



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

About 40% of the coastal emergent wetland area in the Northern Lower Peninsula is considered to be in fair to good condition and about 20% is considered to be in excellent condition. The remaining areas are considered degraded or very degraded. Coastal emergent wetlands are imperiled and include natural communities that are rare, uncommon, or imperiled in the State.

Associated Natural Communities

Great Lakes Marsh
Interdunal Wetland

Associated Species of Greatest Conservation Need

INSECTS

Hine's emerald dragonfly (*Somatochlora hineana*)

REPTILES

eastern fox snake (*Elaphe gloydi*)
eastern massasauga (*Sistrurus catenatus*
catenatus)
spotted turtle (*Clemmys guttata*)
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*)
Least Bittern (*Ixobrychus exilis*)
Black-crowned Night-heron (*Nycticorax nycticorax*)

BIRDS cont.

Northern Harrier (*Circus cyaneus*)
Red-shouldered Hawk (*Buteo lineatus*)
King Rail (*Rallus elegans*)
Common Moorhen (*Gallinula chloropus*)
American Coot (*Fulica americana*)
Piping Plover (*Charadrius melodus*)
Wilson's Snipe (*Gallinago delicata*)
Common Tern (*Sterna hirundo*)
Forster's Tern (*Sterna forsteri*)
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

- Altered hydrologic regimes: The use of bank stabilization (e.g., breakwaters) may alter water flow. Water diversion and extraction may impact hydrologic regimes.

HABITAT CONVERSION

- Industrial, residential, and recreational development: Development on adjacent uplands can impact coastal emergent wetlands. Marina development may contribute to erosion and siltation.
- Wetland modifications
- Dams
- Dredging and channelization

POLLUTION

- Urban, municipal, and industrial

CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Mining practices: There is potential for oil and gas exploration in coastal emergent wetlands.

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Non-consumptive recreation: The use of personal watercraft may impact emergent wetlands.

MICHIGAN'S WILDLIFE ACTION PLAN
TERRESTRIAL SYSTEMS: NORTHERN LOWER PENINSULA

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Species like purple loosestrife (*Lythrum salicaria*) and phragmites (*Phragmites australis*) may alter community composition.

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]
- Institute invasive species monitoring, prevention and control programs. [Invasive plants and animals]
- 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, Wetland modifications, 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 [wetland modifications]

LAW & POLICY

- Work with municipalities to promote planning and zoning insuring adequate protection for uplands adjacent to coastal wetlands. [Urban, municipal, and industrial pollution; Industrial, residential, and recreational development; Wetland modifications]
- Develop new and enforce existing regulations for mitigation of oil and gas extraction facilities. [Mining practices]
- Develop and enforce regulations to curtail recreational activities that cause significant damage. [Non-consumptive recreation]
- Develop new and enforce existing regulations restricting contaminant deposition in the Great Lakes. [Urban, municipal, and industrial pollution]

RECREATION

- Promote responsible watercraft 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. Is there a difference in wildlife value between intensive wetland management and passive wetland management?
- 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).
- 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.
- 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.