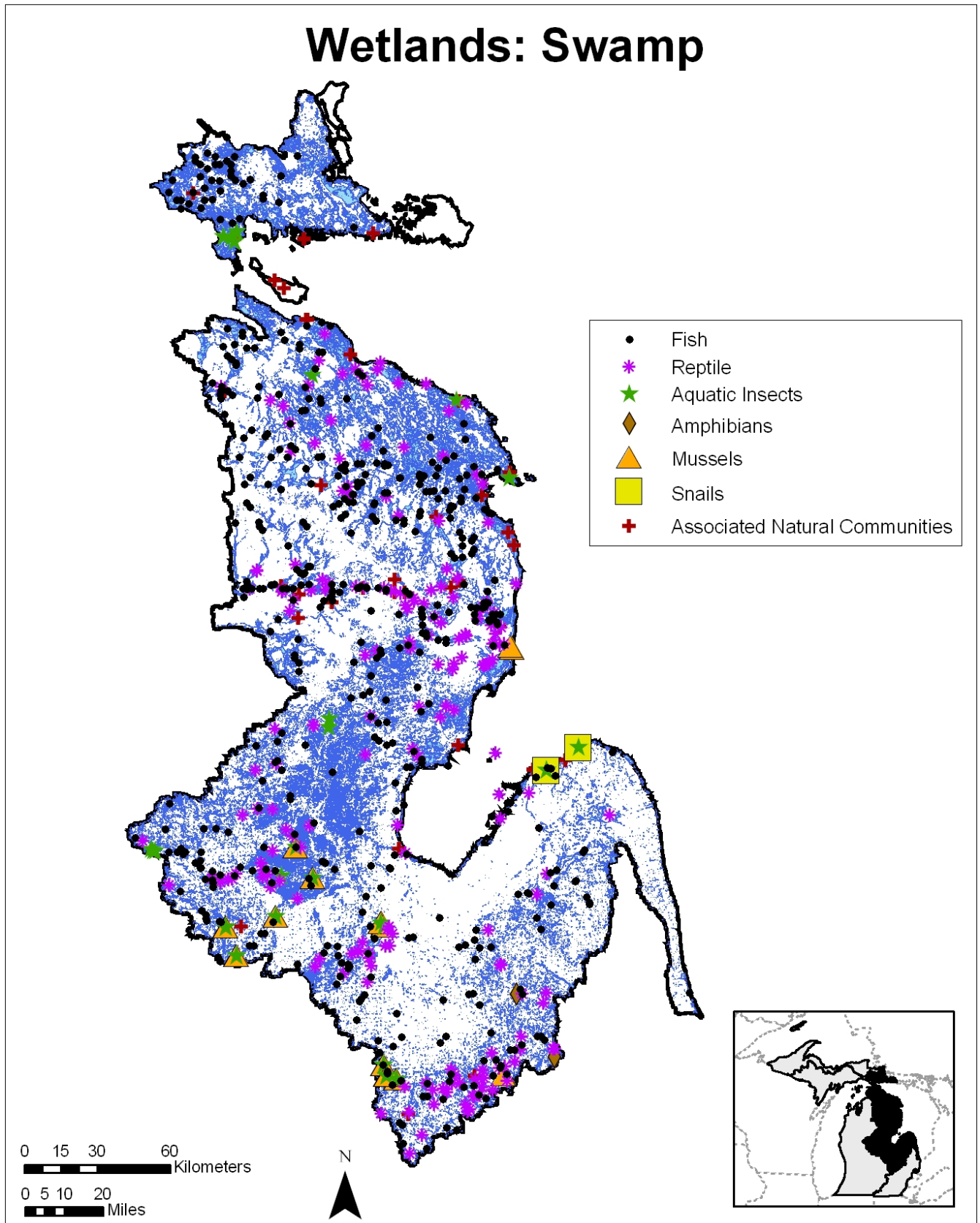


# Wetlands: Swamp



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

**Wetlands: Swamp**

Description

Swamps are wetlands dominated by trees or shrubs with saturated soils during the growing season and standing or slowly moving water during certain times of the year. Swamps can be dominated by trees such as red maple (*Acer rubrum*), black ash (*Fraxinus nigra*), yellow birch (*Betula alleghaniensis*), northern white cedar (*Thuja occidentalis*) and tamarack (*Larix laricina*), or shrubs such as buttonbush (*Cephalanthus occidentalis*), willow (*Salix sp.*), and dogwood (*Cornus sp.*). Composition and structure are influenced by disturbance factors such as flooding regime, windthrow, insect outbreak, and beaver (*Castor canadensis*).

General Condition of Feature

This habitat is considered 40% in good to excellent condition, 20% in fair condition, and 40% in degraded to very degraded condition.

Associated Natural Communities

Hardwood-Conifer Swamp  
Inundated Shrub Swamp  
Northern Shrub Thicket  
Northern Swamp  
Poor Conifer Swamp

Relict Conifer Swamp  
Rich Conifer Swamp  
Southern Floodplain Forest  
Southern Swamp  
Wooded Dune and Swale Complex

Associated Species of Greatest Conservation Need

**MUSSELS**

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

**SNAILS**

spindle lymnaea (*Acella haldemani*)

**CRAYFISH**

devil crawfish (*Cambarus diogenes*)  
digger crayfish (*Fallicambarus fodiens*)

**INSECTS**

spatterdock damer (*Aeshna mutata*)  
muskeg damer (*Aeshna subarctica*)

**FISH**

pirate perch (*Aphredoderus sayanus*)

**AMPHIBIANS**

four-toed salamander (*Hemidactylium scutatum*)  
western chorus frog (*Pseudacris triseriata triseriata*)

**REPTILES**

spotted turtle (*Clemmys guttata*)  
Blanding's turtle (*Emydoidea blandingii*)  
wood turtle (*Glyptemys insculpta*)  
eastern box turtle (*Terrapene carolina carolina*)

**MAMMALS**

water shrew (*Sorex palustris*)

Associated Threats

**MODIFICATION OF NATURAL PROCESSES**

- Altered hydrologic regimes: Hydrologic alterations

**POLLUTION**

**HABITAT CONVERSION**

- Riparian modification: Development
- Wetland modification: Dredge; Filling

**CONSUMPTIVE BIOLOGICAL RESOURCE USE**

- Forestry practices: Logging

**CONSUMPTIVE BIOLOGICAL RESOURCE USE**

- Mining practices: Mineral & gas extraction; Oil and gas development - well pads and access roads

**EDUCATION**

- Social attitudes: Public attitudes

Conservation Actions Needed (Threats addressed)

**LAND, WATER & SPECIES MANAGEMENT**

- Allow seasonal flooding (altered hydrologic regimes)
- Close roads in migration corridors during breeding seasons or install tunnels to allow amphibian and reptiles safe passage to breeding grounds (species threats)
- Control and prevent invasive vegetation from establishing (wetland modification)
- Ensure best management practices are used (altered hydrologic regimes, riparian modification, wetland modification)
- Maintain or rehabilitate natural corridors between swamps and other wetlands and upland areas important for breeding migrations of amphibians and reptiles (species threats)
- Maintain or rehabilitate woody structure (wetland modification)

- Protect existing swamps and other wetlands and rehabilitate degraded swamps (altered hydrologic regimes, wetland modification)
- Remove dams to rehabilitate natural hydrology (altered hydrologic regimes)
- Work with road commissioners and forest management agencies on problem culverts to insure protection of swamps (long-term flooding caused by clogged culverts can kill trees)
- Work with road commissioners and forest management agencies on road constructions to insure protection of swamps (long-term flooding can kill trees)

*LAW & POLICY*

- Continue developing and refining planning and zoning regulations and ordinances (altered hydrologic regimes, riparian modification, wetland modification)
- Continue to work on forest certification endeavors (forestry practices)
- Encourage green-space planning (riparian modification, wetland modification)
- Limit water withdrawals in flow limited and groundwater fed systems (altered hydrologic regimes)
- Protect and rehabilitate groundwater recharge by requiring that all development-related runoff be captured by infiltration basins (altered hydrologic regimes)
- Redraft the Michigan Drain code (altered hydrologic regimes, riparian modification, wetland modification)
- Restrict mining operations and impose mitigation and remediation measures for mining impacts (mining practices)
- Strengthen wetland regulations and mitigation requirements (wetland modification)

*EDUCATION & AWARENESS*

- Continue working with and educating Drain Commissioners (altered hydrologic regimes, riparian modification, wetland modification)
- Educate legislators, other policy makers, and the public on the benefits and ecological services of swamps (social attitudes)

Research and Survey Needs

- Conduct statewide inventories of wetlands
- Determine critical pathways between habitats for amphibians and reptiles to prevent vehicular fatalities and fragmentation of habitats
- Determine life history requirements for SGCN associated with swamps
- Establish effective methods of communicating with the public and their stewardship role
- Model hydrologic flows
- Explore use of prescribe burns as a management tool

Monitoring

- Dredging and channelization
- Effluent discharges: wastewater treatment plants, septic systems
- Hydrologic flow
- Indicator species
- Riparian modification
- Storm water
- Water withdrawals