

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

*NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE*

- Macrophyte removal: Vegetation management (low threat)

*EDUCATION*

- Lack of scientific knowledge
- Social attitudes

Conservation Actions Needed (Threats addressed)

*LAND, WATER & SPECIES MANAGEMENT*

- Maintain or establish riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits (altered hydrologic regimes, altered sediment loads, riparian modification)
- Maintain or rehabilitate natural hydrology (altered hydrologic regimes)
- Soften or remove hard stream and shoreline structures (riparian modification)
- Survey erosion sites within watershed and develop strategies to address problems (altered nutrient inflows, altered sediment loads)
- Use natural materials or soft engineering instead of hard structures for shoreline or riparian modification (riparian modification)
- Work with road commissioners on siting and maintaining river crossings (altered hydrologic regimes, altered sediment loads)

*LAW & POLICY*

- Enforce the use of sediment barriers and best management practices during road siting, construction, and maintenance (altered sediment loads)
- Remove dams to rehabilitate natural hydrology and habitat connectivity (altered hydrologic regimes, dams, fragmentation)
- Restrict dredging and channelization (dredging and channelization)
- Strengthen wetland regulations, mitigation requirements, and enforcement (wetland modification)
- Use best management practices (Variety of threats)
- Work with Drain Commissioners to use natural channel processes to allow a river to manage sediment and flow and decrease the amount of channelization needed (variety of threats)
- Work with local governments to develop and refine planning and zoning regulations and ordinances that consider natural processes (variety of threats)

*EDUCATION & AWARENESS*

- Expand education programs for the general public regarding natural processes and stewardship issues (social attitudes)

Research and Survey Needs

- Determine and implement methods to handle runoff
- Determine incompatible natural resource management threats
- Determine life history requirements for SGCN associated with soft substrates
- Determine number of dams and those that are no longer necessary
- Determine number and condition of road crossings
- Determine number and location of sand mining operations in the basin
- Determine ways of decreasing imperviousness in watersheds
- Model hydrologic flows in each watershed

Monitoring

- Dredging and channelization
- Floodplain modification
- Riparian modification
- Sand mining operations
- Sedimentation
- Storm water flows
- Wetland modification

## Aquatic Characteristic: Clay Substrates

