



# Poplar Island Backgrounder

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Poplar Island, in the mid-Chesapeake Bay, was on track to disappear by the turn of the 21<sup>st</sup> century.

In the 1800s, Poplar Island boasted at least 1,100 acres, including fields, forests, and marsh. Through the years, it played host to early colonial settlers, a small farming village, a hunting club, and a presidential retreat for both Franklin D. Roosevelt and Harry S. Truman.

But erosion and rising sea level took a devastating toll. By the 1990s, Poplar Island was a fragment of its former self, broken into three pieces that totaled less than ten acres.

Hérons, diamondback terrapins, and other wildlife clung to the remnants in search of habitat, but the island continued to fall into the Bay at a rate of 13 feet per year.

Today, Poplar Island has a new story to tell. The island has regained life—and will provide more than a thousand acres of habitat—thanks to a landmark project led by the Maryland Port Administration and the U.S. Army Corps of Engineers.

## Safe Passage

The restoration of Poplar Island evolved from the need to maintain and improve shipping channels that lead to and from the Port of Baltimore. Sediment has entered and clogged shipping channels in the Chesapeake region since colonial times—and deep, clear channels remain important, as ships continue to increase in size.

The process used to remove sediment from the channels is called dredging. Dredging is a constant and challenging task. Today, partners at the Port of Baltimore dredge an average of 4.7 million cubic yards (mcy) of



*The restoration of Poplar Island is a cutting-edge solution for both dredged material management and a once vanishing island.*

sediment from the harbor and Maryland waters of the Chesapeake Bay every year.

Once removed, dredged material must be placed in a new location, away from the shipping channels. For many years, when environmental impacts were under-emphasized, dredged material was placed in the open waters of the bay. This changed in 1968. The state asked experts to find better solutions, ones that would better protect the environment and might even offer some benefits.

Poplar Island has become nationally known as one of the most dramatic and successful of these solutions—the “beneficial use” of dredged material to support environmental restoration.

## The Return of an Island

Poplar Island, approximately 34 nautical miles southeast of Baltimore and one mile northwest of Tilghman Island in Talbot County, was first considered as a placement site in 1994. After many public meetings and environmental studies, construction began in 1998.

The ultimate aim was to use 40 mcy of uncontaminated dredged material to restore the island to 1,100 acres—its approximate size in 1847.

Large dikes were built to contain the dredged material that would be placed around the remaining island fragments, as well as a breakwater to protect the site from future erosion. The first set of dikes, enclosing 640 acres, was complete by 2000. The second set, enclosing 500 acres, was finished in 2001.

Dredged material first arrived at the island in 2001, and approximately 2 mcy continue to arrive each year. The material is placed in cells within the diked area, where it slowly dries and consolidates. A carefully monitored de-watering process allows the excess water to drain from the cell into spillways and then return to the bay.

Cost estimates for the project range from \$340 to \$400 million, for both construction and operations through approximately 2020. Seventy-five percent of the funds are provided by the federal government through the U.S. Army Corps of Engineers, and 25% are provided by the state of Maryland.

### **Welcoming Wildlife**

Wetland and upland plantings began in 2002, aided by nonprofit organizations, volunteers, and the Maryland Conservation Corps. Bay wildlife has made a vigorous response.

Eighty-nine species of birds have been observed at Poplar Island, including eagles, herons, pelicans, egrets, and double-breasted cormorants. Diamondback terrapin nest on the shore, while otters, raccoons, beaver, and deer roam the marsh and woody areas.

Eventually, 555 acres will be shaped into upland habitat and 555 acres will become intertidal wetlands. Of the wetlands, 80% will be low marsh and 20% high marsh.



*Pelicans are among the 89 species of birds that have been observed at Poplar Island.*

Small upland islands, ponds, and channels will increase habitat options, along with areas of forest and shrubs. Some types of habitat developed at Poplar Island are among those most needed in the bay region.

### **Comprehensive Monitoring**

A long-term framework was created to monitor environmental changes at Poplar Island for at least 20 years into the future.

The process began with baseline monitoring to examine conditions before any site work began. Scientists conducted tests before and after the dikes were built, and continue with rigorous monitoring of water quality, sediment quality, aquatic life, and terrestrial life both on and around the island.

No negative impacts have been identified, but more years of study are needed.

### **Project Expansion**

Studies are underway for expanding the Poplar Island project by as much as 575 additional acres.

The expansion may be the most efficient and beneficial way to deal with a shortfall in placement sites, which is expected to occur as Site 92 (Pooles Island) closes to further shipments of dredged material by 2010.