



## LIVING SHORELINE CASE STUDY

Branchbox breakwaters just filled with re-purposed Christmas trees. First tree vane installed (right foreground). © Bill Shadel/TNC

# Slade Dale Christmas Tree Breakwater

*The primary goal of this living shoreline project is to reduce the loss of marsh within the Sanctuary to maintain wildlife habitat and a natural buffer against flooding.*



Slade Dale Sanctuary (left) is a 13-acre preserve located along Beaverdam Creek in Point Pleasant, NJ. It is one of the largest protected open spaces in the town. The Sanctuary is open to the public and features trails with habitats

supporting a variety of birds and other wildlife. In the face of sea-level rise and storms of increasing frequency and intensity, the community became aware that both the Sanctuary and the surrounding residential properties were vulnerable if they didn't take action.

## Project Description

The primary goal of this living shoreline project is to reduce the loss of marsh within the Sanctuary to maintain wildlife habitat and a natural buffer against flooding.

The Slade Dale Living Shoreline was initiated by a member of the Point Pleasant Environmental Commission. He reached out to The American Littoral Society (ALS), a non-profit coastal conservation organization with experience in habitat restoration and living shorelines. ALS staff then visited the Sanctuary and met with the Mayor and other Borough officials who were willing to contribute funds toward project design and implementation. ALS secured a grant to supplement

## Overview

### Living Shoreline Type

Breakwater

### Project Location

Point Pleasant, NJ

### Lead Organization

American Littoral Society (ALS)

### Point of Contact

Capt. Al Modjeski, Habitat Restoration Program Director, [alek@littoralsociety.org](mailto:alek@littoralsociety.org)

### Land Owner

Borough of Point Pleasant

### Project Funders

NOAA Restoration Center, Point Pleasant Rotary Club, Borough of Point Pleasant, The Nature Conservancy, NJ Coastal Wetland Restoration Partnership

### Project Team

American Littoral Society, Borough of Point Pleasant, Princeton Hydro, USFWS Partners Program, Point Pleasant Rotary Club, Good Shepherd Lutheran Church, Atlantic Lifts Dock and Bulkhead, Seapoint Condominium Association, NJDEP, Pinelands Nursery

# Point Pleasant, NJ: Slade Dale Christmas Tree Breakwater Living Shoreline

project costs. To assess the site and design the living shoreline, ALS hired Princeton Hydro, an engineering firm with the right expertise for designing a project with an ecological goal.

The design called for branchbox breakwaters parallel to shore and near-shore tree vanes perpendicular to shore. The material used in these structures could be locally sourced from the community at a very low cost – discarded Christmas trees! Constructing the first Christmas-tree breakwater in the state required coordination and cooperation. The Borough contributed public works staff time and trucks to collect the trees from residents and stage them at a local church. In late 2018, a local contractor installed the branchbox cribbing and, in spring of 2019, volunteers filled the branchboxes with Christmas trees.

## Living Shoreline Features

Two types of structures work together to slow water and trap sediment:

**Branchbox Christmas tree breakwaters (above):** Wooden pilings were driven into the bottom in double rows to create cribbing and re-purposed Christmas trees were placed in between and secured by volunteers. Oriented parallel to shore, the breakwaters will intercept

and dissipate wave energy that would otherwise have hit the marsh edge. In addition, mesh bags filled with recycled shell were tied together and used as weights to better anchor the trees and to also provide more diverse habitat for fish and invertebrates.

**Christmas tree vanes:** Starting at the shoreline, single rows of Christmas trees were placed



Volunteers carefully place and secure Christmas trees to branch boxes. © Princeton Hydro

end-to-end to form a chain—slightly perpendicular to shore – and secured to the bottom. This will help stabilize the eroding shoreline and trap sediment introduced into the water column from the energy dissipation of the living branchbox breakwaters.



## Project Champion

**Dennis Blazak**

Dennis Blazak is a resident of Point Pleasant,

member and Past President of the Point Pleasant Rotary Club, and he also serves on the Environmental Commission. In his own words, he started the Slade Dale Project because he wanted to see positive actions to increase storm resiliency in his hometown. Dennis personally advocated for a grant of \$4,000 from the Rotary Club to fund the permitting phase of the project and was a driving force in the community that ultimately led to the project being implemented. Dennis believes it is imperative for people at the local level to identify and advocate for projects that will make a difference in their community!

## Total Project Cost \$58,000

