

Can artificial islands save the Chesapeake Bay?

[By PAMELA WOOD, Staff Writer](#)

Annapolis Mayor Ellen O. Moyer has an idea for improving the health of the city's creeks: install artificial, wetlands-covered islands.

She's asking the state for money to cover the installation of a test island on Back Creek as part of a larger grant application for environmental projects.

"If this does for our waters what they've done in other waters, this could be a real boon to moving forward on clean water initiatives in our creeks," Ms. Moyer said.

She stressed, however, that it's a big "if."

The floating island technology is new and, to a large degree, unproven. So the mayor's plan is to work with a scientific lab to try the islands out for a year and evaluate how well they remove excess nutrients, sediments and other harmful pollutants from the water.

How they work

The islands, called BioHavens, are from a Montana company called Floating Islands International.

The islands are really mesh mats made from recycled plastic. They are planted with grass or plants that can grow through the mesh and down into the water.

The floating islands can be anchored or left to drift, depending on the setting.

The islands initially were developed for freshwater lakes and ponds as a way to soak up excess pollutants in the water - but it's a problem that's present in the Chesapeake Bay and other areas with salty or brackish water, too.

The plants on the islands are supposed to take nutrients out of the water and use them to grow. The plants, in turn, attract wildlife.

Locally, the only floating island in place is at the Chesapeake Bay Environmental Center in Grasonville. That 64-square-foot floating island is in a pond near a new building at the center.

It was planted earlier this year with soft rush, water plantain, three square and swamp rose. It was donated by BlueWing Environmental Solutions and Technologies of Severna Park.

Already, one type of algae has disappeared from the pond, though there's still a thin, mint-green-colored layer of duckweed on the surface.

"I can't say enough about the floating island," said Judy Wink, director of the environmental center. "We really would like another one or two. Obviously, the more you have, the better intake of nutrients."

BlueWing also is involved in the proposal for Annapolis' Back Creek. BlueWing partners Ted Gattino and Kevin Hedge are busy trying to spread the message of floating islands around the Chesapeake Bay.

They estimate that if 1,000 floating islands, each 250 square feet, were placed in the bay, then 2.3 million pounds of nitrogen could be removed from the water. That would cost \$7.25 million.

The overall pollution reduction goal for restoring the bay is to have 110 million less pounds of nitrogen flowing into the water by 2010. Already, 19 million pounds have been reduced and current programs will reduce tens of millions more.

Promoters acknowledge that putting fake islands in the bay isn't a pollution cure-all.

But they argue the floating islands could have a place as one part of the overall bay restoration strategy. They envision floating islands tied to docks and piers along rivers.

"This is not a panacea," Mr. Gattino said. "This is an opportunity to mitigate what we've already done."

Islands and oysters

The Back Creek project would be installed in a calm lagoon at the Back Creek Nature Park.

In addition to the floating islands, cages of baby oysters would be suspended below them. The total cost of the project is nearly \$240,000. The mayor applied money for the island project and other projects from the state's new, \$25 million Chesapeake Bay 2010 Trust Fund.

The location is near where the city is building a "stormwater education experience" - a series of exhibits that demonstrate ways of controlling and filtering harmful stormwater.

The floating island at the Back Creek lagoon also will serve as a research project, to test how well the islands work in a saltwater setting.

"It's more than just putting an island out, it's about doing the research," Ms. Moyer said.

The island proposal was designed by Alden Research Lab in Massachusetts. Alden would work with BlueWing to install the islands and monitor the water quality.

Ray Tuttle, a senior biologist at Alden, said he was skeptical of the floating islands at first, but he's convinced they have promise.

"I really think that this has application. I think it's going to be demonstrable effective," he said. "Testing and demonstrating it in that lagoon is going to be a significant finding."

He, too, says the islands are just one approach to reducing pollution.

"It's an easy approach and affordable," he said. "You're not solving the problem, but you're reducing the adverse effects of the problem."

Ms. Moyer said that if the state funding is declined, she'll pursue other ways to pay for a floating island at Back Creek. And if the Back Creek project succeeds, she'll investigate trying the islands in the city's other creeks.

She said she's received positive reactions from her staff.

"More than anything, there's been, 'Let's look and see if it makes a difference,' " she said.