

Everglades restoration moves closer to reality with a crucial groundbreaking

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It's been 23 years since Congress passed the Comprehensive Everglades

Restoration Plan, an ambitious program to undo, at least in part, the damage done by humans to one of the most unique ecosystems on the planet.

In the interim, Everglades restoration has made halting progress, with much of the delay centered around a key central component—a reservoir and filtration marshes that reconnect Lake Okeechobee with the Everglades.

The reservoir and stormwater treatment marshes would store [dirty water](#) from Lake Okeechobee, clean it, and send it south to the parched Everglades and eventually to Florida Bay and the Gulf of Mexico.

Last week, the Army Corps of Engineers and the South Florida Water Management District finally broke ground on the project, dubbed The Everglades Agricultural Area Reservoir. Both organizations refer to it as the "crown jewel" of the restoration process. It's one of 68 projects outlined in the restoration plan, but arguably the most important.

This project "is the keystone that deliberately reconnects Lake Okeechobee to the Everglades," said Col. James Booth, commander of the U.S. Army Corps of Engineers Jacksonville District at the groundbreaking on Wednesday.

To understand the function of the reservoir, you must understand what the EAA is. The Everglades once flowed from just south of Orlando, through Lake Okeechobee, all the way to Florida Bay. It has been dammed and drained. The EAA, once part of the River of Grass, is now a 1,160-square-mile block of farmland below Lake Okeechobee covered in sugarcane and other crops.

The area depends on water from the lake for irrigation, and its existence and [water needs](#) have dictated where water flows in South Florida for

decades.

In order to reconnect the Lake Okeechobee to the Everglades, which needs the [fresh water](#), the reservoir will allow a portion of the lake's water to skirt farmland and head south, just as it had for thousands of years.

The original CERP plan called for a massive six-foot-deep, 60,000-acre lake on EAA land. What the EAA Reservoir actually will be is a 10,000-acre square that's 23 feet deep. Its total capacity will be about two-thirds of the original plan.

Steven Davis, chief science officer for The Everglades Foundation, has been closely monitoring CERP for decades. "The constraint was, one, we were looking at state-owned land, and the consideration of willing sellers. So we were constrained with the footprint of the parcel, 17,000 acres," Davis said.

Davis said the reservoir will be complete, if all goes well, by 2030, and will then need a few years of testing to ensure safety. He hopes to see water flowing south out of the stormwater treatment areas by 2032.

The South Florida Water Management District began construction on the EAA stormwater treatment areas in April 2020. The result will be a 6,500-acre constructed wetland that will use [aquatic vegetation](#) to naturally remove nutrient pollution and [clean water](#) before it flows south into the Everglades. They will be filled with nutrient-consuming vegetation that sequester phosphorus, a chemical needed for life, but one that can damage the Everglades, as well as cause algae blooms in coastal estuaries. The wetlands should be complete by late 2023.

Davis said there will be a trail around the EAA Reservoir for biking and hiking, and the 6,500 acres of the stormwater marshes will essentially be

wildlife habitats for birds and fish. Similar marshes in the CERP plan have fishing and waterfowl hunting access, so that's a possibility here as well.

In addition the the EAA Reservoir, one of the most pivotal CERP projects is the 1-Mile Bridge under the Tamiami Trail, a highway that essentially dammed up Everglades when it was built in 1928.

Completed in 2012, just west of the Miccosukee Casino & Resort, the bridge, along with other projects, have created gaps allowing water to flow south, instead of being diverted to coastal areas.

Drew Bartlett, of the water management district, said at a recent Everglades conference that the last two years have seen record amounts of water flowing under the Tamiami Trail, south through the Everglades and into Florida Bay.

Mapping by the district indicates that 20 years ago, [water flow](#) in April was essentially stopped at the Tamiami Trail. The mapping from the last two years shows a distinct watery swath—a river, essentially — moving right through the middle of the Everglades into Florida Bay, echoing the water flows of 100 years ago.

Another goal of the Comprehensive Everglades Restoration Plan is to even out the sheet flow of water.

Recent history saw compartmentalization of the Everglades. Some areas were too dry, causing peat fires, while others were too wet.

When the Tamiami Trail is acting as a dam, the area north of it has too much water too often, resulting in drowned tree islands, the habitat historically used by racoons, deer and the endangered Florida panther.

Davis pointed out the plight of the endangered cape sable seaside sparrow, which nests in areas that every summer would have pulses of very high water that should have been spread across the 50-mile width of the ecosystem. That uneven flow floods their nests. Spreading water out will allow their nests to stay dry and their hatchlings to survive, he said.

The dry areas south of the Tamiami Trail also invite [saltwater intrusion](#) from sea-level rise and threatens drinking water. Millions of people in South Florida, including residents of Broward and parts of Palm Beach County, rely on the Everglades for drinking water, which would be destroyed by salt water.

Salt-water intrusion "is unabated right now," David said, "particularly at the height of the dry season, those marshes are drying out completely, which means there's a void to be filled by sea water. If we can send more water south, especially during the dry season, we've got something to push back with."

Another issue abated by the EAA Reservoir is the disastrous Lake Okeechobee discharges to both the Caloosahatchee River and the St. Lucie area. The discharges are linked to algae blooms and catastrophic seagrass die-offs inside Jupiter Inlet in the Indian River Lagoon. With more water headed south, Davis said, those discharges will be reduced.

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