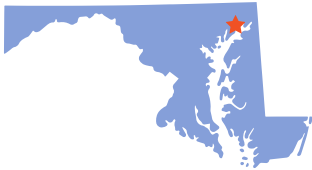


HISTORIC MARYLAND SHORE: A PLACE WHERE PEOPLE AND WILDLIFE THRIVE

In 2024, National Wildlife Federation, the Town of Havre de Grace, Maryland, and other partners launched phase three of the Water Street shoreline restoration project. Phase three creates a unique, dynamic living shoreline with vegetated headland points, dunes, and tidal marsh, incorporating nature-based stormwater features with freshwater wetlands, and vacant lot greening.

Havre de Grace, MD



Havre de Grace is located in northeast Maryland at the mouth of the Susquehanna River on the Chesapeake Bay, approximately midway between Wilmington, DE, and Baltimore, MD. The area is also home to the Susquehanna Flats, the largest bed of underwater grasses in the Chesapeake Bay.

PUTTING NATURE TO WORK FOR COASTAL RESILIENCE

A number of significant threats currently impact Havre de Grace's coastal infrastructure and natural resources. Projections for Havre de Grace suggest a 12% multi-year risk of at least one flood exceeding 6 feet from 2016-2030, a 33% risk by from 2016-2050.



The existing bulkhead is only one major storm away from critical failure, a particular concern for the City's drinking water intakes only a few hundred feet downstream. This post-industrial waterfront along the City's shoreline also includes vacant lots and contaminated soils. The site receives runoff from **over 121 impervious acres**, resulting in heavy water flow over the streets during storms that convey polluted water into the Susquehanna River, impacting water quality and wildlife.

To address these concerns, the City is installing a living shoreline. This creative approach to restoring the Havre de Grace waterfront is a nature-based solution in a high-energy, deep water, environment, with current depths up to 17 feet and demonstrates what could be implemented at similar sites throughout the region.

HAVRE DE GRACE PROJECT BY THE NUMBERS



3,395 sq./ft of
pavement removed



10,135 sq./ft. of dune
habitat created



356 ft. of
shoreline created



9,824 sq./ft. of new
freshwater tidal marsh

For more information:
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HOW IT WORKS

This project includes three elements to reduce flooding, improve water quality, and introduce green spaces, ultimately enhancing the overall health of the Susquehanna Flats.

1 The project creates a habitat migration corridor for tidal marsh and submerged aquatic vegetation using gentle slopes along the headland structures and beach to combat projected sea level rise.

2 Five stormwater outfall pipes have been removed and daylighted. The stormwater is now directed through an innovative step pool system consisting of created wetlands and weirs that slow and filter the water which then filter through the living shoreline.

3 Pavement will be removed from abandoned parking lots which will be vegetated with native plants to create habitat, capture stormwater, and provide green open space.



COMMUNITY ENGAGEMENT

Organizations engaged in the project include the Maritime Museum, Lock House Museum, Friends of Concord Point Lighthouse, Lower Susquehanna Heritage Greenway, Downtown Business Alliance, Green Team, CAT Club, Historical Society, and The City Alliance as well as engagement at City Council meetings and community engagement events. The Havre de Grace High School Environmental Science Program also has plans to study the plants and amphibians on site.

SAVING WHAT WE SHARE

The National Wildlife Federation's Coastal Resilience Growth Fund fights the impacts of climate change along our coasts for wildlife and people.

**50% OF ANIMAL + 28% OF
ENDANGERED PLANT
SPECIES DEPEND ON
WETLANDS FOR SURVIVAL**

**ONE ACRE OF WETLANDS
CAN STORE 1 MILLION TO 1.5
MILLION GALLONS OF
FLOODWATER AND ARE SOME
OF THE MOST EFFECTIVE
CARBON SINKS ON EARTH.**

**COASTAL WATERS AND
WETLANDS PROVIDE
BREEDING HABITAT
FOR 85% OF U.S.
MIGRATORY BIRDS.**