Climate Conservation Solutions Initiative

The Role of Shorelands in the Northwoods

Preserving undeveloped shorelines of high-quality lakes, ponds, creeks, and rivers is one of the top conservation priorities for the Northwoods Land Trust.

Keeping natural shorelands in place – both on land and in shallow, nearshore waters – protects water quality and provides habitat for birds, fish, and other wildlife. Kingfishers, for one, seek shrubs along the water's edge to conceal their young.

Natural vegetation filters runoff during storm events, protecting water quality. *Photo by Ron Eckstein*

Native shrubs, grasses, sedges and trees on land trap soil, pesticides, and fertilizers in stormwater flowing off uplands. An intact buffer of plants blocks pollutants from reaching waterbodies while preventing erosion of banks and loss of land. Fertilizers that reach the water feed algae and invasive, non-native plants that degrade water quality and lower home property values.

This service becomes more critical as a changing climate delivers an increasing frequency of intense rainstorms dropping large volumes of water in a brief time. Without an upland barrier, much of the water would run off the land, flow unchecked downhill and into the nearest waterbody.

Pickerel weed and sedges protect shorelines and provide wildlife habitat. *Photo by Ron Eckstein*

Pickerel weed, water lilies, and other native aquatic plants in the shallows protect shorelines from waves and boat wakes even as they provide habitat for insects, fish, frogs, turtles, waterfowl, minks, and muskrats.

Common loons build nests within beds of aquatic plants. Young ducks hide from predators in the shallow beds. Bass and northern pike use them for spawning.

Removing plants from shorelands eliminates those benefits and opens more water surface area to sunlight. This results in warmer water temperatures near the shores and increased stress on fish.

For that reason, keeping shade from trees, shrubs and overhanging windfalls along a shoreline takes on greater significance in a changing climate.

Warmer air temperatures alone raise surface water temperatures. Surface temperatures, currently, are warming fastest in spring and fall.

Walleye, a cool-water species that spawns in spring, already is feeling the effects of warming waters.

Studies show that a water temperature increase of a few degrees is enough to reduce natural reproduction of walleye in a lake. In the last 20 years, researchers have documented declining natural reproduction of walleye in many northern lakes.

Natural vegetation provides shade along the shoreline.

There is no doubt that high-quality lakes and streams are among the attractions that draw visitors to the northwoods.

Even so, we are at risk of losing the remaining natural shorelands as an increasing number of visitors seek to become property owners and build residences on undeveloped shorelines.

Preserving stretches of untouched shorelines is possible using conservation easements on private property or with donations of land to conservation organizations.

There is a globally significant concentration of 4,291 glacial lakes in the Northern Highland alone, according to the Wisconsin Department of Natural Resources. This is one of the reasons that NWLT considers it to be a focal area for further permanent conservation efforts.

Source: Wisconsin Department of Natural Resources "The Ecological Landscapes of Wisconsin"

The Northwoods Land Trust's (NWLT) **Climate Conservation Solutions Initiative** aims to accelerate the pace of conservation in northern Wisconsin through raising awareness and support of natural solutions to our changing climate.