



Thompson Island Nature Preserve

Living Shoreline Wetland Restoration

Project Status: Ongoing

Thompson Island Nature Preserve

Project Summary

Background

The Delaware Center for the Inland Bays' (Center) Living Shoreline Initiative aims to use natural alternatives to stabilize shorelines that improve water quality and provide habitat for fish, horseshoe crabs, terrapins, and other wildlife in the Bays. Living shorelines help to preserve and restore tidal marshes that are rapidly degrading in the Bays due to erosion, climate change, and sea-level rise.

Project Site

The 4,900 linear-foot project is located on the west, south, and eastern shore of the Thompson Island Nature Preserve (TINP) at the intersection of the Lewes-Rehoboth Canal and Rehoboth Bay (see map). The property is part of Delaware Seashore State Park and is a designated Natural Area Preserve. Roughly 68 acres in size, the preserve holds rich cultural history to the Nanticoke Indian Tribe, hosts significant archaeological resources, rare species, and ecologically-unique habitats.



Unfortunately, the TINP is plagued with severe shoreline erosion, sea-level rise threats and high wave energy, especially during coastal storms. Assessments of the island estimate as much as 0.8 feet per year of shoreline has been lost under recent conditions.

Although the site is not open to the public—and boats are not permitted to land on it's sandy beaches—the project will be publicly visible from the water and from Sunset Park in Dewey Beach.

Map (left): Thompson Island living shoreline project (red star); other Center living shoreline projects (blue stars)

Project Lead:

Bob Collins
Manager, Programs & Facilities
jamesfarm@inlandbays.org

Project Partners:

- Delaware Department of Natural Resources and Environmental Control
- DNREC Division of Parks and Recreation
- DNREC Division of Watershed Stewardship
- Delaware State Parks
- Sovereign Consulting Inc.

Funding:

- DNREC Community Water Quality Improvement Grant
- DNREC Nonpoint Source Program
- Delaware State Parks Trust (Private funding)
- Restore America's Estuaries Coastal Watersheds Grant
- Delaware Community Transportation Fund

Timeline:

Phase 1: Design

- Sept. 1, 2024-Fall 2025

Phase 2: Construction

- Beginning Fall 2025



DELAWARE
CENTER FOR THE
INLAND BAYS
preserve • protect • restore

Project Goals

The objective of the TINP living shoreline is to improve water quality of the Rehoboth Bay while protecting an important heritage site through shoreline stabilization and wetland enhancements. The project will achieve this by: dampening wave energy; facilitating natural accretion and/or nourishment of the shoreline; promoting nutrient retention in connected marshes, enhancing horseshoe crab spawning and terrapin-nesting habitat; protecting and enhancing marsh habitat; and protecting from the impacts of trespassing.

Because the project will take many years to complete, it will be constructed in phases. The construction phase will begin Fall 2025.

Outputs & Outcomes

- Stabilize the eroding shoreline of Thompson Island;
- Reduce sediment and nutrient amounts entering Rehoboth Bay;
- Provide resiliency against storms and sea-level rise;
- Enhance wetland and aquatic habitat;
- Serve as a living shoreline demonstration for public education;
- Reduce public access by water for the purposes of protecting its natural and cultural resources.

Long-term benefits

Living shorelines may have a 25-year (or more) lifespan. As one of the only shoreline stabilization options that grows more resilient with time, these efforts strengthen by attracting shellfish, wildlife, and native plants to enhance their structures. The Center will be monitoring the project to ensure the shoreline functions and observe how it changes with time.

Did You Know?

- Indigenous peoples used the island to gather food and other supplies for thousands of years before Europeans arrived.
- Once Europeans colonized the area, the island was used as farmland before being purchased by the State in 1990.
- Archaeological studies have recovered human burials and artifacts from the island.
- Thompson Island was dedicated as a State Nature Preserve in 2000.



Eroding shoreline at the TINP



Ruddy turnstones are among the abundant wildlife at TINP; on the Lewes-Rehoboth canal jetty



One of the TINP marshes



**DELAWARE
CENTER FOR THE
INLAND BAYS**
preserve • protect • restore

The Delaware Center for the Inland Bays is a non-profit organization established in 1994 to promote the wise use and enhancement of the Inland Bays and its watershed. With its many partners, the Center conducts public outreach and education, develops and implements restoration projects, encourages scientific inquiry, and sponsors research. To learn more and get involved, please visit inlandbays.org.