

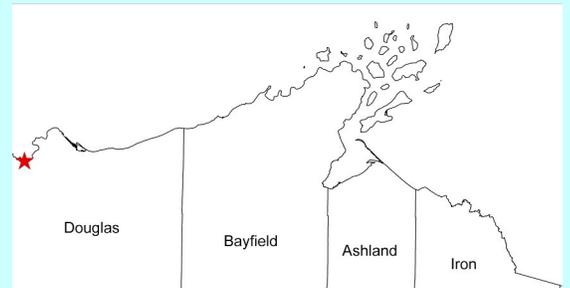
# ESTUARIES & COASTAL WETLANDS OF LAKE SUPERIOR

## Red River Breaks-St. Louis River Marshes

Approximate Size: 6,960 (wetland area: 1,300 acres)\*

Ownership: WDNR/Private

Year Last Surveyed by WDNR/NHI: 2013



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### *Site Description*

Significant wetlands lie within the upper St. Louis River Estuary where the Wisconsin shoreline is almost entirely undeveloped and includes a large block of rough, forested, roadless terrain. The Minnesota side of the St. Louis River also harbors valuable wetlands, including wire-leaved sedge meadow at the Oliver Bridge and downstream at Grassy Point.

### **St. Louis River Marshes**

Upper portions of the St. Louis River Estuary from Fond du Lac downstream to Oliver feature extensive emergent marshes. These are typically located inside the main channel's meanders, but also occur in protected, horseshoe-shaped shallow bays. Important emergent aquatics include arrowheads (*Sagittaria* spp.), bulrushes (*Schoenoplectus* spp.), bur-reed (*Sparganium* spp.), lake sedge (*Carex lacustris*), and cattails (*Typha* spp.). Wild rice (*Zizania palustris*) is locally common, but appears to be less abundant in the St. Louis River estuary overall than described in historical anecdotal accounts. Deeper waters of the marsh complexes support submergent and floating-leaved macrophytes. The patches of marsh associated with the main channel are often bordered by a natural levee adjoining the flowing river. Where well-developed, the levees are vegetated with tall wetland shrubs and lowland hardwoods, especially speckled alder (*Alnus incana*), red-osier dogwood (*Cornus stolonifera*), meadowsweet (*Spiraea alba*), willows (*Salix* spp.), black and green ash (*Fraxinus nigra* and *F. pennsylvanica*), and box elder (*Acer negundo*). The marshes are of major importance to migrating waterfowl.

### **Red River Breaks**

This site borders the Red River and associated Wisconsin tributaries of the lower St. Louis River and contains an extensive block of undeveloped and roadless forest dominated by pole-size trembling aspen with a dense understory of speckled alder in many stands. Conifers, which were formerly dominant here, are limited to steep ravines and small stands of white spruce, white pine, and white cedar. On some of the small terraces a few

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

meters above the streams in the ravine bottoms, mature stands of large white spruce, black ash, and balsam poplar still occur, a vestige of the boreal forest that once dominated the Superior Clay Plain. The lower slopes of the steep-sided ravines are often springy, sometimes supporting remnant stands of white cedar. In poorly drained 'flats' on the level ridges between ravines, there are patches of black ash-dominated hardwood swamp and thickets of speckled alder and other tall wetland shrubs. Areas of standing water are infrequent but, where present, support small emergent marshes and broad-leaved sedge meadows. Along the St. Louis River channel there are stands of emergent macrophytes, shrub swamp, and small patches of black ash swamp. At least 10 species of rare plants have been documented on the site. The area supports a representative diversity of the region's birds, including large populations of many neotropical migrants (e.g. wood warblers, vireos, flycatchers, and thrushes).

### *Threats*

The non-native invasive species purple loosestrife (*Lythrum salicaria*) is present on the levees and shoreline wetlands, but it is still uncommon, while narrow-leaved cattail (*Typha angustifolia*) is a dominant in some of the marshes. At Red River Breaks, both garden-heliotrope (*Valeriana officinalis*) and common tansy (*Tanacetum vulgare*) are present. The site's forests, soils, and waters were seriously damaged during past catastrophic logging episodes. Many of the fragile springs and seeps in the steep valleys are eroding, and slumpage of the steep clay slopes is common, especially during heavy rain events. Increasing the conifer component of the forest over time, particularly adjacent to steep ravines, may help reduce erosion and improve water quality, though more research on this topic would be beneficial.

### *Additional Comments*

The St. Louis River Marshes and Red River Breaks are an integral part of one of the largest freshwater estuaries on the western Great Lakes, and the lower St. Louis River offers unique large scale protection and restoration opportunities in an urban setting. It is considered a high priority owing to its large size, recent state acquisition of lands within the area, and its significance to water quality in the estuary.

### *Abbreviations and Helpful References*

GLCWC - Great Lakes Coastal Wetland Classification.- [http://glc.org/wetlands/pdf/wetlands-class\\_rev1.pdf](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"

### *Suggested Citation*

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