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Red tide is back in Florida, killing fish and impacting human health. Here's what to know about the toxic bloom.

BY LI COHEN
MARCH 6, 2023 / 1:34 PM / CBS NEWS



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air is burning people's eyes, noses
tide, a problem that has
, is back.

miles offshore when there are high
y, the Florida Fish and Wildlife

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In Southwest Florida, it was detected in 114 samples, including 56 that had medium to high concentrations of >100,000 cells/liter. At that level, considered to be "medium," it's likely that people will experience respiratory irritation, shellfish harvesting will be paused and fish kills will be detected. At high concentrations of > 1,000,000 cells/L, there will also be visible water discoloration.

Background concentrations, meaning no effects are anticipated, were also detected in one sample from Destin Beach Okaloosa County, just west of Panama City, the department said on Friday.

Florida Red Tide and other Harmful Algal Blooms (HABs)
last Friday

Statewide *Karenia brevis* concentrations
02/23/2023 - 03/02/2023

Karenia brevis (cells/liter)
● not present/background (0-1,000)
○ very low (>1,000-10,000)
○ low (>10,000-100,000)
○ medium (>100,000-1,000,000)
○ high (>1,000,000)

Karenia brevis cell abundance is shown here overlaid on ocean color satellite images (showing normalized fluorescence line height, or nFHL, an index of chlorophyll a) from 03/01/2023, provided by the Integrated Red Tide Information System (IRIS) at <http://optics.marine.usf.edu/projects/iris.html>. The hotter colors in the image show higher levels of chlorophyll a, and the black represents cloud cover.

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For the most updated information on our sample results, please check our daily sampling map (MyFWC.com/redtidemap), which can be accessed via the online status report on our Red Tide Current Status page (<https://myfwc.com/research/redtide/statewide/>). Our online status report includes a full detailed Red Tide Report with data tables, regional maps, and an interactive Google Earth map. For more information on algal blooms and water quality, please visit Protecting Florida Toge... [See more](#)

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acts of red tide blooms. *K. brevis* kills fish and other marine life. For Florida Fish and Wildlife. If you see a red tide bloom, report it. If you see a red tide bloom, they can also cause "serious Health.

"Illness and death in Florida dogs have been linked to exposure to harmful algal blooms," the agency warns.

Humans should also be concerned for their own health. Brevetoxins tend to accumulate in shellfish, such as scallops and oysters, and if contaminated ones are consumed, it can cause neurotoxic shellfish poisoning, according to the CDC. Contaminated consumption can lead to nausea, vomiting, cardiovascular issues, neurological issues, and rashes, among other things.

Even if contaminated shellfish aren't consumed, just being near a high concentration of the algal bloom can impact human health. Some people can experience irritation within minutes of being exposed to the toxin as the wind and waves carry it into the air. Burning eyes, noses and throats are common on beaches impacted by the tide, and experts say those who have chronic respiratory issues, such as asthma or emphysema, can have worse reactions.

These effects have been seen in the most recent bloom, with one Florida resident sharing an image of a massive fish that they said looked like a goliath grouper washed up among other smaller fish on Turtle Beach in recent days. The air on that beach, the resident said, felt as if there was pepper in it and was irritating their respiratory system.



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id a red tide event.

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Florida's last devastating red tide event was recent - just two years ago in 2021. At that time, hundreds of dead fish could be seen at a time along Tampa Bay's waters, with one local fisherman describing it as "an absolute nightmare" that "looked like a bomb had gone off."

The most recent bloom seems to have started in late September 2022, just before the state was hit by Hurricane Ian. After a period of the state reporting no observations of *K. brevis* concentrations, Florida Fish and Wildlife said on Sept. 16 that background concentrations had been found in one Southwest Florida sample taken 15 miles offshore of Collier County, one of the areas that were hardest-hit by the hurricane.

After the hurricane, the bloom only expanded. On Oct. 21, medium to high concentrations were found in 25 samples in Southwest Florida. That week also saw reports of respiratory irritation in Sarasota County.



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dumpsters, is seen at Maximo Park on July 21,

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K. brevis is an organism in the Gulf of Mexico year-round. When it begins to accumulate and is moved to the coast, that's when it starts to cause problems. Scientists have warned that there are factors that can intensify its growth and spread, including climate change and nutrient pollution.


In November, some scientists said they believe that the latest bloom was being powered up by the runoff left over by Hurricane Ian. Nutrients from farm fields, agriculture and waste that may end up in waterways have the potential to make these kinds of blooms significantly bigger, they said.

Water quality expert and University of Miami professor Larry Brand said at the time that while hurricanes don't cause red tide, "once you have a red tide started, runoff will make it worse." Warming ocean waters could also influence the frequency of red tides.

After the hurricane passed, Dave Tomasko, executive director of the Sarasota Bay Estuary Program, told CBS News that Florida's water "looks like root beer, smells like dead fish rolled into compost." He said he saw vehicles, dead animals and portapotties all scattered throughout waterways.


As of now, Florida Fish and Wildlife says "there is no practical and acceptable way to control or kill red tide blooms."


"Control of red tide in Florida is not a simple issue. The harmful effects of a red tide are caused by toxins released by the organism. Potential controls must not only kill the red tide organism but also eliminate the toxins from the water. To date, this has not been possible," the agency says on its website.




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First published on March 6, 2023 / 1:34 PM

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