



New Jersey Corporate Wetlands Restoration Partnership Project Executive Summary Sheet

Project Name: Diamondback Terrapin Nesting Habitat Enhancement Project

Project Purpose: To create a sandy nesting habitat for diamondback terrapins and develop and test a prototype barrier solution to protect turtles from roadways.

Brief Description: Populations of diamondback terrapins have declined significantly over the last century due to hunting pressures, habitat loss and degradation, road mortality, drowning in commercial style crab traps, and increased predation pressure from enhanced nuisance wildlife populations. The Wetlands Institute (TWI) has been working for the past two decades to reduce terrapin mortality. A cornerstone of those efforts includes the design and installation of pvc barrier tubing to prevent female terrapins from accessing roadways while searching for suitable nesting habitat. These barriers have proven effective in areas where a continuous barrier can be erected. However, there are many areas where pvc tube barriers cannot be installed due to land use, pedestrian traffic, mowing needs, right of way clearances, and aesthetic concerns of some communities. In addition, where high concentrations of terrapins nest, there tends to be a high concentration of predators, especially skunks that decimate nests and consume eggs with remarkable efficiency.

TWI, working with the Borough of Avalon, has identified the Bay Park Marina as an area of enhanced nesting of terrapins and a high impact area for terrapins crossing roadways in search of nesting areas. The Borough of Avalon developed the diamondback terrapin nesting habitat enhancement project to create sandy nesting habitat areas and develop a prototype barrier solution. The prototype barrier will be a low concrete curb with a suitable geometry to keep terrapins from crossing. Sandy nesting habitat areas will be created behind the barrier and habitats will be protected from predators. The project will also create a no-mow pollinator meadow habitat to shield the barriers, provide valuable habitat, and filter runoff prior to reaching the bay. The Borough received a Sustainable Jersey grant for the design and implementation of the prototype barrier, nesting habitat, erection of temporary fencing, creation of the pollinator habitat, and educational and interpretative signage in May, 2018. Funds are needed to test prototype designs, monitor the effectiveness of the barrier and nesting habitat, and protect terrapin nests in the Bay Park Marina project area from predation. Monitoring will be accomplished through digital infrared wildlife cameras and direct observation. Nests protections will be protected from predation through the installation of predator exclosures and potentially through nest relocation into protected nesting boxes. Funding will be used to purchase wildlife cameras, nest protection materials, and staff support for barrier design, monitoring, analysis and reporting.

Resource Values/Project Outputs: Improved nesting habitat for diamondback terrapins, enhanced habitat for butterflies and other pollinators, creation and testing of a prototype barrier to protect terrapins from roadways, enhanced education and outreach events and materials.

Cost/Budget: \$52,663 (\$19,963 Sustainable Jersey), Taylor Design Group (\$6,000), Borough of Avalon (\$10,100), The Wetlands Institute (\$5,350), NJCWRP (\$11,250).

Schedule: Planning and barrier fence installation has already been completed, initial public stakeholder meetings have been completed. Design of permanent concrete prototype barrier and sandy nesting habitat will be over the winter 2018 with installation in spring 2019; interpretive signing will be designed and installed in spring 2019, terrapin outreach programs and releases will occur in summer, 2019.

Observations and nest protections will occur throughout the 2019 terrapin nesting season (summer 2019) with evaluation of concrete prototype barrier effectiveness and report of findings in winter 2019.

Permit Status: Monitoring activities will be conducted under TWI Scientific Collecting Permit application submitted for 2019; current SCP for similar activities in hand.

List of Partners: Borough of Avalon, Taylor Design Group, The Wetlands Institute; Sustainable Jersey

What is requested from the CWRP/Contribution: \$11,250

Point of Contact: Dr. Lenore Tedesco, The Wetlands Institute ltedesco@wetlandsinstitute.org

Borough of Avalon Bay Park Marina

