

ESTUARIES & COASTAL WETLANDS OF LAKE SUPERIOR

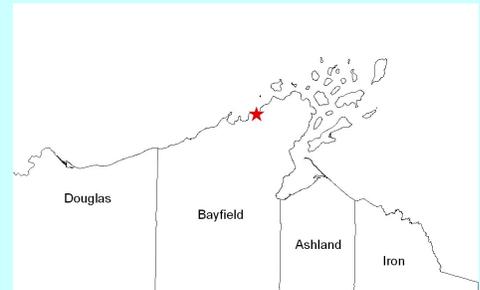
Montreal River Mouth

Approximate Size: 5 acres*

Ownership: Private

Year Last Surveyed by WDNR/NHI: 2012

GLCWC Classification: Barred Drowned River Mouth



Christina Isenring



Amy Staffen

Site Description

The Montreal River is a Class II trout stream that empties into Oronto Bay between two clay bluffs along the state line between Wisconsin and Michigan. The lower portion of the river is controlled by a dam just south of Superior Falls, less than 0.5 miles from the river mouth. A low- to fair-quality Northern Sedge Meadow is located in a lagoon near the terminus of the river, and moderate-quality Northern Mesic Forest claims the uplands. One rare bird has been observed at this site.

The Montreal River mouth is partially constricted by a rocky bar that allows river water to mix with lake water through a narrow opening. The bar is vegetated only on the back side, mostly by green ash (*Fraxinus pennsylvanica*), red-osier dogwood (*Cornus stolonifera*), and ruderal herbaceous plants. A half-acre lagoon located between the river mouth and the dam has a rocky bottom, moderate temperature and lacks submergent vegetation. Two low- to fair-quality Northern Sedge Meadow islands are located in the lagoon and are dominated by sedges (*Carex* spp.), knotted rush (*Juncus nodosus*), spotted joe pye-weed (*Eupatorium maculatum*), giant goldenrod (*Solidago gigantea*), and reed canary grass (*Phalaris arundinacea*). Notable animal species observed in the lagoon during 2012 surveys include a river otter (*Lutra canadensis*) and mussels.

Steep clayey slopes—badly eroded in places—border the west side of the lagoon. Cool moist ravines cut from the uplands downward and are shaded by a narrow, fair-quality strip of Northern Mesic Forest. This particular forest is composed of large hemlock (*Tsuga canadensis*; over 18 inches in diameter at breast height) with scattered white cedar (*Thuja occidentalis*), and yellow birch (*Betula alleghaniensis*) in the subcanopy. On the Michigan side of the lagoon a younger version of this same forest type is dominated by hemlock, sugar maple, white pine (*Pinus strobus*) and balsam fir (*Abies balsamea*; average size of 12-15 inches in diameter at breast height) and has a much thicker shrub layer. Signs of logging are particularly obvious in the uplands on the Michigan side of the river.

*Area includes lower 0.25 miles of river and associated wetlands.

Threats

Invasive species noted at this site include common tansy (*Tanacetum vulgare*), Canada thistle (*Cirsium arvense*), spotted knapweed (*Centaurea biebersteinii*) and reed canary grass. Invasive plants can out-compete native plants by monopolizing light, water, and nutrients, and can have negative impacts on soils, nutrient cycling, etc. Erosion along the steep slopes bordering the lagoon threatens water quality and community composition through siltation and nutrient loading. 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 could facilitate better understanding of this site's wetland resources.

Additional Comments

The mouth of the Montreal River has been identified by the Lake Superior Binational Program as important to the integrity of old growth forests, coastal wetlands and fish and wildlife habitats in the Lake Superior region.

Abbreviations and Helpful References

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

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"

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

"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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Erosion along steep clay slopes near the Montreal River mouth (left). Northern Mesic Forest growing above the barrier lagoon (right).

Suggested Citation

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**WISCONSIN COASTAL
MANAGEMENT PROGRAM**

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