



## 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 area in the Southern Lower Peninsula is considered to be degraded or very degraded (~70%). Most of the remaining areas are considered fair to good condition (~25%). Coastal emergent wetlands are at risk and associated natural communities are considered rare or imperiled in the State.

### Associated Natural Communities

Great Lakes Marsh  
Interdunal Wetland

### Associated Species of Greatest Conservation Need

#### *INSECTS*

delicate meadow katydid (*Orchelimum delicatum*)

#### *AMPHIBIANS*

Blanchard's cricket frog (*Acris crepitans blanchardi*)

#### *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*)

#### *BIRDS cont.*

Black-crowned Night-heron (*Nycticorax nycticorax*)

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*)

Short-eared Owl (*Asio flammeus*)

Sedge Wren (*Cistothorus platensis*)

Marsh Wren (*Cistothorus palustris*)

Eastern Meadowlark (*Sturnella magna*)

Yellow-headed Blackbird (*Xanthocephalus*  
*xanthocephalus*)

### Associated Threats

#### *MODIFICATION OF NATURAL PROCESSES*

- Grazing and mowing patterns: Mowing and cutting in these areas may alter their value to wildlife.
- Altered hydrologic regimes: Construction of revetments and other stabilization structures may modify water flow patterns.
- Fragmentation

#### *HABITAT CONVERSION*

- Industrial, residential, and recreational development: Marinas and other recreational development is prevalent in coastal emergent wetlands. Residential development may impact these areas.
- Wetland modifications

#### *POLLUTION*

- Pesticides and herbicides

#### *CONSUMPTIVE BIOLOGICAL RESOURCE USE*

- Removal of non-timber flora: Beach raking and grooming may alter community composition.

#### *NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE*

- Non-consumptive recreation: Outwash from jetskis and high speed boating may impact these systems.

**MICHIGAN'S WILDLIFE ACTION PLAN**  
**TERRESTRIAL SYSTEMS: SOUTHERN LOWER PENINSULA**

*BIOLOGICAL INTERACTIONS*

- Invasive plants and animals: Plants like phragmites (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*) may modify community composition.
- Other biological interactions: Gulls (*Larus* spp.) may outcompete less common species for nest sites.

*EDUCATION*

- Social attitudes

Conservation Actions Needed [Threats addressed]

*LAND & WATER PROTECTION*

- Expand conservation easement programs (Industrial, residential, and recreational development; Wetland modifications)
- Support and expand conservation purchase of high quality occurrences [variety of threats]

*LAND, WATER & SPECIES MANAGEMENT*

- Manage to approximate natural disturbance regimes using restoration of natural water flow patterns. [Altered hydrologic regimes]
- Assess management goals to ensure that they provide for a diversity of communities across the landscape. [Removal of non-timber flora; Other biological interactions]
- 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, 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 (altered sediment loads, riparian modifications)

*LAW & POLICY*

- Develop new legislation and ordinances, where necessary, to regulate or limit draining or development of emergent wetlands. Enforce existing regulations concerning draining and development of wetlands. [Altered hydrologic regime, Fragmentation; Industrial, residential, and recreational development; Wetland modifications]
- Develop and enforce regulations to curtail recreational activities that cause significant damage. [Non-consumptive recreation]

*EDUCATION & AWARENESS*

- Provide information to landowners on less chemically intensive methods of fertilization and pest management. [Pesticides and herbicides]
- Educate the public and residential developers on the benefits to wildlife of leaving unmaintained yard and beach areas near emergent wetlands (e.g., not grooming beaches). [Removal of non-timber flora]

*RECREATION*

- Promote responsible recreational boating and use of personal watercraft in coastal wetland systems. [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.
- Monitor invasive species introductions and status
- Track water quality trends.