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The Survey Says...

Struggling Seagrass in Sarasota Bay Shapes up as an Environmental, Economic Worry
Acreage of underwater meadows have been in decline since 2016, raising concerns in an area with a lot floating on a healthy ecosystem.

By [Catherine Hicks](#) August 7, 2023



Boaters leaving from the city's 10th Street boat ramps are reminded to mind the seagrasses of Sarasota Bay.

IMAGE: ERIC GARWOOD/COMMUNITY NEWS COLLABORATIVE

On the surface, it's a shimmering magnet for outdoor enthusiasts and those seeking the good life.

Just a few feet below, though, one of Sarasota Bay's driving forces is suffering.

Seagrass, essential to the health of marine ecosystems such as the one linking mainland Sarasota and Manatee counties to their barrier islands and the Gulf of Mexico beyond, has been in decline since 2016, studies show.

Like a canary in a coal mine, seagrass in Sarasota Bay and elsewhere can be an indicator of the overall system's health. And while more and more residents and visitors depend on the sparkling waters for their fun, livelihood and real estate values, it's those same people's responsibility to look after what brought them here in the first place, said Dr. David Tomasko, director of the [Sarasota Bay Estuary Program](#).

"When you live on the waterfront, you have the most to gain, and the most to lose," he said. "If you live on the waterfront, you have to do more with keeping the bay healthy and happy because you have more to gain from it being healthy."

Every two years, aerial photography missions map the bay and have found consistent declines in acreage since 2016, when the Southwest Florida Water Management District recorded a peak of 13,473 acres. In 2022, acreage had declined to 9,962, records show.

Generally speaking, cleaner water allows more sunlight to reach the bay's bottom, allowing turtle grass, manatee grass and shoal grass to thrive in so-called meadows that reach for thousands of acres. But warmer waters, cloudy water conditions and out of balance levels of nitrogen and other substances can play havoc with seagrass growth.

Thriving seagrass provides an essential sanctuary to the wildlife that exists within ocean ecosystems, serving as a nursery for young fish and shellfish and lifelong shelter for invertebrates. Seagrasses are also an essential natural deterrent for the erosion of sandbeds, filtration systems for pollutants and excess nutrients, and traps for sediments, promoting health and clarity of the water.

"Seagrass meadows do so much good for us," said Tomasko, who also said he hopes that one day Sarasota Bay will "once again be a success story."

Statewide, one of the starkest results of seagrass declines has been manatee mortality. Though more prevalent on Florida's east coast, 800 manatees died in Florida in 2022, down from a record 1,110 in 2021.

Volunteers around the Indian River Lagoon took to feeding manatees heads of lettuce in an effort to keep them from starving as seagrass meadows in the region disappeared. Since records have been kept in Brevard County, seagrass coverage in the Indian River Lagoon has fallen by more than half since 1943, according to the Indian River Lagoon Species Inventory.

And the same is true in estuaries around the state. Seagrasses are dying.

“One of the reasons we’ve lost so many manatees in the last two and a half years is from starvation. Not boat strikes, but starving to death because of the lapse of the water quality ... which has affected their food source,” Tomasko said.

Tomasko said more wastewater and more stormwater runoff—all factors of population growth—contribute to water-quality declines that in turn reduce seagrass meadows.

According to Sarasota County census data, our population rose from 379,448 in 2010 to 434,006 10 years later. In 2022, population was up to 452,373. Manatee County population’s had risen to 429,125 in 2022, up from 399,705 in 2020 and 322,833 in 2010.

Neighboring estuary programs continue to observe similar declines in seagrass populations, such as in Tampa Bay, which was once regarded one of the greatest success stories in the state in 2016 when seagrass populations reached an all-time high.

“We’ve lost about a third of our seagrasses from our all-time high in 2016 to our most recent assessment in 2022,” said Marcus Beck, program scientist at the Tampa Bay Estuary Program. “The causes of the broader regional declines aren’t well understood, but climate change is likely playing a role, as increasing temperatures are likely stressing seagrasses beyond their optimal temperature ranges. ... Nobody knows for sure which factors are affecting seagrasses the greatest and it is likely multiple, compounding stressors that have contributed to the decline.”

Though Tampa Bay struggles with a regional issue, specifically a portion of their estuary in Old Tampa Bay suffering greater losses than other areas due to recurring water quality issues, the issue is reflected in

estuaries across the state.

In 2018, the Florida Department of Environmental Protection reported that 2.5 million acres of the state's estuaries were polluted and not suitable for drinking or recreation. In 2020, the number declined to 2.1 million, before growing to 3.1 million in 2022.

The Sarasota Bay Estuary Program, working with Florida Sea Grant and Mote Marine Laboratory, hosts a biannual [Eyes on Seagrass](#) volunteer program, during which volunteers aboard private boats snorkel at one of 55 locations in Sarasota Bay to collect data.

The most recent survey was held on July 8, when roughly 80 volunteers visited a total of 45 fixed station research sites throughout the bay. The data is analyzed and used to compile the annual Sarasota Bay Health Report Card.

Beyond the statistics and the biology, a large portion of the region's economy is at stake. It's more than just boats, hotels and pretty sunsets, said Heather Kasten, the chief executive officer of the Greater Sarasota Chamber of Commerce.

"Our entire community, so much of the business community [within Sarasota], hinges on the health of the bay and water quality," she said. "And you might just say, 'Oh, that's only the hotels and the restaurants, but it goes beyond the tourism industry ... just in terms of the economic vitality that we enjoy so much from, being in Florida and being in a community like Sarasota."

The Sarasota Bay Estuary Program estimates that:

There are nearly 8,000 registered boats in Manatee and Sarasota counties.

More than 20,000 jobs are directly connected to bay-related activities.

Property values are about \$3 billion higher within proximity to the bay than would otherwise be the case.

In 2021, just over 3 million people visited Sarasota County with about \$3.6 billion estimated for total economic impact. Manatee County recorded just under 1 million visitors in 2021 and estimated the economic impact at about \$1.3 billion for the year.

There are many things that individuals can do to minimize their own effects on Sarasota Bay and its seagrasses. Among them:

Making sure grass clippings can't wash into the storm-sewer system, potentially delivering harmful levels of fertilizers into the estuary.

Heeding Florida's rules on private-party fertilizer use, restricted between June 1 and Sept. 30—the rainiest period in Florida.

Cleaning up pet droppings outdoors, keeping that runoff from washing into storm systems.

"We used to be just like Tampa Bay," Tomasko said, "but now, neither one of us is a success story, because a lot of things are catching up on us—population growth, aging infrastructure and a lot of things that we didn't

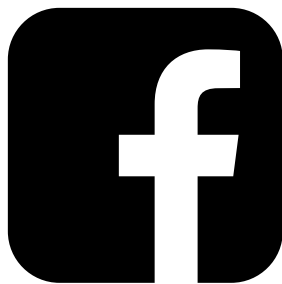
really pay a whole lot of attention to 30 years ago, [such as] our water is getting warmer, our air is getting warmer, we're having more storms and the water levels are rising.”

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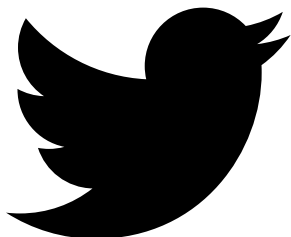
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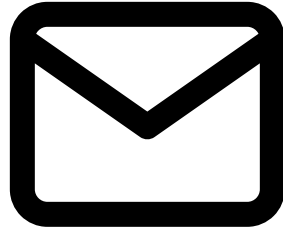
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