



Source: Coastal Emergent Wetland data - Great Lakes GIS Project data, Institute of Fisheries Research (Lakes Michigan, Huron, and Erie); Natural Resources Research Institute (Lake Superior). Associated Natural Communities Data - Michigan Natural Features Inventory Biotics database.

Great Lakes/Coastal: Coastal emergent wetland

Description

Coastal emergent wetlands are directly influenced by and connected to the Great Lakes. Like inland emergent wetlands, these areas are frequently or continually inundated with water and dominated by emergent herbaceous vegetation adapted to saturated soil conditions. These wetlands tend to have abundant nutrients and highly organic soils. Typical vegetation zones include a deep marsh with submerged plants, an emergent marsh of mostly narrow-leaved species, and a marsh meadow, which is inundated by storms and dominated by sedges. Because of their proximity and hydrologic connection to the Great Lakes, water levels in these areas are highly influenced by water levels in the Great Lakes. Seiches, storms, and water level cycles strikingly change vegetation over short periods by destroying some vegetation zones, creating others, and forcing all zones to shift lakeward or landward to accommodate water levels. Coastal emergent wetlands provide important habitat for migrating and breeding waterfowl, shorebirds, spawning fish, and medium-sized mammals.

General Condition of Feature

Much of the coastal emergent wetland in the Western Upper Peninsula is considered to be in fair, good, or excellent condition. However, some areas are considered degraded. Coastal emergent wetlands natural communities are rare or uncommon in the State.

Associated Natural Communities

Great Lakes Marsh

Associated Species of Greatest Conservation Need

INSECTS

incurvate emerald dragonfly (*Somatochlora incurvata*)

AMPHIBIANS

boreal chorus frog (*Pseudacris triseriata maculata*)

REPTILES

Blanding's turtle (*Emydoidea blandingii*)

BIRDS

American Black Duck (*Anas rubripes*)

Blue-winged Teal (*Anas discors*)

Common Loon (*Gavia immer*)

Pied-billed Grebe (*Podilymbus podiceps*)

American Bittern (*Botaurus lentiginosus*)

BIRDS cont.

Least Bittern (*Ixobrychus exilis*)

Northern Harrier (*Circus cyaneus*)

Red-shouldered Hawk (*Buteo lineatus*)

King Rail (*Rallus elegans*)

American Coot (*Fulica americana*)

Wilson's Snipe (*Gallinago delicata*)

Black Tern (*Chlidonias niger*)

Sedge Wren (*Cistothorus platensis*)

Marsh Wren (*Cistothorus palustris*)

Eastern Meadowlark (*Sturnella magna*)

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Climate change

HABITAT CONVERSION

- Industrial, residential, and recreational development: Development, including marinas and homes, along Great Lakes shorelines impacts these systems.
- Incompatible natural resource management: Structures such as rip-rap and revetments may degrade shoreline wetlands due to changes in hydrology.

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Removal of non-timber flora: Beach grooming and raking removes and degrades shoreline vegetation.

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Non-consumptive recreation: Uncontrolled ATV and ORV use may impact these systems.

BIOLOGICAL INTERACTIONS

- Invasive plants and animals

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

- Restore natural hydrologic regimes. [Incompatible natural resource management]
- Develop and implement plans for invasive species control and prevention. [Invasive plants and animals]

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

- Where possible, motorized vehicle trails should be located a minimum of 100 feet (and preferably more than 500 feet) from rivers, streams, lakes and other wetlands except at designated crossings. [Non-consumptive recreation]
- Use best management practices for development, management, and recreational activities around lakes, streams, and wetlands to maintain natural shoreline stability (thereby reducing the need for restoration or artificial structures). [Industrial, residential, and recreational development, Non-consumptive recreation]
- 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 on the Great Lakes. [Industrial, residential, and recreational development]
- Develop and enforce regulations to curtail recreational activities that cause significant damage. [Non-consumptive recreation]

EDUCATION & AWARENESS

- Provide information to private landowners on the impacts of removal or degradation of beach and wetland vegetation. [Removal of non-timber flora]

RECREATION

- Promote responsible ATV and ORV use. [Non-consumptive recreation]

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.
- Document the historic and current range of variation between coastal emergent wetlands. This includes variables such as species composition and size.
- Identify invasive species that may degrade the value of coastal emergent wetlands for wildlife. Develop techniques to control invasive species. Common invasive species include purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), phragmites (*Phragmites australis*), common carp (*Cyprinus carpio*), and round gobies (*Neogobius melanostomus*).
- 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?
- Document Great Lakes water level fluctuations and its impact on coastal emergent wetlands.
- Evaluate the impacts of beach grooming practices on coastal emergent wetlands and their value to wildlife.
- Develop best management practices for development, management, and recreational activities around lakes, streams, and wetlands to maintain natural shoreline stability (thereby reducing the need for restoration or artificial structures).
- Evaluate the impacts of jetties and jetty construction on coastal emergent wetlands and their value to wildlife.

Monitoring

- Track coastal 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.
- Track water chemistry and quality trends.