

Florida's algae problem stems from decades of Lake Okeechobee pollution

July 11 2016, by David Fleshler, Sun Sentinel

The algae fouling South Florida beaches traces its origin to cattle ranches, farms and neighborhoods as far north as Orlando.

A vast area drains into Lake Okeechobee, where water laden with phosphorus has fertilized the growth of horrific algae blooms that have been discharged to the ocean. The target phosphorus level for the lake is 105 metric tons a year. Last year, the lake received 450.

The problem has been building up over decades, and defies easy solutions.

Republican Gov. Rick Scott has blamed the algae plague largely on the Obama administration's failure to fix the federally controlled dike around the lake, where high water levels necessitated discharges to the ocean to protect the deteriorated earthen structure.

But environmentalists point to decades of overdevelopment and lax regulation of agriculture, saying the state never forced farms, cities and other sources of phosphorus to reduce it sufficiently to allow the lake to recover.

"I think it's irresponsible to point the finger at the federal government," said Eric Draper, executive director of Audubon of Florida. "The question of who let the all that pollution into Lake Okeechobee is not a federal responsibility, that's a state responsibility. Florida allowed three million acres that drain into Lake Okeechobee to become overdrained

and overdeveloped."

Most recently, he said, the state Legislature and Scott took action that served the lake badly. Lobbied by U.S. Sugar, a major campaign contributor, the governor and his appointees at the water management district rejected a deal to buy U.S. Sugar land south of the lake for water storage. That could have eventually reduced the need for discharges to the ocean.

And last year the state Legislature passed an agriculture-backed revision to water quality law that allowed polluters to continue discharging phosphorus as long as they complied with [best management practices](#), such as not fertilizing when the weather forecast calls for heavy rain.

"Best management practices are essentially voluntary measures," said Bradley Marshall, senior associate attorney at the Florida office of Earthjustice, the environmental law firm. "What we need are hard limits on how much phosphorus comes off these lands, and the state is not providing that."

Tom Frick, director of the Division of Environmental Assessment and Restoration for the Florida Department of Environmental Protection, said the new system is neither voluntary, nor easy to comply with.

Landowners within the lake's huge watershed must show they are either not discharging pollutants or comply with best management practices, he said. The state is checking into levels of compliance and will engage in enforcement where necessary, he said.

Ultimately, he said, the state's plan calls for bringing the lake's phosphorus down to environmentally healthy levels within 15 years.

Known once as the Devil's element for its use in poisons and explosives

(and status as the 13th element discovered), phosphorus was first isolated by a 17th-century alchemist. It's an essential nutrient for plants and animals, but it has proved one of the most vexing problems for the Everglades, where native sawgrass requires a low-phosphorus environment to keep out competing plants such as cattails.

Phosphorus-laden discharges of water from the lake have been blamed, along with the hot weather, septic tanks and other factors, with causing the catastrophic algae blooms that have coated Treasure Coast beaches with green slime.

Although many environmentalists blame "Big Sugar," the cane fields of U.S. Sugar and Florida Crystals around the southern rim of the lake today account for only a small percentage of its phosphorus.

About 37 percent comes from land to the north that drains into the Kissimmee River, according to a 2015 report by the South Florida Water Management District. This includes vegetable farms, citrus groves, cattle ranches, dairy farms and neighborhoods as far north as the Orlando suburbs, where lawn fertilizer, animal waste and other sources of phosphorus wash into the river, which feeds into the lake.

Only 5.8 percent came from the lands where the sugar fields are located, along with towns and other kinds of farms.

Judy Sanchez, spokeswoman for U.S. Sugar, said the industry has sharply reduced discharges to less than three percent of what's going into the lake.

"People are just used to pointing the finger at us," she said.

She criticized the idea of a buyout, saying it would not yield enough land for water storage to significantly reduce the damaging discharges from

the lake to the ocean.

"You can't send much more water south," she said. "No matter what land you acquire, you're still going to flow water out the estuaries."

While the [sugar industry](#)'s discharges to the lake are minimal compared to other sources, that wasn't the case in the past. A 1992 study found that sugarcane fields and sugar mills accounted for 28 percent of the lake's phosphorus.

"There is a historic load of phosphorus already in Lake Okeechobee that came from the sugar farms," Draper said. "There is a current load, even if it is not a major percentage, coming from the sugar farms. We have had long-standing plans to move some of the that water to the sugar farm land, and the sugar industry went from being favorable to that strategy to lobbying against it."

Earlier this month, the governor announced a proposal for matching grants to help homeowners switch from septic tanks to central sewer systems, which would reduce one source of phosphorus reaching the water.

"It is up to all of us - the state, Florida's local communities and the federal government - to work together on long-term solutions to improve the quality of our water," he said. "If approved by the Legislature, this voluntary program will provide funding to encourage residents to move from [septic tanks](#) to sewer systems in order to curb pollution."

To critics, this appeared to be an attempt to avoid the more difficult choices that need to be made to clean up the [lake](#).

"The state is trying to shift the blame to septic systems," said Marshall, of Earthjustice. "While certainly they're a source of phosphorus, they're

not the primary source of these blooms. It's no coincidence that the blooms are occurring right after the discharges from Lake Okeechobee. Because that means they can avoid dealing with the real problem, which is runoff."

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Citation: Florida's algae problem stems from decades of Lake Okeechobee pollution (2016, July 11) retrieved 19 April 2024 from <https://phys.org/news/2016-07-florida-algae-problem-stems-decades.html>

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