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ENVIRONMENT

After Hurricane Ian, could a red tide bloom in Sarasota spoil the holidays?

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Hurricane Ian helped create ideal conditions for a red tide bloom this fall in Sarasota County, just in time to spoil the return of snowbirds and the holiday season.

Samples taken this week show low levels of Karenia Brevis, a microscopic single-celled organism that causes red tide, present at several locations along the Sarasota County shore, according to the Florida Fish and Wildlife Conservation Commission.

Although samples indicate concentrations have not reached high enough levels to be considered a red tide bloom, the Florida Department of Health's Sarasota office issued a notice to the public Wednesday about red-tide conditions at many local beaches.

How's the water?: Florida Red Tide Map | Beach Water Quality Map | Algal Bloom Map

In case you missed it: Health officials warn of elevated red tide levels at beaches in parts of Sarasota County

No swim: No swim advisory in Bird Key Park Beach due to bacteria spurred by Hurricane Ian

Spills: Wastewater spills hit Sarasota amid program to update aging system

The department cited samples that show "elevated levels" of red tide at Turtle Beach, Nokomis Beach, North Jetty, Venice Beach, Service Club Park, Venice Fishing Pier, Brohard Beach, and Caspersen Beach.

Oceanography Professor Emeritus Robert Weisberg believes conditions could be ripe for it to bloom and linger long enough to impact the holidays.

Weisberg spent many years at the University of South Florida tracking and forecasting ocean currents and studying their impact on red tide before retiring in May.

“What we are starting to see right now should begin to grow,” Weisberg said. “Maybe we’ll have a red tide at the new year, unfortunately, but that appears to be what’s happening.”

Hurricane Ian's impact on Sarasota Bay

Sarasota Bay Estuary Program Director Dave Tomasko said predicting how the red tide will react in local waters is difficult, especially after Hurricane Ian.

In the wake of the storm, the estuary program has put extra effort into monitoring bacteria and oxygen levels in Sarasota Bay, with emphasis on the area between the Ringling Bridge and Venice.

Tomasko said visitors should be wary of the water where they swim because of the high amount of bacteria that has been washed into the shore by floodwaters.

“It’s probably not a really good time to be recreating on the bay, there is bacteria out there that can get you pretty sick," Tomasko said. "When the water looks kind of like root beer, don’t go in it."

“There is very high levels of bacteria coming into our bays along with these floodwaters. That’s because of the kind of underwater compost heap, dead animals, sewage, dog poop, grass clippings, all this stuff coming into the bays," he said. "Literally, we found plumes of brackish, tannin-rich water two miles offshore."

If the region experiences a period of time with little or no rain, Tomasko said water quality should improve after several tidal cycles. That is if a red tide bloom doesn't spoil a quick recovery.

He said many factors are present to encourage a red tide bloom, such as increased nutrients washed into the bay by flood runoff, but also factors that discourage it, such as falling water temperatures and low salinity levels.

"If we have a red tide that’s out there, I don’t really know if it’s going to get worse or if it’s going to get better or stay where it is," Tomasko said. "But we have added a heck of a lot of bacteria and nutrients to the eastern Gulf of Mexico associated with Ian, so will this be a worse red tide? We don't know. But it's got the potential to be worse because the nutrient loads are so much more dramatic."

Red tide in the fall

Red tide is no stranger in Southwest Florida, especially after residents lived with the foul stench of thousands of dead fish that washed ashore during massive red tide blooms in 2018 and last year for months.

This year, the Department of Health office posted signs at local beaches to notify visitors about the presence of red tide for the first time this week, months later than during previous bloom events.

Weisberg, the USF professor emeritus, was not surprised to learn that red tide had been found this week in Sarasota. On a typical year, red tide forms offshore, deep in the Gulf of Mexico, and blows toward Southwest Florida beaches in the fall once the winds and ocean currents change.

Red tide in 2021: Dead fish continue to wash ashore in Sarasota, Manatee

Red tide in 2018: Study IDs source of red tide bloom

He said the previous red tide events took shape at earlier times of the year because they were influenced by other uncommon factors.

Weisberg said the 2018 red tide bloom that rocked Southwest Florida's tourism-driven economy was actually a combination of two events.

First, the lingering remnants of the 2017 red tide took a foothold south of Venice during the summer of 2018 and spread north from there. Then it was met in September by the red tide that bloomed in the Gulf and washed ashore, worsening the situation for local beaches through the end of the year.

"After the Piney Point spill last year we had a red tide bloom that started toward the end of May and that lingered through the summer months," Weisberg said. "So what happened in 2018 was anomalous, what happened in 2021 was also anomalous, but on normal years, we get a red tide beginning in September or October and lasting through around December, then it peters out."

Typically, Weisberg said red tide forms offshore at about 90 to 120 feet of depth. As current circulation begins to change in the fall, it carries Karenia Brevis organisms toward Florida's Gulf Coast. He said this year, Ian seems to have helped stir the Gulf just enough to push red tide to Sarasota.

“Conditions offshore have been conducive for red tide, what has been lacking is the ability to move red tide to the coastline and that changed with Ian,” Weisberg said.

“As Ian was approaching we had strong northerly winds, which move materials from where it originates," he said. “Now, we’ve got our first cold front, which is another way these materials can be transported toward the beach."

"Then, of course, there was a lot of runoff from the land that added further nutrient supply to what may already be a red tide offshore."