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*Wetland creation, 2005*



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# Restoring Poplar Island

## A National Model for Beneficial Use of Dredged Material



## Introduction

Poplar Island, recently on the verge of extinction, is today a national model for habitat restoration and the beneficial use of dredged material. Just off the Chesapeake Bay coastline, about 34 miles south of Baltimore near Talbot County, Md., Poplar Island is being returned to its former size and important ecological function while helping to ensure the economic vitality of the region.

## Island history

In 1846, Poplar Island boasted more than 1,000 acres. During the early 1900s, the island supported a thriving community of about 100 inhabitants, several farms, a school, a church, a post office and a saw mill. By the 1920s, residents began leaving the island as more and more of its landmass fell victim to erosion. In the 1930s, a group of politicians bought the island, and in the following years, the island served as a popular vacation retreat for Presidents Franklin D. Roosevelt and Harry S. Truman. However, the island continued to erode. By the early 1990s, all that remained were several small clusters of islets rising just above the surface of the water. Reduced to about four acres, Poplar Island's disappearance seemed imminent.

- ① *First aerial photo of Poplar Island, taken in the early 1900's.*
- ② *Aerial photo of Poplar Island in 1996, prior to restoration.*
- ③ *November 2005 aerial photo of Poplar Island.*



(H. Robins Holiday Collection, Historical Society of Talbot County)

## Beneficial use - a “win-win” concept



Wetland creation, 2003

Rather than let the island disappear, an interagency team from the U.S. Army Corps of Engineers, Maryland Port Administration, and many other federal and state environmental agencies decided in 1994 that the island was worth saving.

The project’s partners began soliciting input from local communities, businesses and environmental groups about ways to accomplish this effort. They decided to explore the possibility of using dredged material from the navigational channels leading to the Port of Baltimore to rebuild the island to approximately its 1847 footprint.

The Port of Baltimore, as well as most other U.S. harbor and channel systems, must be dredged in order to stay open and remain competitive. The many rivers that flow into the Chesapeake Bay bring a constant supply of fine silt, which settles into the shipping channels.

“This project is harmonizing the economic vitality of the Port of Baltimore with improvements to Maryland’s environmental quality. Through this effort, we are maintaining both the thruways for our shipping channels and recreating wetlands and other habitat for the wildlife and waterfowl of the Chesapeake Bay.”

— U.S. Senator Paul S. Sarbanes  
April 2006.



Dredging of the Chesapeake Bay shipping channels.

To keep the waterways safe and the port economically viable, the island’s placement capacity routine maintenance dredging has to be done. This has led to the increasing challenge of finding suitable placement areas for the material.

Following the necessary environmental studies, government, business, conservation and civic groups and other stakeholders decided that rebuilding Poplar Island was not only viable but could create over 1,000 acres of diverse habitat. In rebuilding the island, dredged material would be placed and shaped to create wetland and upland habitat that would serve as home to many of the Bay’s treasured wildfowl. Their decision is seen by most as a “win-win” solution.

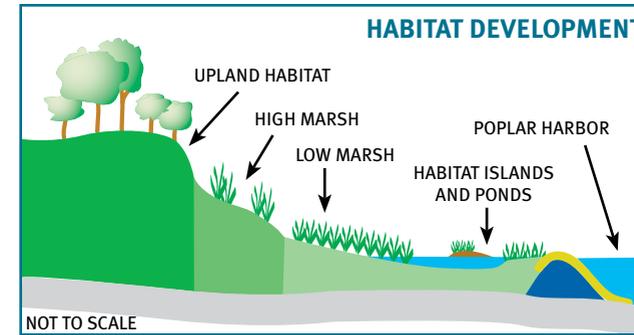


Since the early stages of its construction, the island has attracted a variety of wildlife, such as the Great Blue Heron, left, and the diamond Back Terrapin shown below.



## Rebuilding an Island

The remnants of the original Poplar Island consisted of clusters of low, marshy knolls and tidal mudflats. Using these remnants, engineers first constructed more than 35,000 feet of containment dikes using sand, rock and stone. Within the dikes, clean dredged material is pumped in and allowed to properly drain to maximize the island’s placement capacity. The project is designed to contain about 40 million cubic yards of material over the 16-year life of the project.



The dry material is then shaped to create 1,140 acres of island habitat. The eastern half of Poplar Island, 570 acres, will be created into tidal wetlands, including low and high marsh areas, habitat islands and open water ponds. The western half of the island, 570 acres, will be created into upland habitats, including forests and meadows.

Shortly after the first dredged material was placed on the island in the spring of 2001, ospreys, egrets, terns, herons, eagles, terrapins and other wildlife began to call the newly created island home. Over time, other important ecological changes will occur. As the wetlands mature, they will serve as a natural filter to improve water quality and as valuable habitat for birds, crabs, small fish and shellfish. Extensive engineering work has gone into the wetland development because this effort contributes significantly to the restoration goals for the Chesapeake Bay.

## The Island’s Future

As Poplar Island continues its resurgence, engineers, scientists and others from around the country will closely monitor its success. When the rebuilding of the island is complete, the State of Maryland will manage its long-term stewardship. Many believe the restoration of this island and its habitat will serve as an important link in the ecological chain that anchors the Chesapeake’s incomparably rich natural bounty.



Native grasses and wild flowers are planted on the island to reduce erosion.

## The Port of Baltimore



Container ships unload at Baltimore’s Seagirt Marine Terminal.

In 1706, when Maryland’s colonial legislature first established the port that would mature into the Port of Baltimore, ships were small and easily accommodated in the Patapsco River. Since the founding of Baltimore in 1729, the city and port have prospered and grown steadily. As ships have become larger, deeper and wider channels and regular maintenance of the channels has been needed to assure safe operation.

The Port of Baltimore is one of the largest and most modern seaports in the nation. The Port’s activities contribute some \$2 billion to Maryland’s economy and \$216 million in tax revenues for state and local governments every year.

The Port provides direct jobs for more than 17,000 people and more than 112,400 jobs related to cargo and vessel activity at the Port.