

## River's murky future

It's difficult to tell if and when the Caloosahatchee will recover from Lake O's releases

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A slowdown in harmful releases from Lake Okeechobee this summer has led to some improvements in the Caloosahatchee Estuary, scientists say.

But it may take a few years and a lot less lake water before the estuary repairs itself from damage done in 2004 and 2005, the scientists said.

Less murky, nutrient-laden water from the lake flowed down the Caloosahatchee this summer, meaning sunlight can reach the bottom, where it helps seagrasses grow.

At times during the summer, scientists with the Sanibel-Captiva Conservation Foundation measured sunlight at depths of five or six feet, a depth that was impossible to reach during last year's heavy releases, said Rick Bartleson, a researcher for the foundation.

As a result, some types of seagrass are starting to come back in upstream sites of the Caloosahatchee River, Bartleson said.

However, multiple types of algae continue to grow in the estuary and in the waters just offshore, especially around Sanibel Island and Pine Island Sound, he said.

Some of that algae floated up onto local beaches last week after Tropical Storm Ernesto stirred up the waters and dislodged it.

Beachgoers stroll past a ribbon of red algae on Fort Myers Beach on Sunday afternoon. Jeff Scott, who work at Mid Island Water Sports, said the beach conditions are getting better compared to Friday and Saturday. The return of normal easterly winds should cure the algae problem, he added.

One source of the persistent algae is the nutrients from last year's releases, such as phosphorus, which continue to cycle through the system without being flushed out, Bartleson said. Other sources include nutrients entering the estuary from the atmosphere and fertilizer runoff from lawns and agricultural fields in the watershed.

"You can turn off the river and that stops one source of nutrients, but you still have regeneration," he said.

Regeneration happens when algae that feeds on the nutrients dies and the nutrients are returned to the system.

It's hard to determine how long it will take for the nutrients deposited into the system in 2005 to be flushed out, Bartleson said.

"It wouldn't even get better if you shut off the nutrients from the Okeechobee and watershed and the atmosphere," he said.

As long as algae blooms continue, seagrass will have a hard time recovering, said Rob Loflin, natural resources director for the city of Sanibel.

"A full recovery could take between four and six years in perfect conditions," Loflin said.

The amount of water dumped into the system in 2005 far exceeded what biologists would deem acceptable, said Sanibel Mayor Carla Johnston.

The murky water shut out sunlight and killed about 70 percent of the seagrass in the waters between the mouth of the Caloosahatchee and Sanibel, she said.

A drier than normal rainy season in the area around Lake Okeechobee resulted in fewer discharges this summer. Seagrass beds in some areas are rejuvenating, but one major storm could raise the lake's level, causing more deadly releases.

More releases could doom the remaining seagrass beds, Johnston said.

"If we lose 70 percent of that 30 percent, it doesn't take a wizard to know that we won't have any in a few years," she said.

Considering most of Southwest Florida's economy is tourism-based and those tourists come because of the area's beauty, the livelihood of many residents could be in jeopardy, Johnston said.

"If you don't have paradise, you're not likely to have a booming economy," she said.

Capt. Dave Hanson of Fishbuster Charters said he's seen huge improvements in the water quality compared to last year.

Last year, Lake Okeechobee releases made the water in Estero Bay so fresh that Hanson couldn't keep bait alive in a bait well that pulls in bay water.

The nutrient-laden fresh water caused algae growth on reefs as far south as Naples, he said.

Conditions have improved this year as salinity has returned to inshore waters.

"Nature will take care of itself as long as we stop putting our stuff into it," Hanson said. "It may not come back as good as it once was, but it's going to get better than it will be if they continue to dump most of the water on this side."