



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

Wetlands: Bog

Description

Bogs are peat-accumulating, acidic, low nutrient wetlands that receive all or most of their water and nutrients from precipitation. Sphagnum moss (*Sphagnum andersonianum*) mats are characteristic of bogs. Other characteristic vegetation includes carnivorous plants such as sundew (*Drosera sp.*) and pitcher plants (*Sarracenia purpurea*), shrubs from the Heath family, and sedges (*Carex sp.*).

General Condition of Feature

This habitat is considered 50% in good to excellent condition, 15% in fair condition, and 35% in degraded to very degraded condition.

Associated Natural Communities

Bog
Intermittent Wetland
Muskeg

Associated Species of Greatest Conservation Need

INSECTS

sedge darner (*Aeshna juncea*)
spatterdock darner (*Aeshna mutata*)
zigzag darner (*Aeshna sitchensis*)
muskeg darner (*Aeshna subarctica*)
incurvate emerald dragonfly (*Somatochlora incurvata*)
ebony boghaunter (*Williamsonia fletcheri*)
ringed boghaunter (*Williamsonia lintneri*)
Subarctic bluet (*Coenagrion interrogatum*)

FISH

brassy minnow (*Hybognathus hankinsoni*)
finescale dace (*Phoxinus neogaeus*)

AMPHIBIANS

blue-spotted salamander (*Ambystoma laterale*)
four-toed salamander (*Hemidactylium scutatum*)
Blanchard's cricket frog (*Acris crepitans blanchardi*)
pickerel frog (*Rana palustris*)
northern leopard frog (*Rana pipiens*)

REPTILES

spotted turtle (*Clemmys guttata*)
eastern box turtle (*Terrapene carolina carolina*)

MAMMALS

water shrew (*Sorex palustris*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Altered hydrologic regimes: Water withdrawal; Land use practices

POLLUTION

- Altered sediment loads: Sedimentation (low threat)

HABITAT CONVERSION

- Riparian modification: Development; Shoreline development.; Land use practices (low threat)
- Wetland modification: Dredging; Filling; Human destruction via filling or excavating

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Mining practices: Peat mining.

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Macrophyte removal: Beach sanding (low threat)

Conservation Actions Needed (Threats addressed)

LAND, WATER & SPECIES MANAGEMENT

- Encourage best management practices (altered hydrologic regimes, altered sediment loads, riparian modification)
- Maintain or rehabilitate natural water levels and fluctuations (altered hydrologic regimes)
- Maintain or rehabilitated riparian buffers of at least 50 ft, 500 ft or wider maximizes conservation benefits (altered hydrologic regimes, altered sediment loads, riparian modification)
- Maintain or rehabilitate natural corridors between bogs and other significant habitats both upland and wetland that animals use (riparian modification, wetland modification)
- Protect remaining natural wetlands and rehabilitate degraded wetlands (wetland modification)

LAW & POLICY

- Continue working towards developing and refining planning and zoning regulations and ordinances (altered hydrologic regimes, altered sediment loads, riparian modification, wetland modification)
- Discourage water withdrawals in low limited or groundwater fed watersheds (altered hydrologic regimes)
- Work with local officials to develop setback and buffer ordinances that take into account natural processes (riparian modification)

- Provide incentives for the use and production of native flora instead of using exotics (riparian modification, wetland modification)
- Restrict peat mining and impose mitigation and remediation measures (mining practices)
- Strengthen wetland regulations and mitigation requirements in the State, keeping in mind that wetlands have not been successfully created from scratch (wetland modification)

EDUCATION & AWARENESS

- Continue to educate legislators, policy makers, and the public about the benefits and ecological services that wetlands provide (wetland modification)
- Continue working with and educating Drain Commissioners (altered hydrologic regimes, altered sediment loads, riparian modification)
- Educate the public on the importance of vegetated riparian buffers (altered hydrologic regimes, altered sediment loads, riparian modification)

Research and Survey Needs

- Conduct statewide wetlands inventory
- Determine migration pathways of amphibians and reptiles at high quality or productive sites
- Determine the amount of abandoned tilled farmland and ways to return it to the original condition
- Determine the amount of impervious in the watershed
- Determine the number of peat mining operations in each watershed in the basin
- Determine unknown life history requirements for SGCN associated with this landscape feature
- Identify effective restoration techniques
- Investigate alternatives to water withdrawals and diversions
- Model hydrologic flow of the entire watershed

Monitoring

- Draining and channelization
- Peat mining operations
- Riparian modification
- Storm water flows
- Water withdrawals
- Wetland modification