

Oysters

Background

Oysters are one of the Chesapeake Bay's most valuable fisheries. Beyond their economic value, this filter-feeder helps keep our waters clean, while providing food and habitat to other Bay species. Oysters contribute to the history and culture of the Chesapeake region, inspiring the unique design of the skipjack and leading to countless bull and oyster roasts. Since the late 19th century, the oyster industry—including the catch, sale, shucking, packing and shipping—has contributed millions of dollars to the region's economy. However, due to disease, overharvesting and habitat loss, the oyster industry has significantly declined over the past two centuries.

Importance

Oysters play a vital role in the Chesapeake Bay's ecosystem. They feed by pumping water through their gills, trapping particles of food, along with nutrients, sediment and chemical contaminants. One oyster can filter more than 50 gallons of water in a single day. As they grow, they form layers that spread outwards and upwards, becoming reefs that provide habitat to hundreds of critters, from small fish to invertebrates. Oyster reefs also protect shorelines from wave erosion.

Oyster Decline

When European settlers first set eyes on the Chesapeake Bay, they reported finding enormous oyster reefs that were hazardous to their ships, along with the ability to use tongs to pluck oysters right out of the water. But their overharvesting and dredging practices destroyed healthy reefs and decimated the population.



Oystering in Upper Tangier Sound. Photo by Steve Droter/Chesapeake Bay Program.

Two types of diseases have notably impacted the Bay's oysters. The first, Dermo, is a parasite that attacks oysters during their second year of life, causing slow growth rates and death. It was discovered in 1949. The second, MSX, was found about a decade later and can impact oysters at any age, causing them to die off. Both diseases are caused by high water temperatures and salinity levels.

Additionally, changes in land use, as urban, suburban and agricultural areas have replaced forested lands, has increased the amount of polluted runoff entering our rivers, streams and ultimately, the Bay. Excess nutrients fuel the growth of algae blooms that create low-oxygen dead zones, hindering the development of oyster larvae, and sediment can suffocate oysters and other shellfish. Stress related to poor water quality can often times make oysters more susceptible to disease.

Oyster Restoration

In 2010, the Chesapeake Bay Program embarked on a tributary-based strategy that will build, seed and monitor reefs in several Maryland and Virginia waterways. In the *Chesapeake Bay Watershed Agreement*, this commitment was renewed through the following outcome: “Continually increase finfish and shellfish habitat and water quality benefits from restored oyster populations. Restore native oyster habitat and populations in 10 tributaries by 2025 and ensure their protection.”

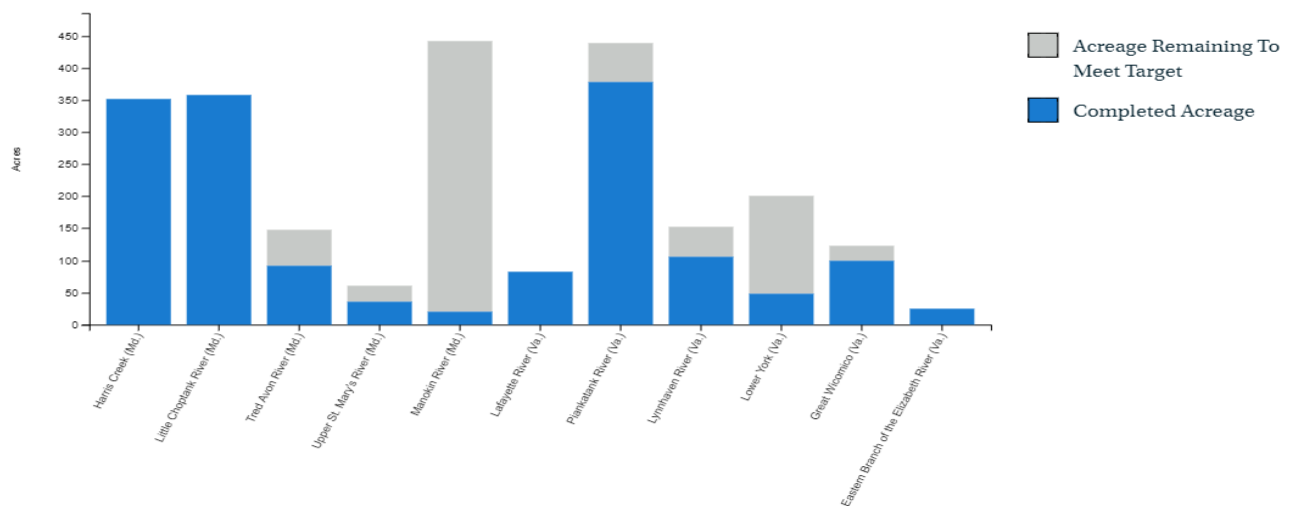
Since then, 10 tributaries in Maryland and Virginia have been chosen for large-scale oyster restoration. They include Harris Creek, and the Little Choptank, Tred Avon, Upper St. Mary’s and Manokin rivers in Maryland, as well as the Lafayette, Piankatank, Lynnhaven, Lower York and Great Wicomico rivers in Virginia. In 2020, Virginia added an additional restoration site: the Eastern Branch of the Elizabeth River. Each of these tributaries is in different levels of progress, but Harris Creek, the Little Choptank River, Lafayette River and the Eastern Branch of the Elizabeth River are considered complete and are currently in the monitoring and evaluation phase.

Scientists continue work to manage harvests, establish sanctuaries, overcome the effects of disease and restore reefs with hatchery-raised seed in an effort to bring back our region’s iconic bivalve.

Oyster Reef Restoration (2020) —

Individual acreage targets are based on a tributary’s historic oyster habitat and currently restorable area.

[VIEW CHART](#) [VIEW TABLE](#)



Oyster Reef Restoration as of 2020
 Courtesy of ChesapeakeProgress/Chesapeake Bay Program

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