

Small but mighty: Floating wetlands ready to battle pollution in South Bethany canals

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(Photo: Staff Photo by Megan Raymond)

Along the hardened edges of the canals in South Bethany, marsh grasses nestled into man-made platforms promise to do some damage to the nutrient pollution known to cause icky algae and fish kills.

The floating wetlands installed by volunteers from [South Bethany](http://www.southbethany.org/) and the [Delaware Center for the Inland Bays](https://www.inlandbays.org/) on Tuesday are small compared to the footprint of the canals, which wind among multimillion-dollar homes fronting on the poorly flushed system.

Small as they may be, 130 mini man-made wetland mats have the potential to make a dent in the pollution plaguing the canals, while also providing new shelter and habitat for fish, crabs and shrimp that will soon congregate on their underwater root systems.

"The purpose is primarily to improve water quality," said Marianne Walch, the center's science and restoration coordinator. "The plants will ~~take up~~ ^{filter} nitrogen and phosphorous and incorporate those nutrients into their roots. At the end of the season, those plants will be harvested, so all of the nitrogen and phosphorus will be removed."

PHOTOS: South Bethany Beach installs floating wetlands

In poorly flushed systems like the residential canals where the wetlands are being placed along the bulkhead borders, excess nitrogen and phosphorous can spell disaster (<https://www.inlandbays.org/about-the-bays/state-of-the-inland-bays-2016/>) for aquatic plants and animals. Those nutrients can enhance algae blooms, which worsen on hot summer days, and take up the oxygen so there is none left for the wildlife in those waters.

Most of the pollution comes from non-point sources, Walch said, such as stormwater runoff and runoff from residential lawns.

"These water quality problems didn't occur overnight, and they're not going to get cured overnight," Walch said.



One-hundred and thirty floating treatment wetlands will be placed along bulkheads in many of South Bethany's canals to help treat stormwater runoff from up to 345 acres of surrounding land on Tuesday, June 19, 2018. (Photo: Staff Photo by Megan Raymond)

Beyond the water quality and habitat benefits, the *Spartina* marsh grasses, also known as cordgrass, that make up the wetlands mats also will beautify the hard edges of the canal, she said. In some places, they will appear like mini floating islands, such as the site where a dozen 4-by-8-foot wetland mats are tied together along the shoreline.

"It's a way of beautifying and at the same time greening up," she said. "They should be beautiful, like floating gardens."

On Tuesday, South Bethany resident George Junkin joined more than 40 people working the volunteer-based assembly line to plant more than 10,000 plugs into the wetland mats.

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"The plan was to plant 10,400 plants," he said. They did not quite hit their goal, he said, so a handful of volunteers will return to finish the plantings this week. "The people of South Bethany really do care about the water quality in their canals, and that's why the town has been supportive of these kinds of efforts for at least the last 10 years."

South Bethany offered more than \$9,000 for the project, which was supported by an additional \$25,188 state grant. Walch said more than 300 hours of volunteer work also have been donated to the project.



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Junkin, who serves on the town's water quality committee, said about half of the floating wetland sections were tied to bulkheads along waterfront homes, while the rest will focus on cleaning up the dead-ends of the canals, where the algal blooms tend to be the worst.

Sometimes, he said, the ends of the canal look like green carpets are floating there.

"We're hoping," he said, "If we get enough of these floating wetlands in the canals, it'll eat up the nitrogen and phosphorus that's in the water so that the algae wants to go some place else for food."

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Volunteer residents of South Bethany Beach help install the floating wetland mats and plants that will be placed along the bulkheads in the South Bethany canals to help treat stormwater runoff on Tuesday, June 19, 2018. (Photo: Staff Photo by Megan Raymond)