



# The Oyster Restoration Program

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The Maryland Port Administration has partnered with the Department of Natural Resources for more than a decade to assist in restoring the depleted stock of native oysters in Maryland's Chesapeake Bay.

The partnership has provided and funded a wide range of programs that have advanced the oyster restoration goals in the 2000 Chesapeake Bay Agreement. These include:

- Replenishing oyster habitat
- Supporting oyster hatchery operations at the Horn Point Laboratory
- Collecting and planting seed oysters
- Mapping oyster bars
- Evaluating the environmental impact of restoration alternatives for both native and non-native oysters

## Restoring Oysters, Restoring the Bay

Oysters contribute to the health of the Chesapeake Bay by removing excess algae from the water as they filter water for food. Scientists estimate that there were enough oysters in the Bay one hundred years ago to filter the entire volume of water once every three days. Today's stock of oysters is so depleted that the same amount of filtering takes over a year.

Two principal culprits are behind the tremendous loss of oysters: over-harvesting and disease. Habitat loss and declining water quality add to the problem. Maryland has taken aggressive steps, especially in recent years, to slow and help reverse this trend.

Restoring a robust oyster population could help to reduce excess algae levels, which have a devastating effect on the Bay. Algae reduce sunlight for underwater grasses and severely reduce dissolved oxygen.



*The Maryland Port Administration works with the Maryland Department of Natural Resources to restore the struggling oyster population in the Chesapeake Bay. (Photo courtesy of Maryland DNR)*

Nutrients from sources such as sewage treatment plants, farm fields, lawns, and automobiles fuel the growth of algae. Nutrients also come from ships engaged with transportation and commerce on the Bay. To help offset the impact of these pollutants, the Maryland Port Administration worked with the Department of Natural Resources to create the Oyster Restoration Program.

## The Oyster Restoration Program

The Maryland Port Administration has supported the Oyster Restoration Program, which is managed by the Department of Natural Resources, since it began in 1996 and 1997. The funds provided by the Maryland Port Administration initially supported two main activities: a habitat program and a seed oyster program.

New oysters grow on hard underwater surfaces, called substrate, including the shells of previous oysters. The habitat program encourages the growth of oysters on disease-free substrate by annually dredging and

moving oyster shell from one part of the Bay to another. Shells were moved and replanted for nine years using funds from the Port Administration. As many as 240 acres of habitat were replenished each year.

Oysters that grew on the new oyster bars came primarily from natural reproduction. They also came from a hatchery at the University of Maryland's Horn Point Laboratory, where young, disease-free oysters are grown in tanks and transplanted to restoration areas. These seed oysters, both natural and hatchery-raised, have given the depleted oyster population a boost.

Maryland watermen have been employed to move the oyster shell and to plant the seed oysters, providing an income for fishermen whose livelihoods had been destroyed by the decline in the natural stock of oysters.

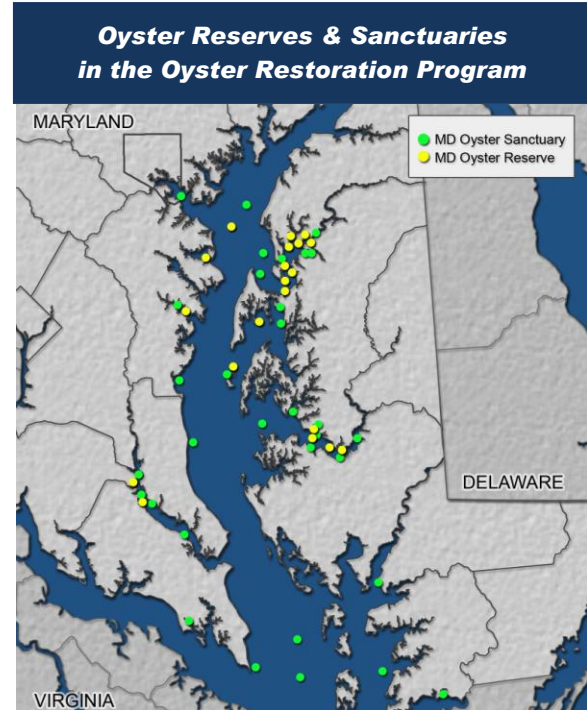
### Evaluating Non-Native Oysters

Efforts to restore the Chesapeake's oyster population resulted in a strongly debated proposal to introduce the non-native Asian oyster to the Bay. The Asian oyster is more resistant to disease.

In 2002, the Maryland Port Administration began contributing funds for a comprehensive



*The Oyster Restoration Program uses the shells of old oysters to create habitat and growing surfaces for new healthy oysters at targeted locations in the Bay. (Photo courtesy of Maryland DNR)*



study of oyster restoration techniques for the Chesapeake Bay, including a detailed look at the potential impact of introducing Asian oysters to the Bay. Produced by Maryland, Virginia, and the U.S. Army Corps of Engineers, the EIS was published in 2008 and contained findings that led to the regional rejection of the Asian oyster proposal.

The EIS was the most aggressive evaluation of oyster restoration alternatives ever performed in the Chesapeake region for the potential introduction of non-native species in any location worldwide. Funds from the Maryland Port Administration supported a major portion of the EIS research, while providing continued support for the seed oyster program and its associated hatchery.

These projects are important steps in the complex effort to restore a valuable part of the Chesapeake Bay ecosystem and revitalize the oyster industry in Maryland. ■