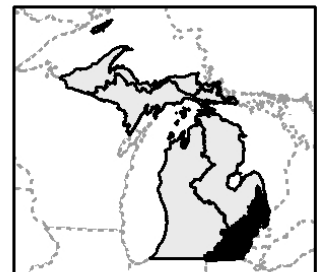


Lake Characteristic: Wave-Washed Shore

No Data



0 10 20 40 Kilometers

0 5 10 20 Miles



Lake Characteristic: Wave-Washed Shore

Description

Wave-washed shores are areas of lakes with constant wind-generated wave energy in relatively shallow water with natural substrates and with the absence of human altered shorelines. These areas are found primarily in the Great Lakes and large inland lakes.

General Condition of Feature

This habitat is considered 30% in good to excellent condition, 30% in fair condition, and 40% in degraded to very degraded condition.

Associated Species of Greatest Conservation Need

FISH

- lake sturgeon (*Acipenser fulvescens*)
- eastern sand darter (*Ammocrypta pellucida*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Altered hydrologic regimes: Impervious surface - more than anywhere else in the State; Factors affecting water levels and hydrodynamics - wave action, shears, etc. (low threat)

POLLUTION

- Altered nutrient inflows: Surface water runoff – nutrients
- Altered sediment loads: Sedimentation of fines (low threat)
- Urban, municipal, and industrial pollution: Surface water runoff - contaminants

HABITAT CONVERSION

- Dams: (low threat)
- Dredging and channelization: Very prevalent in basin more than anywhere else
- Riparian modification: Filling; Hard shore engineering; Altered shoreline – break walls, etc.

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Phragmites has been replacing cattails; Other exotics

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Non-consumptive recreation: Recreational boating - wave energy

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGEMENT

- Control and prevent aquatic invasive species (invasive plants and animals)
- Preserve woody riparian vegetation (riparian modification)
- Soften or remove hard shoreline structures (riparian modification)
- Use alternatives to dredging to achieve the same results (dredging and channelization)
- Use natural materials or soft engineering techniques for shoreline modification (riparian modification)

LAW & POLICY

- Encourage clustered housing developments rather than evenly spaced home lots (riparian modification)
- Manage boating use to reduce wave and wave effects (non-consumptive recreation)
- No open water disposal of uncontaminated dredge spoils (dredging and channelization)
- Require use of Best management practices (altered hydrologic regimes, altered sediment loads, riparian modification)
- Restrict beach grooming (riparian modification)
- Restrict dredging, especially during spawning and migration seasons (dredging and channelization)
- Work with local governments to develop planning and zoning regulations and ordinances (riparian modification)
- Work with local officials on setback and buffer ordinances (riparian modification)

EDUCATION & AWARENESS

- Educate the public on natural hydrologic cycles (social attitudes)

Research and Survey Needs

- Determine effective prevention, control, and survey techniques for aquatic invasive species
- Determine the extent of hard shoreline modification
- Document effective methods of communication with the public and their stewardship role
- Assess effects of jet skis on spawning and migrating aquatic species

Monitoring

- Aquatic invasive species

- Effectiveness of local ordinances
- Jet ski use
- Shoreline modification (dredging, shoreline structures, etc.)
- Use of Best management practices