



John Huff

OCONTO MARSH WORKHORSE WETLAND FUNCTION SHORELINE PROTECTION

OCONTO COUNTY



OCONTO MARSH

Property Owner: WDNR

Wetland Types Present: marsh, sedge meadow, shrub carr

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WETLANDS PREVENT SHORELINE EROSION

While some Wisconsin wetlands are considered isolated, approximately three-quarters of wetlands in the state (~4 million acres) are situated along the shores of lakes, rivers and streams. Wetland plant communities that colonize shorelines are adapted to natural fluctuations in water levels, flood surges and wave action and they protect shorelines against erosion. The roots of shoreline wetland vegetation serve as anchors, holding lakeshore and riverbank soil in place. Stems and leaves absorb and diffuse the erosive energy of waves along lakeshores and of flood currents that rise above the banks of streams and rivers. This wetland function is particularly important in waterbodies that have frequent flooding or significant wave action (from wind and/or boat traffic). Shoreline protection helps maintain waterfront property values and reduces the input of eroded sediment into adjacent waterbodies. In Wisconsin, lakeshore wetlands include both Great Lakes coastal wetlands and inland lakeshore wetlands. Inland lakes vary in size and hydrology, and the shoreline vegetation varies accordingly. Large lakes typically have greater wave action and a greater need for vegetation to stabilize the lakeshore, making wetlands along the coasts of Lake Michigan and Lake Superior critically important for shoreline protection.

OCONTO MARSH & THE WEST SHORE OF GREEN BAY

One of the largest wetlands along the western shoreline of Green Bay, the Oconto Marsh surrounds the Oconto River mouth and stretches along the shore several miles to the north and south. This expansive wetland complex is largely made up of sedge meadow and marsh, with some islands of shrub carr. Vegetation varies with topographic features such as low beach ridges and swales and abandoned oxbows and meanders of the Oconto River on the delta. Water level fluctuations also influence the vegetation of Oconto Marsh, and this vegetation in turn has a strong influence on the stability of the shoreline.

Shoreline erosion is a serious concern along parts of the Green Bay shoreline because of the energy contained within the waves and seiches common on the Bay. Seiches are tide-like rises and drops in coastal water levels caused by prolonged strong winds that push water toward one side of the lake. The dense root networks of vegetation in Oconto

Marsh hold shoreline sediments in place. Cattails, bulrushes, and other emergent marsh plants absorb and diffuse the energy of waves and seiches, limiting their erosive effects. Wetland vegetation protects shorelines along much of the west shore of Green Bay and many other part of Wisconsin's Great Lakes coastline.

ACCESS

Visit the Oconto Marsh page of the Wisconsin State Wildlife Areas website: www.dnr.state.wi.us/org/land/wildlife/wildlife_areas.

INLAND EXAMPLE OF THE SHORELINE PROTECTION VALUE OF WETLANDS

Lake Koshkonong in Jefferson County, one of southern Wisconsin's most popular recreational destinations, boasts 27 miles of shoreline. This shallow impoundment of the Rock River was once an expansive marsh of wild rice, cattails, bulrushes and other wetland plants, but today is largely an open-water lake. Remaining wetland vegetation along the margins provides critical shoreline protection by buffering the shore against wave action created both by winds and boat traffic.

Sources:

Coastal Wetlands of Wisconsin's Great Lakes (WDNR) Wetland Functions, Values, and Assessment. USGS Water Supply Paper 2425 Wisconsin Department of Natural Resources: Wetland Functional Values USEPA Watershed Academy Web Module: Wetlands Functions and Values Ramsar International Convention on Wetlands Fact Sheet Series: Shoreline Stabilization and Storm Protection



Lake Koshkonong shoreline — Jeff Kraemer