Tape grass decreased, how it affects water quality in Fort Myers

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- Human activities, including dredging the river and nutrient runoff from farms and lawns, have degraded the ecosystem.
- A non-profit group secured $3.5 million to fund a restoration project aiming to replant tape grass beds by 2027.
- Restoration efforts face challenges from hurricanes, storm surge, and drought conditions that hinder tape grass growth.

Tape grass in the Caloosahatchee River just isn't what it used to be.

Decades ago, it was so thick in the upper river that Rick Bartleson's uncle had to use his boat propellor to create a pathway through the thick grasses just to get his boat off the dock so they could fish.

All boaters in that area made similar paths for their boats. The grass was so thick that it reached the surface, filling all of the water column with an efficient natural filter.

"When I was growing up I'd go fishing with my uncle in North Fort Myers and he'd have to make a prop dredge through the grass to get the boat out," Bartleson said.



"It was popping out on the north side of the river and in 2000 salinity was just too high and most of the tape grass that was topping out for years and years and it was suddenly gone."

Now, the outlook for tape grass in the system is bleak, but there is some hope that it may return one day.

'More encouraging than I expected'

Long considered an indicator of the Caloosahatchee River's overall health, tape grass hasn't been prominent here in a quarter-century.

Bartleson, a chemist at the Sanibel-Captiva Conservation Foundation, or SCCF, scanned an area of the river near Beautiful Island for tape grass in late April.

"There was a bleak aspect, but it was more encouraging than I expected," he said. "There's not enough to start forming a canopy and start flowering and producing seeds.

"So, for a seed bank, we're probably at year zero. It's not going to filter anything if there's a few sprigs or there isn't enough acreage."

Tape grass critical for Caloosahatchee fishery, manatees

Tape grass is part of Mother Nature's way of providing habitat for wildlife and cleaning the water of any unwanted nutrients.

Without features like tape grass beds and oysters, water quality starts to decline.

"In the '90s it was super effective at filtering the water," Bartleson said. "It was growing from the bottom to the surface, so it would keep algae blooms from forming."



The Caloosahatchee River has a long and winding history, from a shallow river system with seasonal waterfalls, twisty oxbows and to a channelized system that's used as a flood plain for Lake Okeechobee and the historic Everglades system.

Developers and government agencies dredged and straightened the river as an overall effort to drain the Everglades to create land that has since been farmed and used to build homes for millions of south Floridians.

Tape grass has almost disappeared in the Caloosahatchee

The river slowly degraded over the decades as more people and farming operations moved into what was promoted as the nation's winter bread basket.

South Florida's ecology evolved as a low-nutrient system, and any extra inputs of nutrients like nitrogen and phosphorus (used on farms, golf courses and lawns) causes water quality problems like toxic algae blooms.

If natural features like oyster beds and tape grass were more expansive, water quality in the river would improve.

What will happen to the drain plug of the Everglades?

That's where groups like the Angler Action Foundation come into play.

This Stuart-based nonprofit helped secure $3.5 million in funding last year. The money is being used to restore grass beds by planting seeds and monitoring tape grass success.

"It's a mess over there," said Brett Fitzgerald, executive director of the Angler Action Foundation. "But I am extremely hopeful that we're going to have some success bringing tape grass around Beautiful Island."

Fitzgerald and his group hope to complete a tape grass restoration project in the river by April 2027.

The river has been in decline for about a century, but the real water quality issues started around 2000.

Era of hurricanes, drought aren't helping tape grass

"There was a couple thousand acres of (tape grass) there and the tarpon and the ducks and everything were so thick," he said. "And then there were hurricanes and droughts and more hurricanes."

Several hurricanes have hit Southwest Florida since Hurricane Charley in 2004.

Storm surge can cause seed banks to become covered in muck, which can smother the next generation of tape grass.

"We've had success, but it's in a weird spot right now," Fitzgerald said of the project. "The grass was growing and really strong and we had consecutive storms. Then we had drought and it has stunted the growth there."

All of Florida is in a drought now, and the conditions aren't good for tape grass as it needs a certain amount of freshwater to thrive.

Bartleson, the scientist on Sanibel, said regrowing grass in the upper river would improve water quality while helping prevent toxic blue-green algae (cyanobacteria) outbreaks.

"If you want cyanobacteria to grow, kill all the tape grass," Bartleson said.