient inflows)
- Increase education to boaters, scuba divers, and others on preventing the spread of invasive species (invasive plants and animals)

Research and Survey Needs

- Determine effective prevention, control, and survey techniques for aquatic invasive species

**MICHIGAN'S WILDLIFE ACTION PLAN
AQUATIC SYSTEMS: LAKE MICHIGAN BASIN**

- Continue to work with GLFC Lake Michigan Technical Advisory Group implementing Lake Michigan aquatic community objectives
- Determine ways to expand education efforts to the public on their stewardship role
- Develop alternatives to open water disposal of dredging spoils
- Survey erosion sites within watersheds and develop strategies to reduce identified problems

Monitoring

- Aquatic invasive species
- Dredging and channelization
- Effluent discharges
- Lake Michigan tributary water flows
- Shoreline erosion