



Inland wetlands/water: Inland emergent wetland

Description

Inland emergent wetlands, also called marshes, are frequently or continually inundated with water and are characterized by emergent herbaceous vegetation adapted to saturated soil conditions. These wetlands tend to have abundant nutrients and are highly organic. Inland emergent wetlands are quite varied and can be found in poorly drained depressions and along lakes, ponds, and rivers.

General Condition of Feature

Most of the inland emergent wetland area in the Western Upper Peninsula is considered to be in fair to good condition (~95%). Inland emergent wetlands include natural communities that are considered rare, uncommon, imperiled, or critically imperiled in the State.

Associated Natural Communities

Emergent Marsh
Intermittent Wetland [Boggy Seepage Wetland]
Northern Wet Meadow

Associated Species of Greatest Conservation Need

SNAILS

delicate vertigo (*Vertigo bollesiana*)

CRAYFISH

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

INSECTS

sedge darner (*Aeshna juncea*)
zigzag darner (*Aeshna sitchensis*)
incurvate emerald dragonfly (*Somatochlora incurvata*)

AMPHIBIANS

blue-spotted salamander (*Ambystoma laterale*)
boreal chorus frog (*Pseudacris triseriata maculata*)
western chorus frog (*Pseudacris triseriata triseriata*)
pickerel frog (*Rana palustris*)
northern leopard frog (*Rana pipiens*)

REPTILES

blue racer (*Coluber constrictor foxii*)
eastern hognose snake (*Heterodon platirhinos*)
smooth green snake (*Liochlorophis vernalis*)
Blanding's turtle (*Emydoidea blandingii*)
wood turtle (*Glyptemys insculpta*)

BIRDS

Trumpeter Swan (*Cygnus buccinator*)
American Black Duck (*Anas rubripes*)

BIRDS cont.

Blue-winged Teal (*Anas discors*)
Pied-billed Grebe (*Podilymbus podiceps*)
American Bittern (*Botaurus lentiginosus*)
Northern Harrier (*Circus cyaneus*)
Red-shouldered Hawk (*Buteo lineatus*)
King Rail (*Rallus elegans*)
Virginia Rail (*Rallus limicola*)
Sora (*Porzana carolina*)
American Coot (*Fulica americana*)
Spotted Sandpiper (*Actitis macularia*)
Wilson's Snipe (*Gallinago delicata*)
Black Tern (*Chlidonias niger*)
Olive-sided Flycatcher (*Contopus cooperi*)
Purple Martin (*Progne subis*)
Sedge Wren (*Cistothorus platensis*)
Marsh Wren (*Cistothorus palustris*)
Le Conte's Sparrow (*Ammodramus leconteii*)
Bobolink (*Dolichonyx oryzivorus*)
Eastern Meadowlark (*Sturnella magna*)
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)

MAMMALS

water shrew (*Sorex palustris*)
cougar (*Puma concolor*)
moose (*Alces alces*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Altered hydrologic regimes: Altered hydrology may result in changes to the nutrient load of emergent wetlands. Some sites are extremely sensitive to nutrients.
- Fragmentation

HABITAT CONVERSION

- Industrial, residential, and recreational development: Inland shoreline development threatens emergent wetlands adjacent to ponds, lakes, and riparian zones.
- Wetland modifications

POLLUTION

- Urban, municipal, and industrial pollution
- Pesticides and herbicides

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Species like purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*) are a threat.

MICHIGAN'S WILDLIFE ACTION PLAN
TERRESTRIAL SYSTEMS: WESTERN UPPER PENINSULA

EDUCATION

- Social attitudes: Landowners dredge emergent wetlands to convert them into farm ponds or yard water features.

Conservation Actions Needed [Threats addressed]

LAND & WATER PROTECTION

- Expand conservation easement programs [variety of threats]
- Support and expand conservation purchase of high quality occurrences [variety of threats]

LAND, WATER, & SPECIES MANAGEMENT

- Manage to approximate natural disturbance regimes by restoring water flow patterns. [Altered hydrologic regimes]
- Develop and implement plans for invasive species control and prevention. [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 [variety of threats]
- Maintain and rehabilitate natural corridors between wetlands and to representative upland habitats [fragmentation]

LAW & POLICY

- Work with municipalities to promote planning and zoning insuring adequate protection for wetlands and shorelines. Develop local ordinances to retain larger parcel sizes in wetland complexes which contain emergent wetlands. [Fragmentation; Industrial, residential, and recreational development; Wetland modifications; Social attitudes]
- Develop new and enforce existing regulations to reduce airborne pollutants which may contribute to acid precipitation. [Urban, municipal, and industrial pollution]

EDUCATION & AWARENESS

- Provide education to landowners on the value of emergent wetlands to wildlife. [Industrial, residential, and recreational development; Social attitudes]
- Promote agricultural practices which reduce the use of pesticides and fertilizers. [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.
- A common classification system to define wetlands is needed.
- Determine the effects of microtopography on wetland function and its impact on wetland restoration.
- Evaluate the role of managed wetlands in contributing to landscape diversity. How do flooded cornfields impact diversity? Is there a difference in the value to wildlife between intensive wetland management and passive wetland management?
- Assess the influence of wetland creation by beavers. Do these impacts vary regionally?
- Quantify differences in the value to wildlife of restored wetlands and natural wetlands.
- Document the historic and current range of variation between emergent wetlands. This includes variables such as species composition and size.
- Identify invasive species that may degrade the value of emergent wetlands for wildlife. Develop techniques to control invasive species. Common invasive species include phragmites (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*) and reed canary grass (*Phalaris arundinacea*).

Monitoring

- Track emergent wetland acreage and distribution across the landscape.
- Identify and track floristic composition and diversity.
- Track water level and flow fluctuations and its impacts on vegetation and wildlife.