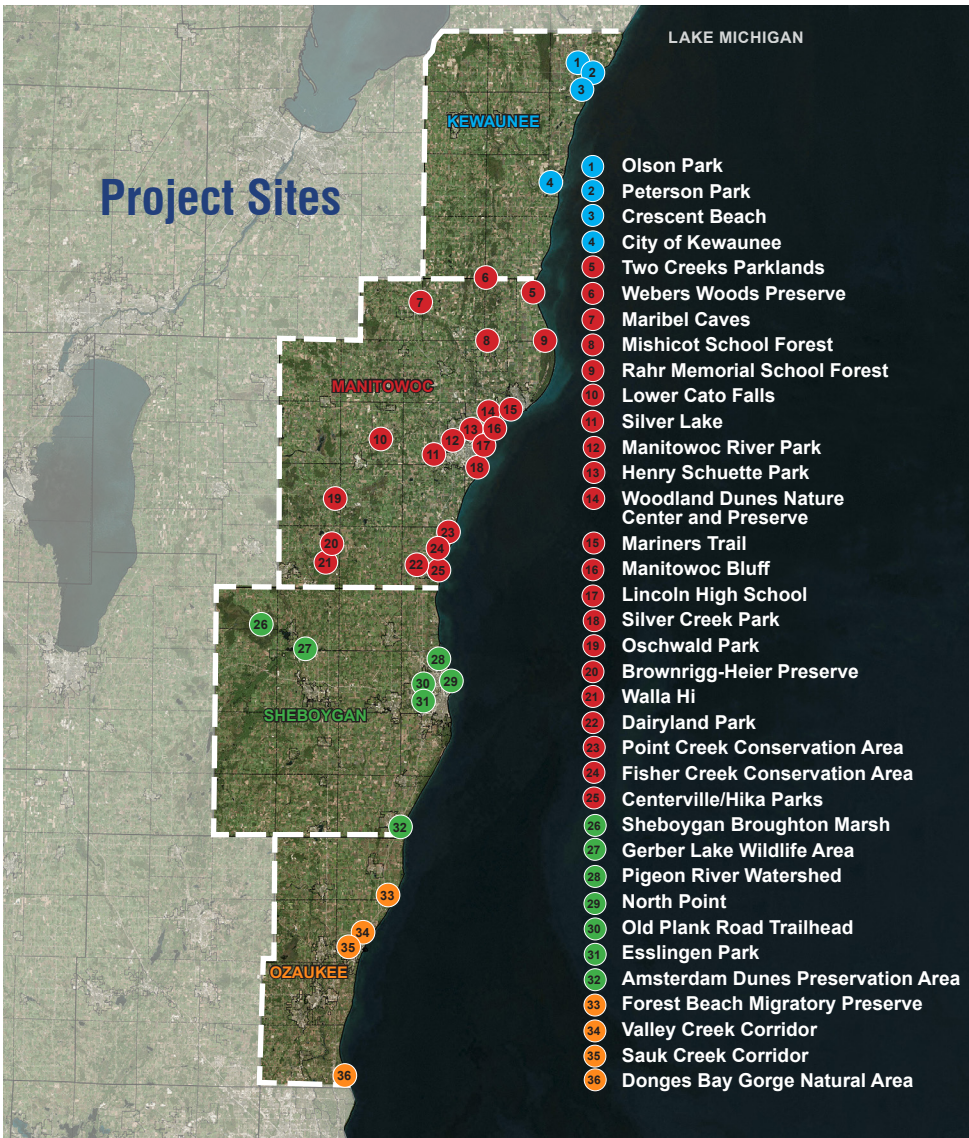




CONSERVATION • COLLABORATION • COMMUNITY

Coastal Reforestation & Climate Adaptability Projects

Enhancing Climate Adaptability of Lake Michigan Coastal Forests and Riparian Habitats



Warming climate, changing precipitation patterns, and invasive pests are degrading the ecological health of forest habitats for migratory and resident birds and wildlife throughout the Midwest. These challenges are compounded by existing fragmentation and historic loss of forest cover. To address these threats to coastal forests and riparian habitats, Lakeshore Natural Resource Partnership (LNRP) with support from Stantec Consulting Services Inc. (Stantec) and a team of non-profits, municipalities, and citizens, developed and implemented climate adaptation strategies across numerous sites along the western Lake Michigan shoreline.

Our project approach uses diverse native tree plantings as a key tactic to address critical vulnerabilities and risks to the Lake Michigan coastal ecosystem by utilizing regional climate vulnerability assessments and habitat suitability models to prioritize effective actions likely to result in sustainable benefits to forests, migratory birds, and wildlife. The project sites were strategically selected to maximize water quality and ecological benefits by targeting restoration efforts across a diverse array of landscapes including priority wetland and riparian habitats in rural and urban settings within coastal ecosystems in Kewaunee, Manitowoc, Sheboygan, and Ozaukee counties.



The implementation strategy focuses on installation of diverse tree species on key publicly-owned conservation lands. The project will enhance forested habitat connectivity and coverage following canopy loss from emerald ash borer, support habitat for migratory birds along the Lake Michigan flyway, and maintain shading in riparian areas, where coldwater streams are increasingly vulnerable to warming conditions. The effort is also intended to increase adaptability of forests by installing a diversity of tree species that are adapted to expected future conditions and increase carbon capture and storage capacity by planting species that are pest resistant and adaptive to changing climate.

LNRP, with Stantec’s grant funding support, secured \$1.8 million in total grant funding for this project from US Forest Service - Great Lakes Restoration Initiative grants and the Wildlife Conservation Society’s Climate Adaptation Fund. These grants were used as leverage to secure additional grant funding at several of the sites. Diverse Partners include Stantec, Friends of Crescent Beach, City of Algoma, City of Kewaunee, City of Manitowoc, Woodland Dunes Nature Center and Preserve, Manitowoc County, Village of Cleveland, Friends of Hika Park, Wisconsin Department of Natural Resources, Town of Two Creeks, Sheboygan County, Sheboygan River Basin Partnership, Glacierland RC&D, City of Sheboygan, and Maywood Environmental Center.



PROJECT OUTCOMES:

- Over 9,400 native trees and shrubs planted since 2020
- 5,864 native plant plugs installed in 2021
- Over 100 acres of native seed installed to restore native plant communities
- Invasive control on-going across hundreds of acres
- Community groups and Conservation Corps provide student and volunteer support annually



Woody species mechanical clearing



Post woody species clearing



Burning of woody debris



Sheboygan County Christian School Students planting native trees



Sheboygan County Christian School Students installing fencing and tree protectors



Native tree planting