Great Lakes Coastal Habitat

The Great Lakes shoreline spans over 10,000 miles and is home to a variety of unique habitats and species. Great Lakes coastal habitats are critical intersections between land and water that connect 3.5 million species throughout the basin, providing 34,000 million people with access to fresh water and serve as the hubs of industry, culture and recreation. Located in southwest Michigan, Muskegon Lake boasts over 4,000 acres of water and hosts the largest city along the eastern Lake Michigan shoreline.

The History of Muskegon Lake

Along the eastern shoreline of Lake Michigan is one of the most recognizable and dynamic natural communities in the Great Lakes: freshwater sand dunes. Interactions between shifting dunes and a drowned river mouth created Great Lakes: freshwater sand dunes. Interactions between recognizable and dynamic natural communities in the eastern shoreline of Lake Michigan.

Restoring Great Lakes Areas of Concern (AOCs)

AOCs are degraded watersheds, or portions of watersheds, along the Great Lakes impacted by historic and ongoing pollution. Restoration of U.S. AOCs is a high priority for the U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration (NOAA), the Great Lakes states, and local communities. Funding to restore these long-degraded areas is provided by the Great Lakes Restoration Initiative (GLRI), the largest federal investment in the Great Lakes in 20 years.

Muskegon Lake was designated as an AOC in 1985 under the U.S.-Canada Great Lakes Water Quality Agreement due to ecological problems caused by industrial discharges and filling of open water and coastal wetlands.

Restoring Muskegon Lake

In 1992, the local community came together to improve the health of Muskegon Lake and the quality of life for West Michigan residents. Their priorities complemented federal and state priorities and made Muskegon an ideal location for investment.

Dozens of restoration projects at Muskegon Lake were identified based on regional needs using science-based metrics. The Partnership is implementing four remaining projects to address habitat restoration goals for the AOC by:

- Removing 25.9 acres of sediment and mill debris
- Creating and softening 7000 feet of shoreline
- Restoring 65.3 acres of emergent and 44.6 acres of open water wetlands
- Re-establishing fish passage

Because of the extent of degradation at AOCs, restoration projects are costly and complex. The U.S. Congress, U.S. EPA, NOAA and GLC utilized both the 2008 American Recovery and Reinvestment Act (ARRA) and the GLRI to invest in Muskegon Lake, a place where the benefits of restoration were clearly defined and would be manifested in the natural community and local economy.

Project Partners

National Oceanic and Atmospheric Administration
West Michigan Shoreline Regional Development Commission
Grand Valley State University – Anns Water Resources Institute
Michigan Departments of Environmental Quality and Natural Resources
U.S. Environmental Protection Agency

NOAA-GLC Regional Partnerships

Since 1955 the Great Lakes Commission (GLC) has worked on behalf of the Great Lakes states and provinces to protect and enhance the region’s economic prosperity and environmental health. One of the ways the GLC executes this vision is by implementing coastal habitat restoration through NOAA’s Regional Partnership program. Regional Partnerships are a unique funding mechanism that allows for more flexibility than a traditional grant. NOAA and GLC have many shared priorities and use combined resources and project management abilities to improve outcomes for complex AOCs.

Revitalizing Muskegon

A 2011 socio-economic study conducted by Grand Valley State University (GVSU) showed a $66 million return on the $10 million ARRA habitat restoration grant, including:

- $12 million increase in property values
- $600,000 in new tax revenues annually
- $1 million a year in new recreational spending
- 65,000 additional visitors annually
- 55 cents in the local economy for every federal dollar spent
- Job creation in an area with an unemployment rate higher than 12 percent

Since 2011, the NOAA-GLC Partnership has invested $30 million in new funding at Muskegon Lake. During the summer of 2017, GVSU will be executing a follow up study to further refine the socioeconomic impacts of restoration and how this additional investment in Muskegon Lake is impacting life in West Michigan.

For more information on the project, visit: http://glc.org/projects/habitat/noaa-glc-restoration

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