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Sewage pipe suspected in killing of coral reef

Delray Beach, FL Scuba diving instructor Chris Wilkins said he sometimes refuses to take divers to a popular coral reef off the coast of southern Boynton Beach because of the algae.

"I don't want them to see a reef that is under siege," Wilkins said. "Red algae blooms are killing the base structure, the sponges and corals. [The reefs] are just devoid of fish."

Some think the daily discharge of about 13 million gallons of partially treated sewage spewing from an underwater pipe is to blame. The sewage comes from the South Central Regional Wastewater Treatment Plant, which is co-operated by Boynton Beach and Delray Beach.

"The reason why we believe the wastewater is damaging the reef is because the scientists at Harbor Branch Oceanographic Institution have taken samples to discover what the algae is eating." Said Tom Warnke, chairman of the Palm Beach County chapter of the Surfrider Foundation. "They discovered [the algae is] eating human sewage."

The Surfrider Foundation is a nonprofit organization dedicated to the protection of the world's oceans and beaches. Warnke also has served as the district director for the Eastern Surfing Association since 1971.

Palm Beach County Reef Rescue Director Ed Tichenor created a petition asking the Florida Department of Environmental Protection to stop destruction of the reef. About 2,000 people have signed it, he said.

The South Central Regional Wastewater Treatment Plant's permit to discharge sewage expires in December. The petition urges the Department of Environmental Protection to write a new permit that would comply with the requirements of the Federal Clean Water Act, which requires that wastewater discharges not degrade the waters that receive them.



SLOW DEATH: A pipe 90 feet underwater and about a mile offshore discharges 13 million gallons of partially treated sewage each day.

Wilkins said the negligence of wastewater treatment plants is the greatest threat to coral reef off Palm Beach County's coast.

"Waste in general is a problem," said Wilkins, who owns Ameri Dive Scuba Center in Boynton. "It's hard to manage, but that's their job. When they placed that pipe it was bad placement."

The pipe has been about a mile out into the ocean off Atlantic Avenue since 1964, said Robert Hagel, executive director of the wastewater treatment plant. The pipe, which is 90 feet underwater, is the plant's only way of getting rid of wastewater, and it is one of eight in southern Florida that dispose of sewage this way, he said.

Boynton Beach is in the process of conducting tests to determine the source of the algae, Mayor Jerry Taylor said, adding that the test could cost the city thousands to millions of dollars.

“The state is basically saying you spend the money and prove you are not guilty,” he said. “I have a problem with that... Why doesn’t the state come in and do the tests?”

Hagel said he is not convinced that the pipe is causing the algae blooms.

“There are many factors,” he said, citing ocean upwellings, global warming and dust from the Sahara Desert as possibilities. “Numerous studies indicate that the Lake Worth inlets have [a] tremendous number of nutrients that are having impacts on the reef.”

The nutrients are causing the problem and more research is needed to find out where the nutrients are coming from, he said.

“They have the same type of damage all the way up the coast,” Taylor said, adding that he agrees more research is needed to prove that sewage is causing the algae problem.

Warnke described the algae as stringy and purple. It is killing sea fans and coral and clogging up lobster, snapper and grouper holes, leaving them nowhere to hide, he said.

The South Central Regional Wastewater Treatment Plant applied for permit renewal in June, but the Department of Environmental Protection notified the plant that it’s application was incomplete. It asked the plant to begin a monitoring program to prove that the plant’s discharge is not causing or contributing to the algae blooms.



A Sea fan is slowly killed by the red algae that grows on it.

The department also requested that the plant look into at least three alternative methods of treatment and disposal.

Coral reefs cannot handle any kind of nutrient enrichment whatsoever, Tichenor said.

“Just 14 parts per billion causes a negative impact on a coral reef, and the plant is discharging thousands of pounds a day of nitrogen,” Tichenor said.