Tampa Bay Times

What we know about Piney Point's impact on Tampa Bay

One year later, scientists are still studying the effects of an enormous wastewater release.

Tampa Bay is visible from a phosphogypsum stack at the old Piney Point fertilizer plant property, with downtown St. Petersburg in the background. About 215 million gallons of polluted water from the site were released into Tampa Bay last year. [DOUGLAS R. CLIFFORD | Times]

By **Zachary T. Sampson**

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PALMETTO — The 215 million gallons of wastewater plunged into Tampa Bay like

What happened next was unsurprising, scientists say. Algae bloomed, likely supercharged by the contaminated water released last year from the old Piney Point fertilizer plant property.

The wastewater was bad for Tampa Bay, but measuring how bad is complicated. One reason: The bay is routinely tainted by other pollution, making it hard to isolate Piney Point's effect.

RELATED: Inside the effort to close Piney Point and keep Tampa Bay safe

Decades of progress have lifted the estuary as a model for environmental restoration. But 2021 brought renewed concern. A toxic Red Tide bloom gripped Tampa Bay, killing countless fish and other marine animals, including manatees. Scientists say the wastewater from Piney Point may have made it worse.

"We've made sizable strides forward in Tampa Bay," said Peter Clark, president of the conservation group Tampa Bay Watch. "But we can also take big steps backwards."

The state allowed the polluted water to be dumped into the bay between March 30 and April 9 amid concerns of a worse disaster — a Piney Point reservoir collapsing and letting loose a flood into nearby homes and businesses.

The Tampa Bay Estuary Program, which monitors the bay's health and advocates for keeping it clean, estimates the release may have added more nitrogen into the lower part of the estuary in 10 days than that section typically sees in a year.

"That doesn't help the healing process, for sure," said Ed Sherwood, the Estuary Program's executive director.

RELATED: Red Tide's return raises fears about the health of Tampa Bay

Peter Clark, president of Tampa Bay Watch, grabs algae last April around Bishop Harbor, near where 215 million gallons of wastewater from Piney Point were dumped into the bay. [DOUGLAS R. CLIFFORD | Tampa Bay Times]

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‘Trying to find that signal’

Scientists might never agree on how much Piney Point is to blame for causing or exacerbating multiple algae blooms last year.

Algae use nitrogen to grow, but runoff from heavily fertilized lawns and leaking sewer systems are constant problems.

“We’re talking about compounds that currently exist in the environment at some level,” said Steve Murawski, a fisheries biologist at the University of South Florida. “Trying to find that signal … is always a challenge.”

Researchers are looking to identify connections between the release and the blooms by tracing signatures in nutrients from Piney Point that could show up in the algae, like fingerprints. That work is incomplete, said one of the researchers,

Elise Morrison, a professor in the University of Florida's department of environmental engineering services.

Scientists have assembled a timeline, though, that suggests pollution from Piney Point may have cycled through the environment for most of last spring and summer. It is laid out in a recently published paper from the Marine Pollution Bulletin.

Dead fish are skimmed from the surface of the Intracoastal Waterway during a Red Tide bloom last July. [DOUGLAS R. CLIFFORD | Times]

Diatoms, non-toxic algae, bloomed first in April around Port Manatee, where Piney Point's owner pumped the wastewater into the bay. The diatoms disappeared within weeks.

Shortly after the first bloom, a different kind of algae popped up off Anna Maria Island, south of Piney Point. Popularly called Lyngbya, it drifted in wide, smelly mats that choked channels and canals.

Red Tide moved into Tampa Bay about the same time. The bloom floated between the bay and the gulf, reaching its rotten peak in July.

Toxins from the Red Tide killed untold numbers of fish and inflicted people with scratchy throats and coughs along the shore. Pinellas County collected more than 1,800 tons of dead sea life and debris. Bloated, gray tarpon and goliath grouper carcasses lapped at the edge of downtown St. Petersburg. Maggots crawled through the flesh of dead sheepshead.

Scientists are emphatic that the Piney Point discharge did not cause the Red Tide.

Karenia brevis, the organism that makes up Red Tide, created a bloom that wind and currents blew into Tampa Bay, where conditions — including warm and salty seawater — already were conducive to the algae growing. But contamination from the spill could have worsened the bloom, researchers say.

Their theory is that nitrogen from Piney Point initially was gobbled up by diatoms. When those organisms died, some of the nitrogen would have been released back into the bay. The mat-like algae and Red Tide, may have fed upon it at that point.

"We know that *Karenia brevis* can use a lot of different types of nutrients, including recycled nutrients," said Kate Hubbard, director of the Florida Fish and Wildlife Conservation Commission's Center for Red Tide Research.

A University of South Florida model shows pollution from Piney Point moved with tides and currents around Tampa Bay, sticking at high concentrations for months.

Miranda Rossi (center), 27, of St. Petersburg, marches in downtown Tampa during the Rally to Save

Long-term concerns

Shortly after the release, environmental managers announced other troubling news: Tampa Bay had lost several thousand acres of seagrass over the previous two years. Seagrass beds are important nurseries for fish and a bellwether for the health of the entire estuary.

RELATED: Tampa Bay loses 6,350 acres of seagrass over past two years

The release had nothing to do with those declines, but environmentalists worried Piney Point could spur further losses. The bay's seagrass trouble is centered far north of the discharge zone in a part of Old Tampa Bay beset by repeated algae blooms. The algae are thought to be clouding the water, blocking sunlight that seagrasses need to survive.

Initial surveys offer reason for optimism that Piney Point did not hurt seagrasses, Sherwood said. Another round of long-term monitoring results are due later this year.

Capt. Scott Moore, a longtime fishing guide in Manatee County, said he remains concerned. Already, he said, he has spotted more algae tangled up with seagrass this year.

"Those nutrients did not help," Moore said.

An unidentified fisherman wades into the waters of Tampa Bay near the Gandy Bridge last October. [CHRIS URSO | Times]

It's unclear whether contaminants from Piney Point still are recycling through the ecosystem.

Clark, of Tampa Bay Watch, said water quality has seemed relatively poor around Tierra Verde. He can't remember blooms of macroalgae — stringy or leafy muck that is easily spotted with the naked eye — as bad as last year's since the 1980s, he said.

The old fertilizer plant property still holds hundreds of millions of gallons of wastewater that could leak or spill. "I'm not convinced we're done with the release of nutrients," Clark said. Crews are racing to clean and drain the ponds at Piney Point.

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Dave Tomasko, executive director of the Sarasota Bay Estuary Program, said the crisis brought attention to the broader issue of water quality in Florida. At the

River Lagoon along the East Coast, where algae blooms are believed to have wiped out tens of thousands of acres of seagrass.

Environmental advocates say elected officials should invest more in reducing waste that flows to the bay, while homeowners can make lifestyle tweaks to lower their personal pollution footprints.

“(Piney Point) and the Indian River Lagoon, starving manatees, are like a message to get across to people,” Tomasko said. “Get your act together or this is going to be your future.”

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