



Virginia Association of Counties

# ACHIEVEMENT AWARDS



## APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 2, 2017.** Please include this application form with electronic entry.

### PROGRAM INFORMATION

**County:** Prince William County

**Program Title:** Leesylvania State Park Living Shoreline Project

**Program Category:** Environmental

### CONTACT INFORMATION

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### SIGNATURE OF COUNTY ADMINISTRATOR OR CHIEF ADMINISTRATIVE OFFICER

**Name:** Christopher Martino

**Title:** County Executive

**Signature:** \_\_\_\_\_

Prince William County, Department of Public Works,  
Environmental Services

2017 Virginia Association of Counties Achievement Award  
Candidate:

## LEESYLVANIA STATE PARK

LIVING SHORELINES PROJECT



## *The Problem*

Active erosion from the waves of the Potomac River created from the prevailing northeast winds coupled with the active boat wakes and stormwater runoff from adjacent upland areas has destabilized approximately 800 linear feet of shoreline of the Potomac River. The shore erosion along this reach has undercut and exposed the root zone of large trees causing them to become unstable and fall into the Potomac River.



## **The Proposed Solution**

A living shoreline is a relatively new approach for addressing shoreline erosion and foster the creation and protection of marsh areas. The hybrid project at the park uses a combination of a series of off shore Stone Sill structures to act as a breakwater and the creation of vegetative marsh wetlands behind each structure.

The construction of the Living Shoreline will slow down and break up the erosive waves coming ashore from the Potomac River. The stone sills are placed just offshore in the project area, behind the sill structures in the sand was used to re-nourish the eroded shore. Then marsh vegetation is planted behind the rock sills in the nourished beach. The created wetlands will filter water coming in from the river and stormwater runoff flowing out of the Park into the River. This project will not only protect the shoreline it will provide a benefit to aquatic and terrestrial species by habitat creation.





## **The Challenge**

How could this proposed project be possible? A partnership had to be established.

## **The Partnership**

An effort to protect 800 feet of Potomac River Shoreline at Leesylvania State Park in Woodbridge is underway. It is the first Living Shoreline Project in Northern Virginia. A partnership between County, Regional and State officials was formed to facilitate the design and construction of the living shoreline.

### **Partners include:**

- Northern Virginia Regional Commission- Project Coordination and Management
- Prince William County Department of Public Works Environmental Services -Provided Permitting and Technical Assistance
- Virginia Department of Conservation and Recreation- State Park Manager
- Virginia Institute of Marine Science –Project Design and construction oversight
- Virginia Association of Parks-Fund management
- Dominion Power, National Fish and Wildlife Foundation, CSX Railroad provided grant funding
- Prince William County : Tidal Wetland Mitigation fund support
- Prince William Conservation Alliance: Project Promotion

The price tag for this project is around \$470,000 and most of the funding has come from grants and the Mitigation Fund. No Federal, State or County dollars used to build the Living Shoreline.



This is the preferred method of handling shoreline erosion issues, whether on public or private land.

One of the goals of this project is to demonstrate alternative method of shoreline stabilization as opposed to traditional structures, such as bulkheads or seawalls that can actually worsen the erosion to adjacent unprotected properties.

### **Anticipated Benefits of the Leesylvania Living Shoreline Project**

- 800 linear feet of stabilized shoreline
- 22,000 square feet of enhanced riparian buffer habitat
- 25,000 square feet of restored intertidal marsh and beach habitat



Living Shoreline under construction



Planting the wetland marsh behind each sill



Virginia Governor Terry McAuliffe and VIMS project designer Scott Hardaway review the design plans.

Virginia Governor Terry McAuliffe endorsed the project during his tour of the Park in July of 2016. The Governor named the Living Shoreline Project at the Park an official Virginia Treasure, an important ecological and cultural asset to the state. The project will help protect the Potomac River and the Chesapeake Bay from excessive shore erosion.

Scott Hardaway of Virginia Institute of Marine Sciences said that the project would grow into something that will not only protect the shoreline, but will serve as an educational tool as well. He further stated, "This project, in my mind, will provide long-term shore protection for the park. It will be an evolving living shoreline classroom as the wetlands mature through time, as fish and other aquatic species use the valuable habitat that we have created."

# Short Overview :Leesylvania State Park Living Shoreline Project

## Project Partners

- Leesylvania State Park
- Dominion Power
- National Fish and Wildlife Foundation
- Prince William County
- Northern Virginia Regional Commission
- Chesapeake Bay Trust
- CSX Railroad
- Virginia Association of Parks



**The Problem:** Erosion from strong waves and upland runoff has destabilized approximately 800 linear feet of shoreline of the Potomac River at Leesylvania Park. The base of the large trees along this reach have eroded exposing roots, causing them to lean and fall into the Potomac River. The shore erosion has contributed large amounts of fine sediment to the river and ultimately the Chesapeake Bay.

**The solution:** A Living Shoreline technique was selected by the Project Partners over a typical rock revetment structure to stabilize the shoreline. The design uses a combination of

beach nourishment planted with native marsh vegetation for sediment stabilization and a series of offshore rock sills as breakwater structures.

## **VACO Project Press release**

### **Living Shoreline at Leesylvania State Park**

There is 800 feet along the Potomac River at Leesylvania State Park where erosion threatens a portion of the river's shoreline. The erosion has caused many trees to fall into the river; and several large trees were removed recently due to safety concerns. The solution to the problem was a living shoreline approach implemented by the park and its partners.

A living shoreline uses a combination of beach nourishment planted with native marsh plants and a series of offshore rock structures (sills) to serve as a breakwater. The elements of the technique will control erosion and provide habitat for fish and wildlife along the stretch of beach along the river.

The Prince William County Department of Public Works is helping to manage the project, in cooperation with the Virginia Department of Conservation and Resources, Leesylvania State Park, Virginia State Parks, George Mason University, the Virginia Institute of Marine Sciences, the Maryland Department of the Environment, the National Oceanic and Atmospheric Administration, the Chesapeake Bay Trust and several other organizations. This is the first living shoreline constructed in Northern Virginia.

Virginia Governor Terry McAuliffe visited the park to look at the progress of the project. "We have got to protect our water," McAuliffe said during his visit to the park. "We have got to protect our natural resources; and I just wanted to be here to thank everyone who has been involved in making this thing successful." Project designer Scott Hardaway, of the Virginia Institute of Marine Sciences, said the project will grow into something that will not only protect the shoreline, but will serve as an educational tool, as well. "This project, in my mind, will provide long-term shore protection for the park. It will be an evolving living shoreline classroom as the wetlands mature through time, as fish and other aquatic species use the valuable habitat that we have created."