



"Before" conditions at Shore Avenue Park, looking toward the manmade lagoon at the end of 12th St. © Owen Little and Associates

# Shore Avenue Park

■ *The project goal is to slow the rate of shoreline loss and ultimately build back shoreline.*



playground, and comfort station. With its shoreline rapidly eroding from boat wakes and high currents, the park is not only suitable for a living shoreline, but the high visitation of the park will allow it to serve as a demonstration site. The Borough prides itself on being proactive and environmentally conscious, so when it was evident to the town engineers and municipal officials that action was needed, they were excited for the opportunity to take an innovative and greener approach to shoreline protection.

## Project Description

The park was severely affected by Superstorm Sandy, which damaged the park's infrastructure and its shoreline. The Borough's Department of Public Works was able to make repairs in time to re-open for the summer season, but a long-term solution to protect the shoreline was needed to stem the loss of property. Municipal engineers began to evaluate the site and gather information to pursue design and construction of a living shoreline on the site. Borough representatives attended a workshop, organized by The Nature Conservancy, where they were able to discuss feasibility of their living

## Overview

### Living Shoreline Type

Marsh Sill

### Project Location

Ship Bottom, NJ

### Project Lead

Borough of Ship Bottom

### Point of Contact

Frank J. Little, Jr., Borough Engineer,  
flittle@owenlittle.com

### Land Owner

Borough of Ship Bottom

### Project Funder

The Nature Conservancy

### Project Team

Borough of Ship Bottom, USFWS  
Partners for Wildlife Program,  
Landscape Architect Bryce Bennett

# Ship Bottom, NJ: Shore Avenue Park Living Shoreline



Example of a marsh sill from a site in the Chesapeake Bay Estuary. © Chesapeake Bay Trust.

shoreline project with state and federal regulators. Encouraged by the positive response, the Borough's engineers submitted a proposal to and were then awarded a grant from The Nature Conservancy's Living Shorelines Grant Program to fund project design and permitting. While the project was still in the design phase, the Borough purchased a subtidal in-holding – an underwater piece of land owned by another party. Not only did this purchase ease the permitting and eventual construction phases of the project, it also demonstrated the Borough's commitment to constructing a living shoreline at Shore Avenue Park. The project goal is to slow the rate of shoreline loss and ultimately build back shoreline. The project's design consists of nearshore rock sills parallel to shore to intercept onshore waves and fast currents. The sills will be backfilled using as much onsite soil as possible and this will be graded into a gentle

slope. A space between the sills will allow the passage of sediment and wildlife. Riprap already present on the shoreline will be re-used to construct the sills, serving the added purpose of clearing the upland for grading and planting. Native species of trees and shrubs will be planted between the upland edge and the parking area, enhancing soil stability, providing food for birds and insects, and beautifying the park.

## Living Shoreline Features

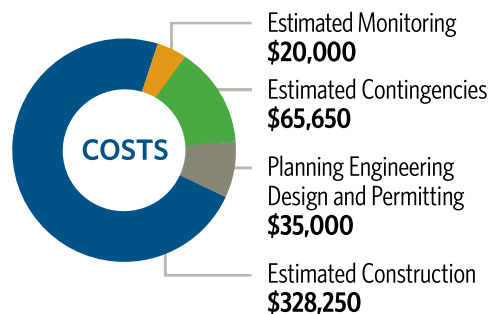
**Marsh Sill:** Constructed from granite riprap to abate energy from wind-driven waves

**Regraded Shoreline:** Restore a natural sloping shoreline planted with low marsh and high marsh plants to stabilize the upland edge

**Plantings:** Low-marsh and high-marsh plants to trap and hold sediment, stabilize the shoreline, and slow water flow.

## Estimated Total Project Cost \$448,900

(as of July 2019)



## Project Status

The Borough is actively seeking funds for permitting and installation of the living shoreline. As of July 2019, the design is complete, and the necessary permits have been identified but permit applications have not yet been prepared or submitted.

## Key Lessons Learned

- When planning or designing a living shoreline, consider engaging a landscape architect on your project team. A landscape architect can bring an understanding of the natural landscape, wildlife habitat needs, and aesthetics, all of which complement the expertise of an engineer.
- Investigate land ownership thoroughly within and nearby your area of interest. The Borough was grateful that the inholding land owner was willing to sell to the Borough, otherwise the project might have been delayed while an agreement was struck.
- Innovative projects like living shorelines require a great deal of advance planning and high-quality information on tides and currents. The Borough was fortunate that local data is provided by a tide station near the project site.