

## Port dredging helps reclaim vanishing island

Poplar, nearly lost to history, reborn as wildlife haven

By Timothy B. Wheeler, The Baltimore Sun

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POPLAR ISLAND —

While most of the Chesapeake Bay's islands are slowly vanishing beneath the waves, one not far from Baltimore is staging a remarkable renaissance.

Poplar Island, former hunting retreat, hangout for politicians and black cat farm, had nearly washed away by the late 1990s. But it's since been restored to the size it was when it was still a thriving 19th-century farming and fishing community, using muck dredged from the shipping channels leading to Baltimore just 34 miles to the northwest.

Pairing economic necessity with environmental restoration, state and federal government agencies have teamed up to barge 18 million cubic yards of silt to this island just off Talbot County on the Eastern Shore. The stuff has been scraped from the bay bottom so cargo-laden ships won't run aground. Once deposited and dried out behind dikes protecting the island from the bay, the reclaimed material is being shaped by heavy equipment and volunteers' hands into a combination of salt marsh and wooded uplands.

Begun 12 years ago, the effort has rebuilt the island from a few desolate patches of eroding sand to 1,140 acres, roughly what surveyors measured in 1847.

The massive undertaking is costing \$667 million, with the federal government picking up 75 percent of the tab and the Maryland Port Administration the remainder. And it's less than halfway done, with plans to add another 575 acres of land.

But it's already teeming with life again, though of the winged and four-footed variety.

"If you build it, they will come," quips Jan Reece, an environmental consultant for the state, as he peers through binoculars to tally the thousands of gulls, herons and shorebirds feeding and sunning themselves. A bald eagle perches on a stand that gives it a panoramic view of the low-slung landform.

"I was here when it was a natural island, and I saw it disappear," says Reece, who grew up on nearby Tilghman Island and who in his youth studied birds on the dwindling Poplar in the 1960s. "And here it is, bigger than it ever was."

Settled early

It's a rare second act for an island with a rich history. English colonists settled here in the early 1630s, rebuilt after an Indian massacre and raised livestock and tobacco, among other crops.

British warships camped here during the War of 1812, and in the 1840s, a grandson of Charles Carroll of Carrollton, Maryland's signer of the Declaration of Independence,

started a fur farm on the island, importing 1,000 black cats and hiring a waterman to supply them with fish. But the bay froze over that winter, according to a history of the bay's disappearing islands by William B. Cronin. The waterman couldn't get fish to the animals, Cronin recounts, so they apparently escaped across the ice to the mainland in search of food.

By the late 1800s, the island had split into three pieces, but the main portion harbored a community named Valiant with about 100 residents, a post office, a school, a general store and a sawmill.

That sawmill might have been what accelerated the erosion of the island, suggests Laura Baker, an educator with the Maryland Environmental Service, which is managing the restoration project for the port administration. "They cut all the trees down," she said, and destroyed the roots that were helping to hold the sandy land together.

Whatever the cause, by 1920, the last permanent resident had left. The island's next incarnation was as a hunting retreat and political hangout. A group of Democrats bought Poplar and one of its spinoff islands in the 1930s and built a clubhouse on the adjunct, which was subsequently called Jefferson Island. It was a favorite getaway for President Franklin D. Roosevelt; his successor, Harry S. Truman, also apparently visited.

The clubhouse burned down in 1946. Two years later, the two islands were bought by a former caretaker and his wife, who built a hunting and fishing lodge on the ruins of the old clubhouse.

"At that time, Poplar was still about 200 acres," recalls Peter K. Bailey, 69, of Bozman, who was a young boy when his family owned the island. There were still some trees and herons and crows, he said, and deer.

"We had duck blinds over there," he says of Poplar, "and I used to row over there in a boat and explore."

After only a few years, though, Bailey's father died and the family sold the islands. They were the last to live there full-time. Poplar's adjunct islands, Jefferson and Coaches, remain privately owned.

Let's muck it up

State and federal officials hit upon reclaiming Poplar Island in the 1990s as they cast about to find acceptable places to dispose of the muck dredged from Baltimore's shipping channels.

For many years, the port had dumped the material back in the water a short distance from where it was scooped up, but political pressure halted that practice amid concerns about its impact on water quality and fish. The channels need to be dredged regularly or they will silt in, threatening thousands of jobs and one of the state's most important economic hubs.

Starting in 1998, the island has been rebuilt in stages. Dikes were erected first to encompass the remnants of the old Poplar and to create a series of "cells" sheltered from the bay. Beginning in 2001, a chocolate-milk-colored slurry of water and dredged silt has been pumped off barges into the cells and allowed to dry out. Some of the manipulation is done with large excavating machines on tracks, made of aluminum so they won't sink in the quicksand-like wet silt.

The stuff is spread to carefully calibrated elevations, so it will get wet during high tides, and channels are created to allow the bay's waters to reach the new marshland. Then wetland grasses are planted, many times by volunteers, and other landscaping is done to attract various wildlife.

"It's amazing how quickly we've got a 1,100-acre island well on its way," says Kevin Brennan, project manager for the U.S. Army Corps of Engineers, Baltimore District.

There have been glitches. The silt used to establish the marshes is rich in nitrogen from the nutrient-choked bay, and wetland grasses have grown so fast with such a glut of plant food that they are falling over from their own weight in places.

"It's not toxic, but just very, very rich with nitrogen," explains J. Court Stevenson, an ecologist at the University of Maryland's Horn Point environmental laboratory.

Marshes normally are considered good natural "sponges" for nutrients that otherwise might foul the water, but Stevenson says in this case there appears to be more than the plants can handle. He thinks the problem might be that the plants aren't getting enough silica particles through their roots from the silt, which might help firm up their stalks.

Similarly, efforts to attract migratory least terns to a specially prepared habitat patch on the island didn't work out as expected. The shorebirds seem to like to nest on bare ground covered with oyster shells, but with those in short supply these days, scientists working on the project decided to try pea gravel instead. It evidently turned off the terns.

"We call it 'adaptive management,' kind of a buzzword for learning as we go," says Chris Guy, a biologist with the U.S. Fish and Wildlife Service.

#### Bird magnet

Complications notwithstanding, the island has attracted a rich array of bird life, nearly 170 different species, of which close to 30 nest here. It's the only island in the bay where common terns nest, biologists say.

"The diversity of wildlife here is amazing," says Peter McGowan, another federal biologist. This year the number of snowy egrets hit an all-time high, he says, and tricolor herons were seen here for the first time.

Poplar is also home to a thriving community of diamondback terrapins. Upward of 1,000 are hatched on the island every year, Baker says, and a portion of those baby

terrapins are farmed out to Maryland schoolchildren who raise them as classroom projects and bring them back every spring to release.

The island even draws two-legged life. More than 2,000 people visit annually, about half of them school groups. Delegations from China, Japan, Central and South America have come to see how an island is being rebuilt. The Maryland Environmental Service also offers tours to the general public.

"It's great to see it come back," says Bailey. "I know it's essential for the economy of the state to have the channels dredged and you've got to have someplace to put it. Being able to have that great wildlife is a bonus."

There are no plans to make it into a park, though, as that would conflict with its role as a wildlife sanctuary.

Will it slip away again?

With scientists warning that climate change is accelerating the sea level's rise, some might question why the government would invest in re-creating a low-lying island that could ultimately wash away again.

The Corps' Brennan says Poplar's marshes have been built up as high as they can be and still be wetlands, and the island is virtually armored with large riprap boulders.

"We're buying ourselves more time," he adds.

But with most of the rest of the bay's islands gradually washing away, the remote habitat Poplar can provide is needed now, biologists say, whatever its long-term fate.

"Island habitat is some crucial habitat that's not forming anymore," says Guy.

Though Poplar will continue to receive dredged material for another 17 years or so, the port and Corps are looking for other disappearing islands to reclaim as wildlife havens. The next candidates are James and Barren islands, off Dorchester County.

Using dredged material to rebuild vanishing islands is more expensive than depositing it on the nearest available land, officials acknowledge. The Poplar project has cost nearly three times what it cost to deposit muck at the now-full Hart-Miller Island off Baltimore County, says Frank L. Hamons, deputy director of the Maryland Port Administration. Even so, the Poplar costs are a fraction of what ports elsewhere like New York pay to dispose of their dredged material, he says.

Besides replenishing the shrinking supply of wildlife habitat, the port official notes, Poplar has a public relations purpose as well. Until recently, at least, people tended to view dredged material as noxious and oppose its disposal anywhere near them. By creating wildlife habitat, he points out, port officials can demonstrate the stuff has beneficial uses.

"It costs more. Is the public willing to pay? With all the support Poplar gets here, the answer has to be yes."