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ENVIRONMENT

Sarasota Bay has been losing seagrass. What are local governments and citizens doing about it?



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Seagrass acreage in Sarasota Bay dropped by 26% from 2016 to 2022, according to the head of the bay's estuary preservation program.

This new information comes from aerial maps the Southwest Florida Water Management District made of the bay's seagrass meadows.

The Sarasota Bay Estuary Program is able to learn about the health of the bay by tracking these plants. When water quality is poor, seagrasses die. Manatees, which rely on that vegetation for food, will then starve.

Dave Tomasko, the program's director, said the devastating red tide outbreak from 2017 to 2019 and the Piney Point disaster both contributed to the decline in seagrass since 2016.

Previous coverage: Sarasota Bay losing vital seagrass, research shows

And: Red tide intensifies: Local beaches to have high respiratory irritation

The estuary program and local governments say they are addressing the loss by informing members of the public of steps they can take and by improving wastewater and stormwater management.

Why seagrass numbers have been declining

Every two years, the region's water management agency creates maps of seagrass meadows in an area from Tarpon Springs to Boca Grande, Tomasko said. The most recent mapping took place from December 2021 to February 2022. The mapping results, which were released

last month, show that there was a 5% decline in Sarasota Bay's seagrass acreage from 2020 to 2022. During the previous two-year period – 2018 to 2020 – the acreage dropped by 18%, or about 2,000 acres, according to Tomasko.

Some seagrass isn't visible from an airplane, so that vegetation didn't appear in the aerial maps. But Tomasko said that that seagrass isn't thick enough to serve as food for manatees.

He attributes the 2018-2020 drop to the ride tide outbreak that occurred then. The bloom, which lasted 18 months, caused breathing problems and damaged local tourism.

Charter fisherman Todd Romine said that when he was finally able to take his boat into the bay after the bloom, the bayfloor was barren in some areas. There wasn't any seagrass or fish there, he recalled.

“It was almost like this forest fire that just burned everything up,” he said, “and it was just gone.”

Red tide, which is occurring again along the west Florida coast's shoreline, turns the bay a brown color, meaning the seagrass doesn't have enough sunlight and can't grow. Sarasota Bay's seagrass coverage decreased by 26% from 2016 to 2022, and Tampa Bay's went down by 28%, Tomasko said.

“This is kind of like a wake-up call,” he said. “This is serious. We need to do a better job of dealing with our wastewater, our stormwater, take better care of our shorelines, our mangroves.”

Tomasko said that the bay's water quality improved from the late 1980's until about 2014, and then started to worsen. During a period of about five years, a string of wastewater overflows led to higher concentrations of nitrogen and phosphorus in the bay.

More recently, in the spring of 2021, an estimated 215 million gallons of wastewater were released from the Piney Point facility into Tampa Bay, and some of the nutrients in the water entered Sarasota Bay. Tomasko said that the Piney Point disaster was likely a major reason why seagrass acreage in Sarasota Bay decreased from 2020 to 2022. He noted that macroalgae – which look like underwater tumbleweeds – have been plentiful in the upper bay since the release.

What can be done to encourage seagrass growth?

Tomasko described a “three-legged stool” of how to address red tide. One of those legs is a need for state-of-the-art systems for managing stormwater and wastewater. Sarasota County plans to spend over \$500 million to update its wastewater and water infrastructure system.

Another leg of the stool is that regulators, like the Florida Department of Environmental Protection, need to “do their job in a timely manner,” Tomasko said.

And the last leg is that members of the public “need to do their part,” he said. These actions include picking up your dog’s waste, not putting your grass clippings in storm drains or the bay and not over-fertilizing your lawn.

Local governments are also trying to improve Sarasota Bay's health. Both Manatee and Sarasota counties have ordinances prohibiting the use of fertilizer containing phosphorus and nitrogen from June 1 to Sept. 30.

Sarasota County is also working on stream restoration projects to improve the quality of water entering the bay, according to Aaron Zimmerman of the county’s public works department. Sarasota County has many streams that serve as channels for stormwater, and it’s planning to make some of those curvier and add native plants. These changes will lower the amount of harmful nutrients in the water.

Justin Moore, a local charter fisherman, said that the public needs to learn about red tide, which is caused by the *Karenia brevis* species, and about other algae that grow in the bay.

“Right now, we’re kind of at a turning point, I think, in Florida, that people really have to get educated on water quality and what is red tide, what causes red tide and what are the aftermaths of red tide,” he said.