

CRITICAL WATER ISSUES

ALGAL BLOOMS & RED TIDE

Noxious algal blooms in South Florida's waterways are devastating to wildlife and result in serious impacts to Floridians' livelihoods. Resolving it requires legislators, scientists, activists and citizens to unite firmly behind cooperative efforts to mitigate the damage and prevent its recurrence. Although there are no easy fixes, The Nature Conservancy is advocating for several key projects—some already under construction—to provide relief as quickly as possible. Fixing the algae problem is frustratingly slow for those suffering in its presence, but finger-pointing and hyperbole will not solve the problem: smart storage and expanded treatment of water throughout the Everglades ecosystem is the only solution.



Unfortunately, as we confront blue-green algal bloom, our state is faced with a second water crisis: red tide. Though both blue-green algae and red tide occur naturally, they pose distinct threats and, therefore, require different interventions.

BLUE-GREEN ALGAE

Cyanobacteria, the microorganism that comprises blue-green algae, occurs naturally in Florida's freshwater and brackish habitats. Blooms can erupt with high heat, sunlight, abundant nutrients and reduced water flow. Summertime in Florida offers prime toxic bloom conditions.

Treating current harmful algal blooms and preventing future blooms requires sound science and comprehensive planning. We are advocating for extensive storage and treatment of water in the entire Everglades

ecosystem, which includes these critical areas of concern:

- North of Lake Okeechobee, to attenuate runoff
- South of Lake Okeechobee, to ultimately send clean water to the Everglades
- In the lake itself, when the Herbert Hoover Dike repair is complete
- In local watersheds, to address stormwater runoff from urban and agricultural sources

The Conservancy's key role in initiatives to benefit the Caloosahatchee and St. Lucie estuaries:

Herbert Hoover Dike repair

- TNC Florida successfully advocated for the state, Congress and the U.S. Army Corps of Engineers to accelerate by 3 years completion of repairs to the dike
- We now urge the Corps to allow for temporary storage in the lake following the completion of repairs

TNC's position: We believe there is room for additional short-term storage in Lake Okeechobee when excessive rainfall occurs in the system. This storage, by far the least expensive and quickest option given the cost and construction time needed for reservoir construction, can reduce damaging discharges to the estuaries.

Everglades Agricultural Area Reservoir

- TNC Florida trustees joined our government relations team to aggressively advocate for passage of the critical Water Resources Development Act of 2018 which will congressionally authorize the new EAA Reservoir, providing storage and treatment so more water can be sent to the Everglades instead of to the estuaries

TNC's position: We believe the EAA Reservoir, along with the C-43 reservoir on the Caloosahatchee River and the C-44 reservoir/stormwater treatment area on the St. Lucie estuary and other large-scale watershed projects, will make the most significant long-term improvements for the estuaries.

RED TIDE

Caused by the single-celled alga, *Karenia brevis*, red tide has been a naturally occurring phenomenon along Florida's Gulf Coast since the 1800s. Red tide is a saltwater event, not directly linked to blue-green algal blooms and Lake Okeechobee.

This summer's outbreak has been particularly horrific, with hundreds of dead fish, manatees, turtles and birds. Wildlife die when oxygen levels drop due to decomposing algae, or from toxins from the algae.

Researchers, including those from our partners at Mote Marine Laboratory, have found no direct link between nutrient pollution and the frequency or severity of red tides caused by *K.*

brevis. Florida red tides develop 10-40 miles offshore, away from manmade nutrient sources. Currents, including the Loop Current, can push red tides closer to our coastal communities and once red-tide blooms reach Florida's shoreline, local nutrient sources can fuel their growth and increase their persistence.

Although red tide originates offshore, the coastal nutrients that might be exacerbating its impacts could be reduced if we improve:

- Fertilizer practices (such as avoiding those with urea)
- Stormwater management
- Conversion from septic to sewer