

Work at Poplar Island getting attention

By JOSH BOLLINGER jbollinger@stardem.com | Posted: Friday, September 12, 2014 4:15 am

Poplar Island

Maryland Environmental Service employees work in construction vehicles to rebuild Poplar Island into a wetland and forested habitat. The rocks lining the shore help prevent wind and wave erosion.

POPLAR ISLAND — The work underway at Poplar Island in the Chesapeake Bay has gained international recognition, with people coming from all over the world to see how it's being done and take that technology back to their own countries.

Talbot County is even using the island as a model for the type of work it hopes to attract to the area.

The first survey of Poplar Island, which is northwest of Tilghman Island and south of Kent Island, was in 1847.

The island at that time was about 1,100 acres in size, said Megan Garrett, an environmental specialist with the Maryland Environmental Service.

“But what they found was that Poplar was subject to erosion — wind, waves, currents crashing into the island, slowly starting to eat away at the sediment,” Garrett said.

The island virtually disappeared and was reduced to about 3 to 5 acres by 1993, with only four small remnants of the island left, she said.

The U.S. Army Corps of Engineers, funding 75 percent of the \$1.2 billion budget, and the Maryland Port Administration, funding 25 percent, teamed up to rebuild Poplar Island using dredged material from the shipping channel leading to the Port of Baltimore.

Construction started in 1998, and the island is still an active work zone known as the Paul S. Sarbanes Ecosystem Restoration Project.

Garrett said Maryland Environmental Service employees do the “day-to-day operations” on the island, and other environmental work is done by various organizations, including the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, the U.S. Geological Survey, Ohio University and the University of Maryland Center for Environmental Sciences.

Material from the Port of Baltimore's shipping channels is used because the cargo ships that pass underneath the Chesapeake Bay Bridge need a 50-foot clearance to pass, and most of the Bay's depth



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is between 20 and 25 feet, Garrett said. Also, the material is “clean dredge,” or material that doesn’t have heavy metals or toxins like in Baltimore’s Inner Harbor, she said.

Construction of the island started as a jigsaw puzzle, she said. The work started with the perimeter of what was left of the island, constructing “armor stone” walls to protect the island from being affected by wind and wave erosion.

Since 2001, the workers have started reforming the island in connected “cells,” or smaller, more manageable chunks of the dredged material being made into either wetlands on the eastern section of the island or built up to a higher, 30-foot elevation for future forest lands on the western section.

“We are supposed to receive 68 million cubic yards of dredged material total. So far we’ve received about 25 million cubic yards,” Garrett said. “We’re a little more than a third of the way through, as far as volume is concerned, but we’re still filling in that puzzle.”

Dredged material is supposed to stop being brought to the island by 2029, but there still will be construction and planting to do. Overall final completion is not scheduled until 2041.

When the island is finished, Garrett said, there will be about 700 acres of completed wetlands, with a total size of about 1,700 acres.

Garrett said the island was only going to be reformed into the 30-foot elevated forest land initially, but it was decided to include the wetlands to do something more beneficial for the environment.

She said when the wetlands first started being constructed, they weren’t sure how to build them.

“The wetland cells, in particular, we kind of had to break into smaller pieces because they are very, very difficult to create,” she said. “You have to get the measurements and elevations just right, you’ve got to make sure the tidal flow comes in just right, so it was a lot easier if we broke the island into little pieces and kind of did one at a time.”

Also, once the project is finished, all the construction equipment, buildings, pipes and inlets structures for tidal flow will be removed to create a remote island habitat — a place where species important to the Bay’s ecosystem can flourish.

There are still two remaining remnants that are now islands themselves and won’t be reattached to Poplar — Jefferson and Coach islands, both of which are privately owned, Garrett said.

Now, Poplar Island has become an “international model” for this kind of work, with officials from the Middle East, Asia, Africa and Europe visiting the site to learn more about the technical aspects of how an island is rebuilt, Garrett said.

Paige Bethke, director of the Talbot County Office of Economic Development, said the county is using Poplar Island as a model, too — not a technical model, but an industry model.

“People are coming from around the world to see how this was done, and that’s the idea — that we would have some opportunities here (Talbot County) to build some technologies or some projects that would then be from here so people would come here to see them or to use them,” Bethke said.

Bethke said the Talbot County Office of Economic Development is trying to promote environmental technologies and attract businesses to the county that have those technologies as the focus of their work, as it's an "emerging industry."

She said the most immediate types of businesses the county is trying to attract include testing labs. "But, over time, there are many technologies related to the environment that are starting to develop," she said, including geographic information systems, or GIS, and environmental technologies in the agricultural community to manage runoff and nutrients.

"So we're trying to expand those kinds of businesses here, businesses that might be able to use our land as tests or to experiment with technologies," Bethke said.