



Inland wetlands/water: 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

Most of the bogs in the Southern Lower Peninsula are considered degraded or very degraded (~70%). Most of the remaining bogs are considered to be in fair or good condition. Bog natural communities are classified as uncommon in the State.

Associated Natural Communities

Bog

Associated Species of Greatest Conservation Need

INSECTS

ebony boghaunter (*Williamsonia fletcheri*)
ringed boghaunter (*Williamsonia lintneri*)
Hoosier locust (*Paroxya hoosieri*)
bog conehead (*Neoconocephalus lyristes*)
melodious ground cricket (*Eunemobius melodius*)
tamarack tree cricket (*Oecanthus laricis*)

AMPHIBIANS

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

REPTILES

blue racer (*Coluber constrictor foxii*)
black rat snake (*Elaphe obsoleta obsoleta*)
smooth green snake (*Liochlorophis vernalis*)
copperbelly water snake (*Nerodia erythrogaster neglecta*)

REPTILES cont.

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

BIRDS

American Bittern (*Botaurus lentiginosus*)
Sora (*Porzana carolina*)
American Coot (*Fulica americana*)
Wilson's Snipe (*Gallinago delicata*)
Short-eared Owl (*Asio flammeus*)
Northern Shrike (*Lanius excubitor*)
Golden-winged Warbler (*Vermivora chrysoptera*)
Connecticut Warbler (*Oporornis agilis*)
Canada Warbler (*Wilsonia canadensis*)

MAMMALS

southern bog lemming (*Synaptomys cooperi*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Climate change
- Altered fire regime
- Altered hydrologic regimes: Changes in hydrologic regimes can impact bogs.

HABITAT CONVERSION

- Wetland modifications
- Dredging and channelization

POLLUTION

- Urban, municipal, and industrial: Acid precipitation may impact bogs.
- Pesticides and herbicides

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Mining practices: Peat mining impacts bogs in the Southern Lower Peninsula.

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Invasive species like phragmites (*Phragmites australis*), glossy buckthorn (*Rhamnus frangula*), and maple (*Acer spp.*) may alter species composition.

Conservation Actions Needed [Threats addressed]

LAND & WATER PROTECTION

- Create and/or expand conservation easements [variety of threats]
- Support land conservancy purchase of undeveloped land [variety of threats]

LAND, WATER & SPECIES MANAGEMENT

- Manage to approximate natural disturbance regimes using prescribed fire and restoration of natural water flow patterns. [Altered fire regime; Altered hydrologic regimes]
- Institute invasive species monitoring, prevention and control programs. [Invasive plants and animals]
- Support Landowner Incentive Programs to foster conservation on private land [variety of threats]
- Maintain or establish riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits [wetland modifications]

LAW & POLICY

- Develop new legislation and ordinances, where necessary, to regulate or limit draining or development of bogs. Enforce existing regulations concerning draining, mining, and development of bogs. [Altered hydrologic regimes; Wetland modifications; Dredging and channelization; Mining practices]
- Enforce existing and develop new legislation to restrict emissions that contribute to acid precipitation. [Urban, municipal, and industrial pollution]

EDUCATION & AWARENESS

- Provide information to landowners on less chemically intensive methods of fertilization and pest management. [Pesticides and herbicides]

Research and Survey Needs

- Conduct a statewide wetlands inventory.
- Evaluate the impacts of modifications of natural hydrologic regimes and local water chemistry.
- Evaluate the potential for restoration and creation of bogs. What is the time frame required for the successful establishment of a bog? What management techniques are appropriate for bog creation and maintenance? Are any agencies or non-governmental organizations currently attempting to restore or create bogs?
- Examine variability among bog systems and determine whether differences are meaningful to wildlife. Should there be more "bog" natural communities in MNFI's classification?

Monitoring

- Track bog acreage and distribution across the landscape.
- Identify and track floristic composition and diversity.
- Track successional stage in wetlands to identify potential bog systems.