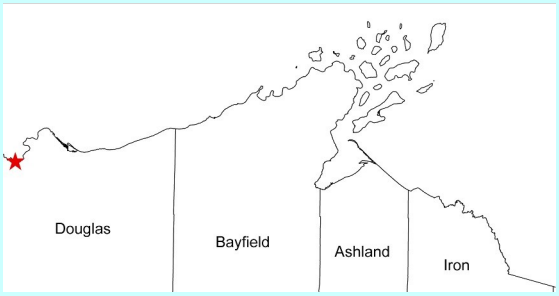
ESTUARIES & COASTAL WETLANDS OF LAKE SUPERIOR

Oliver Marsh

Approximate Size: 330 (wetland area: 120 acres)*

Ownership: Douglas County/Private

Year Last Surveyed by WDNR/NHI: 2013



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Site Description

This large marsh occupies part of the St. Louis River Estuary between the Village of Oliver and the City of Superior Municipal Forest. A narrow, natural levee has developed on the outside bend of a channel meander and is partially vegetated with shrubs and small lowland hardwoods. The levee separates the northern portion of the marsh from the main channel. The emergent beds are typical of Lake Superior stands and include bulrushes (*Schoenoplectus* spp.), bur-reeds (*Sparganium* spp.), lake sedge (*Carex lacustris*), cattails (*Typha* spp.), sweet-flag (*Acorus calamus*), and arrowheads (*Sagittaria* spp.). Pockets of wild rice (*Zizania palustris*) also occur in several protected bays fed by tiny streams draining the uplands to the east. A deep central lagoon between the natural levee and the emergent beds (that lie adjacent to the upland shore) harbors significant stands of floating-leaved and submergent macrophytes.

Most of the Wisconsin portion of the shoreline of this site is undeveloped and forested with the early successional species paper birch (*Betula papyrifera*) and trembling aspen (*Populus tremuloides*). Remnant stands of conifers, mostly white spruce and white pine, are scattered along the clay bluffs. Where homes and docks have been constructed (as is the case near the Village of Oliver) erosion is often noticeable. Small patches of the non-native invasive purple loosestrife (*Lythrum salicaria*) are often associated with the natural levees or disturbed shoreline areas. Slumps occur on many of the clay bluffs exposed to the direct action of water and ice, especially when they are unprotected by stands of aquatic vegetation. The Minnesota side of the river has more residential and industrial development but also has extensive marshes.

*Acreages are rough estimates based on GIS and aerial photographs and do not reflect ownership or management boundaries.

Threats

The non-native invasive species purple loosestrife and common buckthorn (*Rhamnus cathartica*) are present along the levee and edges of the marsh, though both were uncommon in 2013. Within the marsh, narrow-leaved cat-tail (*Typha angustifolia*) is abundant, although a good diversity of other emergent aquatic plants is also present. Across the Lake Superior clay plain, water quality and wetland function are known to be adversely affected by open lands (*e.g.*, developed land, agriculture, young forest) and positively affected by older forests and conifers. Land use analysis of the watershed and associated water quality monitoring could facilitate better understanding of this site's aquatic and wetland resources.

Additional Comments

One of several high quality marshes within the St. Louis River Estuary, this site also includes a good diversity of aquatic plants.

Abbreviations and Helpful References

GLCWC - Great Lakes Coastal Wetland Classification.- http://glc.org/wetlands/pdf/wetlands-class_rev1.pdf

Lake Superior Binational Program - http://www.epa.gov/glnpo/lakesuperior/

WDNR Coastal Wetlands webpages - http://dnr.wi.gov, Keyword: "coastal wetlands"

WDNR/NHI - Wisconsin Department of Natural Resources, Natural Heritage Inventory Program. http://dnr.wi.gov , Keyword: "natural heritage"

"Managing Woodlands on Lake Superior's Red Clay Plain" - WDNR publication #PUB-FR-385 2007. http://dnr.wi.gov, Keyword: "bmp landowner guides"

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Stands of both stiff arrowhead (*Sagittaria rigida*) (left) and narrow-leaved cat-tail (right) occur within Oliver Marsh.

Suggested Citation

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