DOI-NFWF
42279 Building Ecological Solutions to Coastal Community Hazards
NJ DEP Office of Coastal and Land Use Planning
Municipal Project Narrative

Spring Lake

Scope: The Spring Lake NFWF funded activities are the design, development of permit documents, permit approvals, bidding, implementation and monitoring of a living shoreline and vegetated embankment created along 900 feet of the Wreck Pond shoreline at Shore Road between its intersection with 6th Avenue and with Central Avenue. Shore Road is lined with single family residential buildings opposite the site.

Goals: The goals of these activities are habitat enhancement/creation, shoreline stabilization, tidal flood mitigation, stormwater management, public outreach and education, and overall additional resiliency for the upland area beyond the site.

Project Partners: NJ Department of Environmental Protection, National Wildlife Federation, Barnegat Bay Partnership, Partnership for the Delaware Estuary, Stevens Institute of Technology, Spring Lake Borough, Leon S. Avakian, and Najarian Associates

Project Funding:
DOI NFWF Grant
Spring Lake Match

Project Design:
The area of the project is approximately 900 linear ft. by varying depths from 100-180 feet on Shore Road between 6th Avenue and Central Avenue. The site is currently mowed turf with a few shrubs and trees and with phragmites along the waters' edge. A band approximately 15' wide of turf will be retained for the length of the area from the curb waterward. The design provides a new vegetated embankment beyond that area of approximately 20-40 feet wide and 900 feet in length. Waterward of this an area will be planted as low and high marsh. Varied plant material will be installed to test their viability in the range of tidal water levels and salinity levels which are still in flux due to new outfall construction and varied tidal and storm conditions. The length of the embankment will be separated by an area to allow access to the shoreline. The top of the embankment will be at Elevation 6 NAVD88.

Value: This is a pilot project that will help form the design and implementation of living shorelines for the remaining shorelines of Wreck Pond which will be funded by a different grant. The project will provide insight into the issues and benefits of using ecological solutions at such conditions.

DEP and USACE Permit Approval Process:
Joint Permit Processing Meeting (1-for preliminary design review and permitting input)
DEP Coastal GP 24 – Habitat creation, restoration, enhancement and living shorelines activities
DEP Tidelands License

CAFRA (for activities above mean high water)
Water Quality Certificate
USACE Nationwide Permit #27 Habitat Restoration,
USACE Nationwide Permit #3 Maintenance
Freehold Soil Conservation District Review

Monitoring: A monitoring plan will provide for documenting existing site conditions, monitoring during implementation, and post implementation monitoring through Jan 2018. Citizen scientist monitoring may be provided by locals.

Project Schedule
The implementation is anticipated to start in Fall 2017

Associated Projects: Spring Lake has received $3.4M in funding to install a new outfall structure and to develop living shorelines appropriate to the remainder of the perimeter of Wreck Pond.

Detailed Project Activities:
The area of the project is approximately 900 linear ft. by varying depths from 100-180 feet on Shore Road between 6th Avenue and Central Avenue. The site is currently mowed turf with a few shrubs and trees and with phragmites along the waters' edge. A band approximately 15' wide of turf will be retained for the length of the area from the curb waterward. The design provides a new vegetated embankment beyond that area of approximately 20-40 feet wide and 900 feet in length. The length of the embankment will be separated by an area to allow access to the shoreline. The top of the embankment will be at Elevation 6 NAVD88. The embankment will be planted with a riparian meadow seed mix and will not be mowed. Waterward of the embankment will be an area of high marsh approximately 20-40 feet wide by 900 feet in length. This will be planted with Spartina patens (quantity: 3100 @ 2 inch plugs) at 18" spacing for two rows below Elevation 1 to 1.5. It will be interspersed with Spartina alternaflora for two rows. The planting of the high marsh will also include Distichlis spicata (quantity: 750 @ 2 inch plugs) on 18'spacing; Juncus gerardii (quantity: 1500 @ 2 inch plugs) at 18" spacing; Spartina alternaflora (quantity: 600 @ 2 inch plugs) at 18" spacing and Spartina cynosuorides (quantity: 600 @ 2 inch plugs) at 18" spacing. There will be three small areas of steep saltmarsh between the embankment and the high marsh. The plantings for these areas will be Shoenoplectus robustus (quantity: 440 @ 2 inch plugs) at 18" spacing and a portion of the Spartina cynosuorides mentioned above. Below and waterward of the high marsh will be a low marsh area approximately 60 feet wide by 900 feet in length. The planting of the low marsh will include Spartina alternaflora (quantity: 18,000 @ 2 inch plugs) at 18" spacing from Elevation .5 to 1.0. The varied plant material will be installed to test their viability in the range of tidal water levels and salinity levels which are still in flux due to new outfall construction and varied tidal and storm conditions. The separate grant for the remainder of the shoreline will fund replacement of any planting that is not successful in the varying tidal levels and salinity. The living shoreline will enhance habitat value, provide pollinator habitat, protect nearby homes from flooding from the pond and provide increased storm water management from the inland side.