



# Friends *of the* Everglades

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**Submitted in writing to the House Committee on Transportation & Infrastructure  
Subcommittee on Water Resources & Environment  
Hearing on the Comprehensive Everglades Restoration Plan  
and Water Management in Florida  
Thursday, September 24, 2020**

Dear Chair Napolitano, Ranking Member Westerman, and honorable members of the subcommittee:

On behalf of Friends of the Everglades, founded by Marjory Stoneman Douglas in 1969, and Center for Biological Diversity, which joins us in this testimony, thank you for conducting today's hearing on the world's largest environmental restoration project — the Comprehensive Everglades Restoration Plan — and the inextricably linked challenge of water management in Florida.

This is a timely and urgent matter for some 9 million residents who live in the 16-county Greater Everglades ecosystem, reaching from Orlando south to the Florida Keys. As you sit today, Lake Okeechobee's water levels are rising and the Army Corps of Engineers has warned coastal communities that polluted discharges from the lake to the Caloosahatchee and St. Lucie Estuaries may be forthcoming — again.

It's been only two years since Florida's historic toxic-algae blooms of 2018 that killed marine life, threatened human health, and hamstrung businesses on the state's southeast and southwest coasts. That crisis followed a similarly disastrous toxic-algae bloom in 2016, which was preceded by decades of periodic Lake Okeechobee discharges that damaged ecosystems and businesses along the northern estuaries. Even when toxic algae is not present in Lake Okeechobee water, massive discharges to the St. Lucie and Caloosahatchee are harmful because they deplete salinity levels and carry phosphorus, nitrogen and sediment to the delicate estuarine systems. While water sent south to the Everglades must be cleaned, the water discharged east and west is entirely untreated.

The crisis of too much water for the northern estuaries is especially confounding because the southern end of the Greater Everglades ecosystem receives too little water during the dry season. Parts of Everglades National Park burned this spring<sup>1</sup> during the dry season, while Florida Bay, south of the park, regularly suffers from hypersalinity due in part to lack of freshwater from the north. The solution, as identified in CERP, is to store, treat and send more water south from the lake to the Everglades. The EAA Storage Reservoir aims to address this problem — but, unfortunately, its reduced scale calls into question whether it will be effective in mitigating the Army Corps' harmful discharges from Lake Okeechobee and sending clean water to the southern Everglades.

We are grateful that the Army Corps and South Florida Water Management District have, since 2019, demonstrated new willingness to protect residents and ecosystems from toxic algae by modifying Lake Okeechobee operations and finding new places to store water south of the lake. However, the gains have been only incremental.

All of the factors that caused the 2018 toxic-algae crisis continue to exist today. In our testimony, we will outline potential near-term and long-term solutions for saving the only Everglades in the world, protecting the health of residents who live near it, and ensuring this vital ecosystem remains an economic engine for the state of Florida.

## The Everglades ecosystem and CERP

Over the past century, half of the greater Everglades has been lost to development. The remnants of the system have been drained, channelized and otherwise manipulated in the name of flood control and water supply, resulting in too little water to Everglades National Park and Florida Bay, and too much water to the northern estuaries that serve as relief valves for Lake Okeechobee: the St. Lucie and Caloosahatchee estuaries, as well as Lake Worth Lagoon.

What's left of the Everglades is severely degraded. Water remaining in the system has been polluted by phosphorus, nitrogen, mercury, and other contaminants introduced by agriculture, urban development, and industry.<sup>2</sup>

When Congress passed CERP 20 years ago, it was with the recognition that significant action was needed to salvage the Everglades. We are still waiting to see on-the-ground results.

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<https://www.usatoday.com/story/news/nation/2020/04/28/everglades-wildfires-if-coronavirus-restrictions-lift/3030271001/>

<sup>2</sup> <https://www.nap.edu/read/25198/chapter/1#xi>

The cost of the 68 authorized CERP projects increases with each passing year. From 2020-2030, an estimated \$7.4 billion will be needed for total South Florida Ecosystem Restoration Construction, which includes CERP and other Everglades-related projects.<sup>3</sup>

A former Friends of the Everglades executive director once said, “The Everglades is a test. If we pass, we may get to keep the planet.” Given the poor water quality and toxic algae blooms we’ve witnessed in recent years, it is difficult to claim we have a passing score. But it is not too late: With bold thinking, flexible operations and political will, we can rescue the Everglades ecosystem yet — thereby protecting the millions of people and thousands of species that rely on it.

## Human health and toxic-algae blooms

Water management in Florida historically has weighed the competing interests of flood control, water supply, water quality and natural systems. A growing body of evidence suggests our management of water in Florida also has a direct impact on a fifth and critical interest: human health.

Harmful Algal Blooms (HABs) are the waterborne threat of our time, and our growing understanding of the health risks they pose create new urgency for Everglades restoration. Toxins in red tide are known to harm humans and marine life, and are exacerbated by discharges from Lake Okeechobee.<sup>4</sup> Mounting research indicates links between toxins found in cyanobacteria, also known as blue-green algae, and non-alcoholic liver disease and neurodegenerative diseases (including Lou Gehrig’s, Parkinson’s and Alzheimer’s diseases).<sup>5</sup>

During the toxic algae crisis of 2018, satellite imagery from the National Oceanic and Atmospheric Administration showed 90% of Lake Okeechobee’s open water was covered with cyanobacteria. Without regard to the human-health risk, lake water was discharged to the coastal estuaries that summer, where it presented as noxious blooms along public waterfronts and private properties. In Southwest Florida, the cyanobacteria blooms prompted by Lake Okeechobee discharges commingled with toxins from a simultaneous red-tide bloom, posing risks that researchers are only beginning to comprehend.<sup>6</sup> The health concerns presented by toxic algae threaten those living well away from the waterfront, too. Scientists at Florida Gulf

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[https://evergladesrestoration.gov/content/ids/meetings/091720/IDS\\_2020\\_Update\\_Public%20Workshop.pdf](https://evergladesrestoration.gov/content/ids/meetings/091720/IDS_2020_Update_Public%20Workshop.pdf)

<sup>4</sup> Medina et al (2020): *Seasonal dynamics of terrestrially sourced nitrogen influenced Karenia brevis blooms off Florida's southern Gulf Coast*

<sup>5</sup> Brain Chemistry Labs research: <https://brainchemistrylabs.org/new-blog/tag/BMAA>

<sup>6</sup> Metcalf et al (2020): <https://link.springer.com/article/10.1007/s12640-020-00248-3> and <https://www.news-press.com/story/tech/science/environment/2020/07/21/multiple-blooms-multiple-toxins-multiple-worries-new-study-sheds-light-2018-s-disastrous-algae-crisis/5478751002/>

Coast University found evidence that cyanobacteria can be aerosolized and travel more than a mile inland.<sup>7</sup>

Historically, the Army Corps has not considered Harmful Algal Blooms as an official factor in its management of Lake Okeechobee's water. In 2019, the Corps proposed a deviation to its Lake Okeechobee Regulation Schedule to allow for more flexibility when Harmful Algal Blooms are present in the lake. We applaud that flexibility, which has the added benefit of relieving pressure from the aging Herbert Hoover Dike.

We hope to see the Army Corps build on that flexibility when it implements its Lake Okeechobee System Operating Manual (LOSOM) in 2022. We also are grateful to you, members of the Transportation & Infrastructure Committee, for passing a WRDA bill that keeps the so-called "Savings Clause" out of LOSOM. Including it would have foisted 20-year-old water-supply promises onto Lake Okeechobee management in the future. We hope to see the U.S. Senate follow suit by passing the WRDA bill.

Long-term flexibility for Lake Okeechobee operations is critical; this problem is not going away. Scientific consensus is that HABs are increasing in magnitude, frequency and duration worldwide.<sup>8</sup> It's critical that Everglades restoration efforts and Lake Okeechobee operations proactively address the risks.

## EAA Reservoir improvements needed

The planned EAA Storage Reservoir and its connected Stormwater Treatment Area would be able to address the challenges outlined above — if it was of adequate scale, and appropriately designed and constructed to alleviate toxic-algae discharges. However, we previously joined Sierra Club and Center for Biological Diversity in articulating 20 major concerns<sup>9</sup> about the current 16,000-acre configuration, including:

- A 23-foot deep reservoir of nutrient-rich water could promote the same or more profound conditions that fuel Harmful Algal Blooms than those currently experienced by the estuaries.
- The 6,500-acre STA proposed for the EAA Storage Reservoir has not been proven adequate for water-quality treatment. Research from wetlands ecologist Dr. William J. Mitsch, director of Florida Gulf Coast University's Everglades Wetland Research Park,

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<https://www.news-press.com/story/tech/science/environment/2019/03/15/new-health-questions-raised-fgc-u-research-toxic-algae-dust/3176195002/>

<sup>8</sup> Congressional Research Service, *Freshwater Harmful Algal Blooms: Causes, Challenges, and Policy Considerations* (Aug. 20, 2018)

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[https://everglades.org/wp-content/uploads/2020/05/EAA-Storage-Reservoir\\_Final-EIS\\_Joint-Comments\\_Sierra-Club\\_Center-for-Biological-Diversity\\_Friends-of-the-Everglades\\_02-24-20-3.pdf](https://everglades.org/wp-content/uploads/2020/05/EAA-Storage-Reservoir_Final-EIS_Joint-Comments_Sierra-Club_Center-for-Biological-Diversity_Friends-of-the-Everglades_02-24-20-3.pdf)

indicates the treatment wetlands in the STA are not sufficient to handle the anticipated volume of increased flows south from Lake Okeechobee.<sup>10</sup>

- While the planned EAA Storage Reservoir and STA provides some added relief to both the St. Lucie and Caloosahatchee estuaries, the reductions are relatively minor in comparison to those provided by already authorized projects. To re-establish stable health to these estuaries, greater reductions to significant high-volume discharges are needed.

Studies indicate more land is needed in the Everglades Agricultural Area to address system-wide concerns by storing at least 1.2 million acre feet of water. In the absence of willing sellers among EAA landowners, the federal government should consider all reasonable alternatives that would eliminate discharges to the northern estuaries — including eminent domain if necessary. This is within the federal government’s right<sup>11</sup> so long as it complies with the Fifth Amendment requirement to provide “just compensation” to the owner. Moreover, using private property to protect the natural environment is a clear public use under the Fifth Amendment.

## Environmental justice for all

The decades-old push to stop polluted Lake Okeechobee discharges to the northern estuaries is sometimes painted by agricultural interests as an effort of “coastal elites” to protect their own interests. However, that assessment is misleading and overlooks critical stakeholders who fish in and live near waterways impacted by toxic algae blooms. Toxic-algae laced discharges from Lake Okeechobee harm subsistence fishermen along both estuaries. Airborne toxins are capable of reaching residents far from the shore. And, of course, the harm inflicted on our marine-dependent businesses impact workers at all socioeconomic levels.

We thank you for your attention to Everglades restoration, water management and the emerging concerns that are intertwined with Harmful Algal Blooms.

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<sup>10</sup> <https://www.sciencedirect.com/science/article/pii/S2590290319300094>

<sup>11</sup> Kirby Forest Indus., Inc. v. United States, 467 U.S. 1, 9 (1984)