

Critical Habitat Area Wissota 12 – Upper Moon Bay

This Critical Habitat Area encompasses approximately 5300 feet of shoreline at the upper end of Moon Bay (Figure 11). It includes important terrestrial habitat, shoreline habitat and shallow water habitat (Figure 15-17). The shoreline at this Critical Habitat Area is composed of some native herbaceous growth, shrub growth and lawns with abundant wooded cover. The island at this site is a distinctly unique feature in the bay. Large woody cover from fallen trees is present in the shallow water. This woody cover provides important habitat for fish cover and wildlife resting areas.

This site was selected for its value for fish and wildlife habitat and its aquatic and terrestrial plant communities. It provides a visual and audible buffer from road and boat noise.

The Plant Community:

The plant community at this site includes 15 species of aquatic plants.

The emergent vegetation at this site protects the shoreline and provides important food sources, cover and fish spawning habitat. The emergent community is composed of cattail and arrowhead at this site.

Floating-leaf vegetation, white water lilies, greater duckweed and small duckweed, dampen wave action and provide important fish habitat.

A diverse submergent plant community provides many fish and wildlife benefits (Table 7). Elodea, coontail, water stargrass and wild celery occur at this site. The pondweed family is an important food source for fish and waterfowl and is represented at this site by long-leaf pondweed, clasping-leaf pondweed and spiral-fruited pondweed. Small rosette vegetation colonizes the lake bottom, anchoring the substrate. The rosette-forming arrowhead is present here.

Two exotic, invasive aquatic plant species, curly-leaf pondweed and Eurasian watermilfoil are common at this site. The spread of Eurasian watermilfoil into this area is of concern.

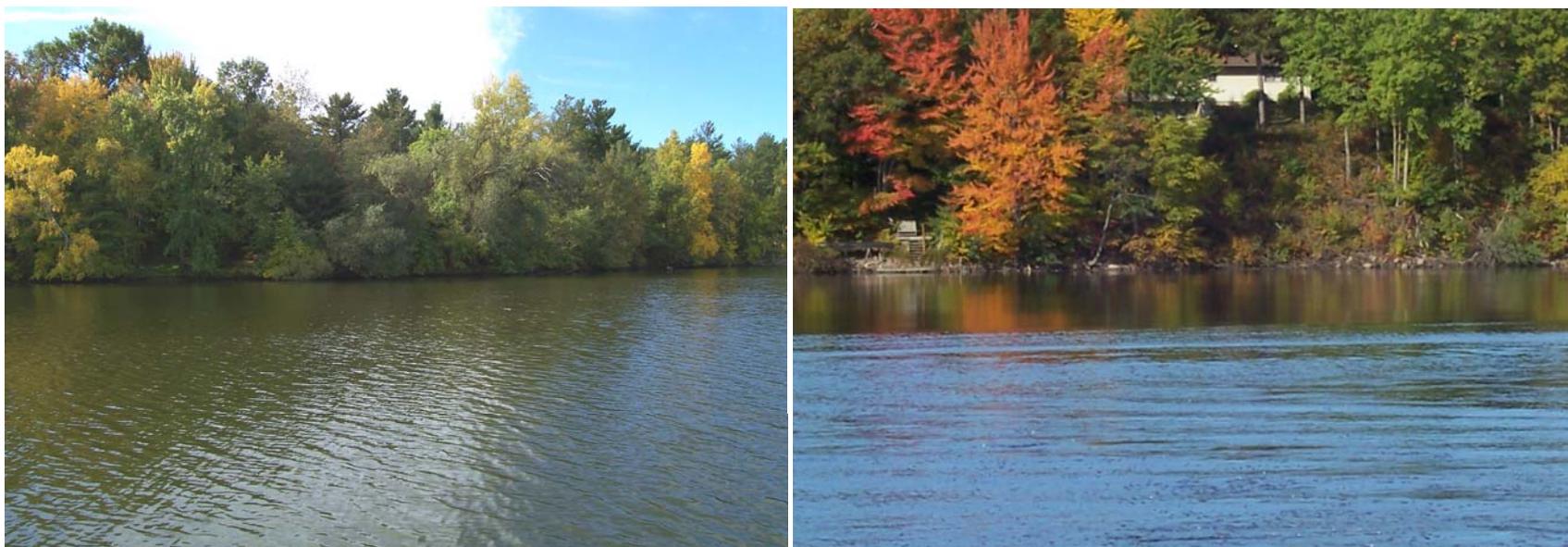


Figure 15. Lake Wissota Critical Habitat Area #12; shore by Yellow River Inlet and typical development on bay.

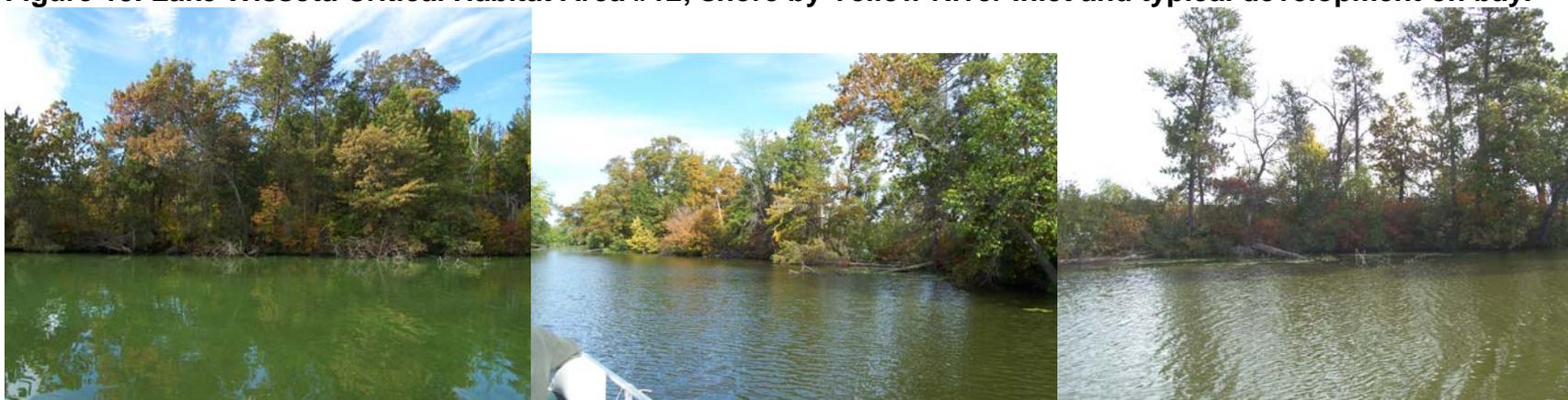


Figure 16. Lake Wissota Critical Habitat Area #12; Bay side (southwest side) of island



Figure 17. Lake Wissota Critical Habitat Area #12; Lake side (northeast side) of island

Table 7. Wildlife and Fish Uses of Aquatic Plants in Critical Habitat Area 12

Aquatic Plants	Fish	Water Fowl	Song and Shore Birds	Upland Game Birds	Muskrat	Beaver	Deer
<u>Submergent Plants</u>							
<i>Ceratophyllum demersum</i>	F, I*, C, S	F(Seeds*), I, C			F		
<i>Elodea canadensis</i>	C, F, I	F(Foliage) I					
<i>Myriophyllum spicatum</i>	F, C						
<i>Potamogeton crispus</i>	F, C, S	F(Seeds, Tubers)					
<i>Potamogeton nodosus</i>	F, I, S*, C	F*(Seeds)			F*	F	F
<i>Potamogeton richardsonii</i>	F, I, S*, C	F*(All)			F*	F	F
<i>Potamogeton spirillus</i>		F(Seeds)	F		F	F	F
<i>Vallisneria americana</i>	F*, C, I, S	F*, I	F		F		
<i>Zosterella dubia</i>	F, C, S	F(Seeds)					
<u>Floating-leaf Plants</u>							
<i>Lemna minor</i>	F	F*, I	F	F	F	F	
<i>Nymphaea odorata</i>	F, I, S, C	F(Seeds)	F		F	F	F
<i>Spirodela polyrhiza</i>	F	F		F			
<u>Emergent Plants</u>							
<i>Sagittaria latifolia</i>		F, C	F(Seeds), C	F	F	F	

Aquatic Plants	Fish	Water Fowl	Song and Shore Birds	Upland Game Birds	Muskrat	Beaver	Deer
<i>Sagittaria rigida</i>		F (tubers, seeds)			F (stems, tubers)	F (stems, tubers)	
<i>Typha angustifolia</i>	S, C					F	
<i>Typha latifolia</i>	I, C, S	F(Entire), C	F(Seeds), C, Nest	Nest	F* (Entire), C*, Lodge	F	

F=Food, I= Shelters Invertebrates, a valuable food source C=Cover, S=Spawning

***=Valuable Resource in this category**

*Current knowledge as to plant use. Other plants may have uses that have not been determined.

After Fassett, N. C. 1957. A Manual of Aquatic Plants. University of Wisconsin Press. Madison, WI

Nichols, S. A. 1991. Attributes of Wisconsin Lake Plants. Wisconsin Geological and Natural History Survey. Info. Circ. #73

Wildlife Habitat

This bay is a good waterfowl feeding area. Emergent vegetation, floating-leaf vegetation, shoreline shrubs and brush and fallen logs provide this critical habitat. This site provides:

- 1) shelter, cover and feeding areas for ducks
- 2) shelter, cover, nesting and feeding areas for mink, songbirds, kingfishers, frogs, toads, salamanders, turtles and snakes
- 3) feeding areas for coots and double-crested cormorants.

Fish Habitat

Large woody cover, emergent vegetation, submerged vegetation and floating-leaf vegetation at this site provide critical fish habitat. This site provides:

- 1) feeding areas for walleye and catfish
- 2) year-round nursery areas, feeding areas and protective cover for northern pike, musky, largemouth bass, bluegill and yellow perch

Water Quality

The aquatic plant community at this site:

- 1) provides a nutrient buffer, the plants at the shore and in the water acting as a nutrient sink, absorbing nutrients and reducing algae blooms
- 2) provides a biological buffer, reducing the possibility of invasions by exotic species
- 3) stabilizes the sediments, holding the sediments to reduce the resuspension by waves and other disturbance
- 4) provides a physical buffer that protects the shoreline against erosion
- 6) is within an area where cold water inflows of the Yellow River provide temperature gradients that provide for higher diversity

Recommendations for Area 12

Recommendations for the terrestrial shoreline buffer:

- 1) Maintain wildlife habitat at this site
- 2) Maintain snag trees and trees with cavity nesting
- 3) Maintain and increase naturally vegetated wildlife corridor on shore
- 4) Minimize removal of any shoreline vegetation. Shore vegetation protects shore from erosion and nutrient run-off that would compromise water quality. Allow removal of a maximum corridor width of 30 feet.
- 5) Maintain exotic signs at the boat landing
- 6) No permit approval for bank protection via rip-rap or retaining walls, not needed at this site.
- 7) No bank grading

Recommendations for the aquatic habitat below the Ordinary High Water Mark

- 8) Maintain current protection of area for fish habitat
- 9) Do not remove fallen trees along the shoreline
- 10) Do not alter the littoral zone except for improvement of spawning habitat
- 11) Maintain the aquatic vegetation (emergent, floating-leaf and submergent) in an undisturbed condition for wildlife habitat, fish cover and as a buffer for water quality protection. Limit removal to navigation channels. Permits required for any vegetation removal.
- 12) Chemical treatment of aquatic vegetation limited to early-season, selective control of Eurasian watermilfoil. Goal of treatment is to eliminate this exotic species and restore native vegetation.
- 13) Protect emergent vegetation.
- 14) No permit approval for pea gravel beds or sand blankets, except for DNR fishery or wildlife approved projects.
- 15) No dredging or lake bed removal or modifications.
- 16) Pier placement by permit only to minimize number of piers and their size and disturbance; require light-penetrating pier material such as metal grating.
- 17) No boat ramp placement.
- 18) Recreational floating devices sited by permit only.