



# MDOT SHA MET Roundtable Addressing Permanence and Viability III

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State Highway Administration  
Environmental Programs Division &  
Water Programs Division  
Office of Environmental Design

Tydings Memorial Bridge over the Susquehanna River

# What do you think of when you hear State Highway Administration?

Most likely building and maintaining roads and bridges - and you're right - but there are environmental consequences in trying to balance providing transportation needs and protecting the environment.

Efforts need to be made to avoid and minimize impacts to wetlands, streams, forest and wildlife habitat.

# That's where we come in

We are the Office of Environmental Design (OED)

Comprised of several divisions including biologists, ecologists and landscape architects working to comply with environmental regulations concerning wetlands, streams, and water quality.



Holly Neck Site, Back River, MD



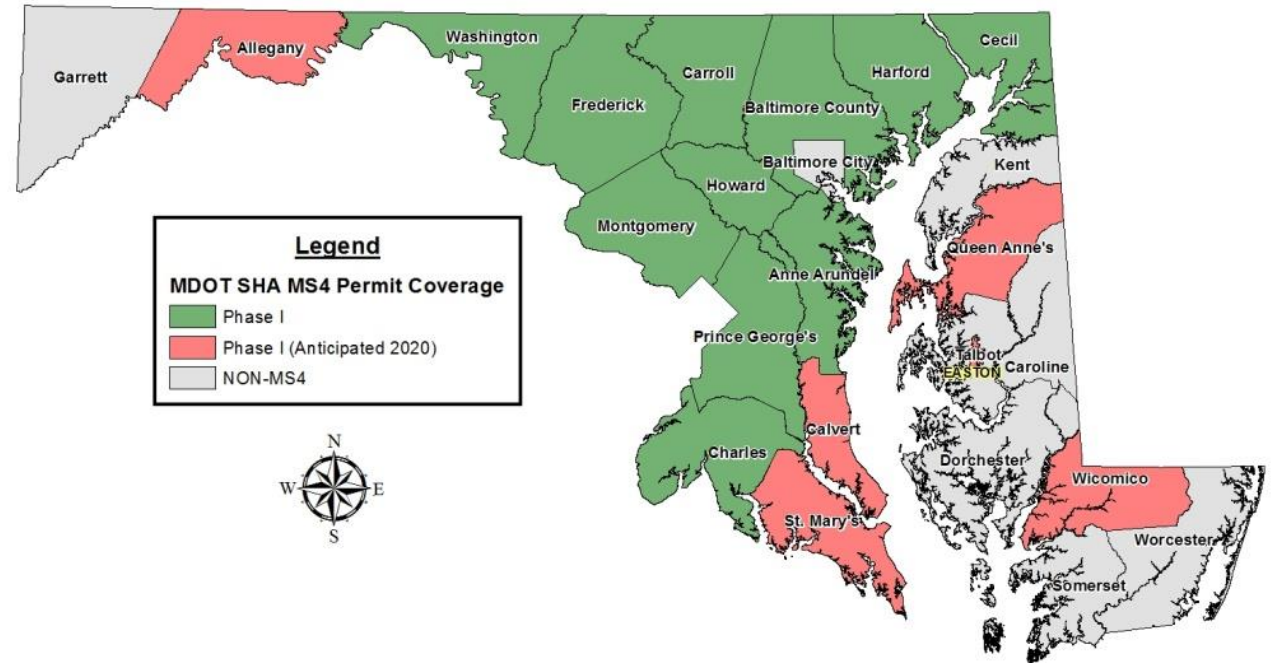
Holland's Branch, Darlington, MD

# Waterways and Wetland Permits/Mitigation

- Manage over 200 sites comprising over 1,700 acres statewide
- Negotiate and obtain permits from state and federal resource
- Perform wetland and stream mitigation to offset impacts and to satisfy permit requirements
- Responsible for compliance requirements related to required permits as a result of the EPA's Clean Water Act and meeting state water quality standards

# Meeting State Water Quality Standards

- 20% Impervious Restoration for MDOT SHA's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Compliance
- Pollutant Load Reductions for Total Maximum Daily Load (TMDL) Compliance
- MS4 permit applies to urbanized counties in Maryland
- MDOT SHA implements a variety of best management practices to achieve these goals



# What SHA needs

We are in the need of land opportunities

- to create, restore, enhance and preserve wetlands;
- to perform stream restoration;
- to plant riparian or stream corridors; and
- to conduct reforestation

Although MDOT SHA owns a significant amount of land, it is primarily linear in nature and confined to the right of way (ROW) of existing roads, providing limited opportunity to meet requirements for mitigation and restoration. Therefore we are seeking additional opportunity beyond the ROW to meet our goals.

# What might this include ?

- ▶ Marginal, unproductive lands or areas difficult to utilize
  - ▶ Low lying land that has been drained by ditches or drainage tiles, or does not drain well, for wetland creation/restoration
  - ▶ Existing wetlands that are choked with invasive vegetation can often be enhanced to improve water quality and wildlife habitat
  - ▶ Existing wetlands of good ecological value can provide opportunities for preservation
  - ▶ Steep slopes or hillsides that can be difficult to mow or cultivate can be reforested
- ▶ Streams suffering from eroded banks or void of streamside trees often provide excellent opportunity for stream restoration or riparian corridor reforestation which can improve water quality and habitat for aquatic organisms and fish. Streams that have been historically culverted or do not exclude cattle.



Cattle pasture



Residential yard

# How is your land affected?

- ▶ Removing marginal lands from production or reducing activity on lands
- ▶ Perpetual protection and access
  - Land needed to access the mitigation site for construction, post construction monitoring period, and long term maintenance
  - Land that undergoes grading and planting will be perpetually restricted from grazing, timber harvest, drainage alterations, building structures, and any kind of development. This is required by the environmental regulations.
  - Perpetual vehicular access will be required and cannot be obstructed by structures or other permanent obstructions.
  - All rights provided to MDOT SHA through the negotiations and compensation package will be perpetual and transferrable to future owners.

FACTOR	SHA Partnership
Cost	No cost
Time	Perpetual
Property Rights	Limited



# How can we work with you?

- ▶ Providing watering troughs
- ▶ Installing or providing compensation for fencing
- ▶ Cattle crossings and stream fords
- ▶ Erecting signage that can publicize your efforts
- ▶ Flexibility in negotiating priorities
- ▶ Implement approved BMPs where our needs match project opportunities on private lands



# Acquisition Options

- This is not a cost-share program
- MDOT SHA can work with you through four general ways

Acquisition Type	Description
Perpetual Easement	Acquire perpetual easement to construct, monitor & maintain in perpetuity
Fee simple	Buy land outright, taking complete ownership
Land Owner Donation	Tax reduction benefits
Partnership	Work through MET easement program and place Restrictive Covenants

- Participation in program does not infer public access and use, such as parkland
- Existing easements and program enrollment (CREP, MALPF) can be investigated by MDOT SHA to determine potential for conflicts

# MET - MDOT SHA Partnership for Chesapeake Bay Restoration

- ▶ MDOT SHA and MET have an existing agreement in which MET finds willing easement holders to participate in a tree planting or stream restoration projects
- ▶ MDOT SHA funds the entire design and construction of the restoration
- ▶ MET facilitates a Declaration of Restrictive Covenants with the landowner which includes the following:
  - ▶ MDOT SHA works within the existing easement parameters
  - ▶ MDOT SHA will require perpetual access to the project to inspect and maintain
  - ▶ A Third Party Agreement may be necessary if a Land Trust is also involved
  - ▶ Temporary construction right-of-entry may be necessary

# Gramies Run Stream Restoration

- ▶ MET and Cecil County Land Trust Easement
  - ▶ Old cattle field with eroded stream
  - ▶ Integrated stream and riparian wetland floodplain restoration
    - ▶ Lower existing stream banks and adjacent floodplain
    - ▶ Invasive plant removal
    - ▶ Stabilize stream banks
    - ▶ Plant riparian vegetation
- ▶ Construction to begin soon and complete by March 2020



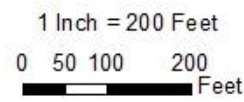


**Legend**

- Project Area
- Stream Line
- Parcel Boundaries
- Cecil Land Trust & MET Easement
- Forest Conservation Act Easements



**Gramies Run  
Elkton, MD**



**MARYLAND DEPARTMENT  
OF TRANSPORTATION**

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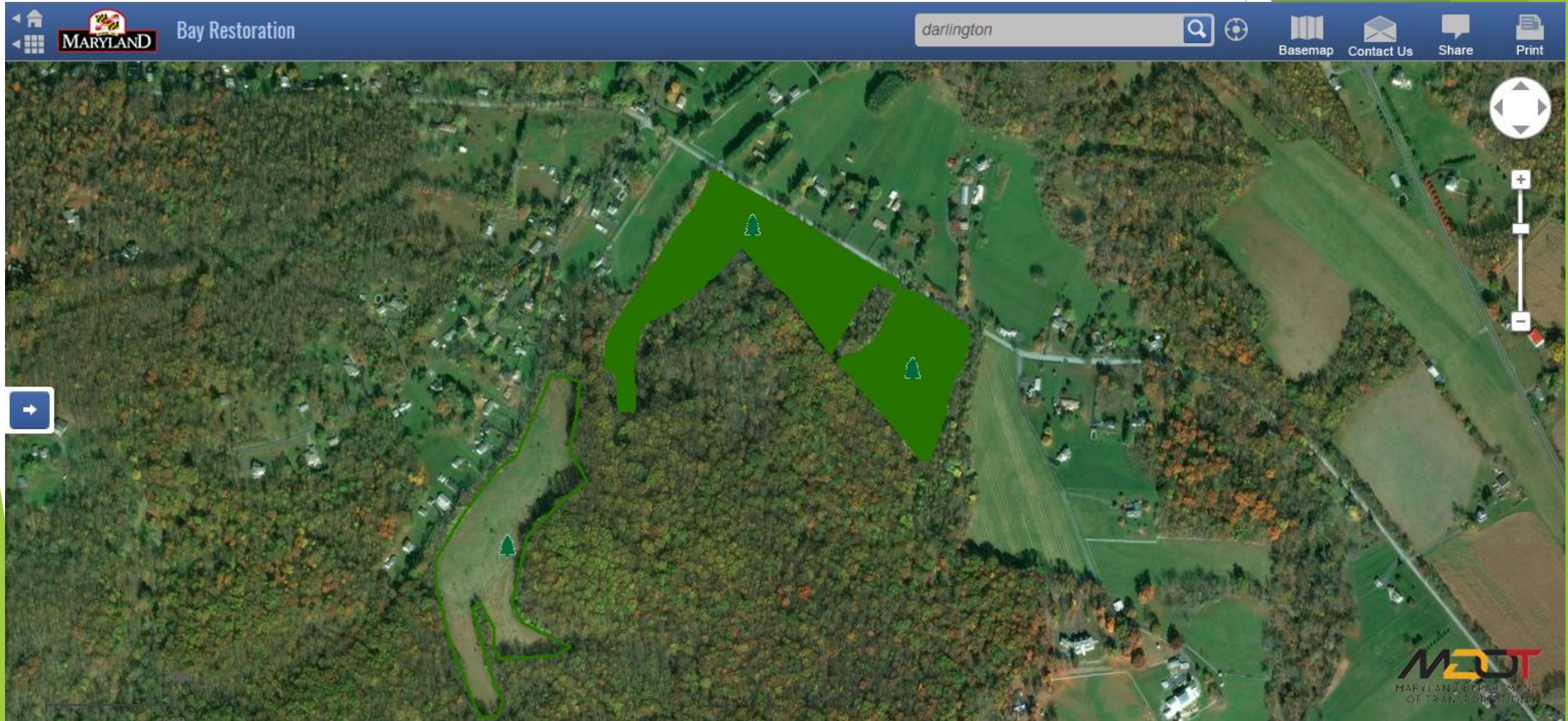
**STATE HIGHWAY  
ADMINISTRATION**

# Tree Planting

- ▶ Criteria- Minimum of 3 acres of upland open space
- ▶ MDE Planting Requirements
  - ▶ 100 trees/acre, over 50% with a diameter at breast height of 2 inches
  - ▶ Sites initially planted at a higher density (~150 trees/acre)
- ▶ MDOT SHA will draft a Declaration of Restrictive Covenants which MET will facilitate signature and file with county records department
- ▶ Documents to be signed prior to advertisement
- ▶ OED will advertise Establishment Contracts to maintain plantings
  - ▶ Limited mowing
  - ▶ Weed control
  - ▶ Replanting as necessary



# Tree Planting at Palmer State Park



# Magness Farm Wetland Mitigation

- ▶ Family-owned dairy farm in Harford County
  - ▶ Farmer had concerns about eroding stream and had desire to restore wetland habitat. Contacted CBF and NRCS seeking assistance.
  - ▶ Restored formerly drained wetlands and eroded stream channel
    - ▶ Removed drain tiles
    - ▶ Graded highly eroded drainage ditch
    - ▶ Installed fencing and two cattle crossings
    - ▶ Planted over 3000 trees and shrubs
- ▶ Project footprint of 7 acres allowed for productive adjacent areas to continue to function as grazed pasture while addressing the concern/desire of the farmer





# Magness Farm



# Nixon Farm Wetland Mitigation

- ▶ Family-owned farm in Howard County.
- ▶ Needed mitigation for MD 32 Corridor Project
- ▶ Former farmed floodplain and drained wetlands.
  - ▶ Converted former pond to shallow water wetland.
  - ▶ Relocated stream for improved floodplain connectivity, incorporated stream structures for better habitat and stability, and reduced channel slope for less erodible velocities.
  - ▶ Created wetlands for habitat and water quality improvements.
  - ▶ Enhanced existing wetlands through tree and shrub plantings.



# Nixon Farm



# MDOT SHA Bay Restoration Website:

<http://www.marylandroads.com/bayrestoration>

Maryland.gov Phone Directory State Agencies Online Services En Español

DEPARTMENT OF TRANSPORTATION  
State Highway Administration

Enter search term

HOME BUSINESS PROJECTS COMMUTER SAFETY ENVIRONMENT INFO CENTER

**Environment & Community**

- > Documents and Reports
- > SHA Bay Restoration
- > SHA Bay Restoration Strategies

Home > Environment & Community > Protecting & Enhancing the Natural Environment > Chesapeake Bay and Local Waterway Restoration

## Chesapeake Bay and Local Waterway Restoration

The Chesapeake Bay is a great resource to the State of Maryland and a national treasure constituting the largest estuary in the United States and one of the largest and most biologically productive estuaries in the world. Water pollution has become a serious threat to the ecologic health of the Bay.

In order to restore the health of the Bay, the United States EPA has set pollution reduction goals for the jurisdictions within the 64,000 square mile Chesapeake Bay Watershed. In Maryland, State agencies, federal and local governments, non-profits and citizens are joining together to do their part to restore the bay. SHA is embarking on the most comprehensive environmental enhancement initiative in its history.

Utilizing a series of proven strategies and controls to reduce nutrients and sediments reaching our local waters and ultimately the Bay, SHA is implementing projects in eleven urban counties. Using our interactive map, you can find projects in your area that are being implemented by SHA. While SHA is required to undertake these environmental efforts, we are genuinely pleased to be a part of the Chesapeake Bay restoration. By making the investment now, we can restore this key Maryland resource and assure the health of the Bay in the future.

**SHA RESTORATION PROJECTS NEAR YOU**  
Find out what projects SHA is planning in eleven urban counties. Enter an address into our interactive mapping tool to explore projects in your neighborhood.

**BAY RESTORATION STRATEGIES**  
See the types of water quality improvement strategies SHA is using to reduce pollutants in stormwater runoff and improve water quality in local waterways and the Bay. These strategies include changing land uses, reducing pollutant loads on roadways and implementing structural controls and non-structural techniques.

# MDOT SHA Bay Restoration Viewer

**MARYLAND** SHA Bay Restoration Viewer

Enter an address to view nearby projects: 20184 National Pike, Hagersto

Basemap Layers Contact Us Print

Overview Legend Glossary of Terms »

Under Maryland's Chesapeake Bay Watershed Implementation Plan (WIP), MDE has committed to meeting pollution reduction goals to restore the Chesapeake Bay and meet EPA targets by 2025. State agencies, federal and local governments, non-profits and citizens are joining together to do their part. SHA uses a series of proven strategies and controls to reduce nutrients and sediments that reach local waters and ultimately the Bay, and is implementing these projects throughout the eleven most urbanized counties in Maryland. Please visit the [Chesapeake Bay and Local Waterway Restoration](#) page for more information on SHA's efforts.

Tree Planting (2) ▼

Stream Restoration (0) ▼

Stormwater Control Structure (3) ▼

Outfall Stabilization (0) ▼

Pavement Removal (0) ▼

Data Last Updated: 12/22/2014

Disclaimer: This application is intended to serve as a public resource for general reference. The data is preliminary and subject to change. SHA provides this information without any warranty of any kind either expressed or implied.

Tree Planting

Treatment Type:	TR
SHA ID Number:	210013UT
Location:	US 40
Watershed:	POTTF_MD
Acres:	2.37
Planted:	

SHA State Highway Administration

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

# Questions?



# Contact Information

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