

Climate Conservation Solutions Initiative

The Role of Wetlands in the Northwoods

Preserving our remaining intact wetlands is a necessary step in providing future generations of northwoods residents with sustainable communities in the face of a changing climate.



Sedge meadow wetland along the Manitowish River in Vilas County. *Photo by Ron Eckstein*

All natural wetlands on the landscape, whether positioned between land and open water or isolated from waterways, are working to benefit the environment, wildlife, and us.

Wetlands are identified by the type of plant communities living in them. Here are a few: sedge meadow, wild rice marsh, shrub-carr, coniferous bog, black spruce swamp, lowland hardwood swamp, deciduous floodplain forest, and alder thicket.

Shallow marshes with wild rice could lose that identity in the future if the native plant known as manoomin to the Ojibwe becomes increasingly scarce in the absence of suitable habitat due to changes in the region's temperature and precipitation patterns.



Wild rice beds along the upper Wolf River in Oneida County. *Photo by Ron Eckstein*

Wetlands with healthy, undisturbed plant communities provide many valuable services, from storing stormwater and cleansing it of pollutants, to recharging groundwater and contributing water to rivers and lakes, holding floodwaters, protecting shorelines, and providing critical habitat for fish, birds, and mammals of all sizes. Wild rice, as an example, provides food for many bird species, especially waterfowl that also use it for nesting cover.

Those crucial services are maintained by preserving and restoring wetlands in watersheds, particularly in the headwaters of rivers, and reconnecting or safeguarding connections between floodplains and streams.

Keeping wetlands intact also builds the region's resilience to severe weather events, especially the ability to hold water from heavy downpours,



Flooding is becoming more common in northern Wisconsin with extreme precipitation events. *Photo by Ron Eckstein*

occurring more frequently under a changing climate. Maintaining healthy plant communities in those wetlands ensures they continue to provide one other invaluable service.

Trees, shrubs, sedges, bur-reeds, bulrushes, wild rice, grasses, and other native plants living in Wisconsin's wetlands absorb carbon dioxide from the air and store the carbon, with most of it locked in soils.

In this way, wetlands reduce the concentration of greenhouse gases in the atmosphere, lessen the risk of unchecked warming, and help prevent the most extreme impacts of climate change.

Draining or destroying wetlands releases much of that carbon back into the air as carbon dioxide and methane, adding to the load of climate-altering greenhouse gases in the atmosphere.

Degraded wetlands, in turn, become vulnerable to severe weather, especially prolonged droughts that would dry wetland soils and release even more carbon.

Preserving intact wetlands on public lands, and on private property with the use of conservation easements, acquisitions, and public education, will guard against disturbance and loss of this natural resource, and help sustain northwoods communities.



Shrub-carr wetlands store carbon at Powell Marsh in Vilas County. *Photo by Ron Eckstein*



Thirty-four percent of the Northern Highland in Iron, Oneida, and Vilas Counties is covered by wetlands. This makes the region highly resilient to climate change. These are some 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.