

Central Everglades Project: *A Roadmap to Achieve Restoration Results*



Great Egret

Hundreds of thousands of wading birds once nested in the Everglades.¹ Starting in the mid 1800s, canals, levees and other infrastructure were put in place to make the area more suitable for development and agriculture. These manmade changes to the landscape have left wetlands in the region in poor health – some areas are over dry, while other areas are too wet.

Having too much or not enough water at the right time can lead to wading birds abandoning their nests. As a result of these changes to the ecosystem, wading bird populations have declined sharply from historic numbers to a total of only 43,896 wading bird nests in 2015.²

Coastal estuaries have also suffered from these changes to the landscape. Historically, during the rainy season, water would spill over the banks of Lake Okeechobee and flow south in a slow, steady pattern, known as sheetflow, finally emptying into Florida Bay, near the Florida Keys.

Today, when water levels become too high in Lake Okeechobee, water is diverted from its natural path and is instead released into the Caloosahatchee and St. Lucie estuaries in order to protect the aging Herbert Hoover Dike. These large releases of freshwater can lead to algae blooms, and die-off of seagrasses and oysters.

Without the ability to move this water south, Florida Bay is disconnected from its historic upstream source of freshwater. Until the barriers to freshwater flow constructed over the last century are removed and additional water is stored south of Lake Okeechobee, Florida Bay cannot be assured of enough freshwater to prevent damages from high salinity levels.

The water issues in 2015-2016 clearly demonstrate the need for projects that develop more water management options. At the same time that billions of water flowed to the east and west of Lake Okeechobee, Florida Bay suffered a massive sea grass die-off because of localized drought conditions.

The Solution: Restoring the Central Everglades

The Central Everglades is the vast region of the Greater Everglades Ecosystem that connects Lake Okeechobee and Everglades National Park. The Central Everglades Project (CEP) is a series of interconnected restoration projects that are designed to increase freshwater flows south through this region. When complete, CEP will hold, treat and deliver water through the Central Everglades, providing benefits to coastal estuaries, and Florida Bay.

In the Central Everglades, increases in freshwater will rehydrate wetlands and improve the habitat for wading birds and other wildlife. Combined with other restoration efforts such as Tamiami Trail bridging, additional water storage in the Everglades Agricultural Area and the C-111 projects, more of these flows will be delivered to Florida Bay. This will rebalance salinity levels and benefit fish, crabs, and other animals that are the food source of birds like Roseate Spoonbills.

In the coastal estuaries, this project is the first step toward reducing releases of water from Lake Okeechobee that will restore salinity levels and allow seagrasses and oyster beds to recover. (See Figure 1)

Flowing Water South

A new Flow Equalization Basin south of Lake Okeechobee will capture some of the water currently discharged to the St. Lucie and Caloosahatchee estuaries. This feature will then help attenuate flows to the Central Everglades that will be facilitated by the removal of barriers to flow.

Keeping Water in the Everglades

Because of the nature of the water table in South Florida, water that enters the Everglades can easily seep into urban areas. CEP includes operational changes and construction of a partial barrier to prevent seepage and ensure that more water remains in the Everglades.

¹ Frederick, P., et al., The White Ibis and Wood Stork as indicators for restoration of the everglades ecosystem. Ecol. Indic. (2008), doi:10.1016/j.ecolind.2008.10.012

² Cook, Mark I., ed. *South Florida Wading Bird Report*. Rep. Vol. 21. West Palm Beach: South Florida Water Management District, 2016



Audubon's Restoration Goals for the Central Everglades

Restoring freshwater flows south from Lake Okeechobee will benefit an area extending from the Central Everglades all the way south to Florida Bay. Due to the ecosystem decline observed in the Central Everglades³, Audubon has long urged for the prioritization of restoration projects that restore flow and provide ecosystem benefits more quickly.

CEP represents a response to this call to action and was the direct result of an expedited planning process that can now be used as a model for future ecosystem restoration projects around the nation. By mimicking the natural path of water flow, CEP will benefit Roseate Spoonbills, Everglade Snail Kites, other iconic species while rehydrating South Florida drinking water aquifers.

Audubon scientists expect CEPP to provide many benefits including:

- ⇒ Improve area and quality of habitat for birds and other wildlife by increasing freshwater flows to the central Everglades by an average of about 200,000 acre-feet per year.
- ⇒ Rehydrate wetlands by restoring sheetflow through removal of more than 25 miles of canals and levees to restore natural sheet flow to 10,000 acres of degraded wetlands.
- ⇒ Helps prevent algae blooms and degradation of habitat quality in the Caloosahatchee and St. Lucie estuaries by reducing damaging freshwater releases from Lake Okeechobee
- ⇒ Improve salinity levels and habitat quality for Roseate Spoonbills and other wildlife in Florida Bay.
- ⇒ Rehydration of aquifers for over 7 million people who rely on the Everglades for drinking water.

Once Congressional approval is obtained, construction of the Central Everglades Project should be prioritized.

With the capability to move more water south through CEP, planning and building a reservoir in the EAA is even more imperative. Water from the Lake can be moved into this reservoir, flowed south through CEP features to parts of the Everglades where it is desperately needed.

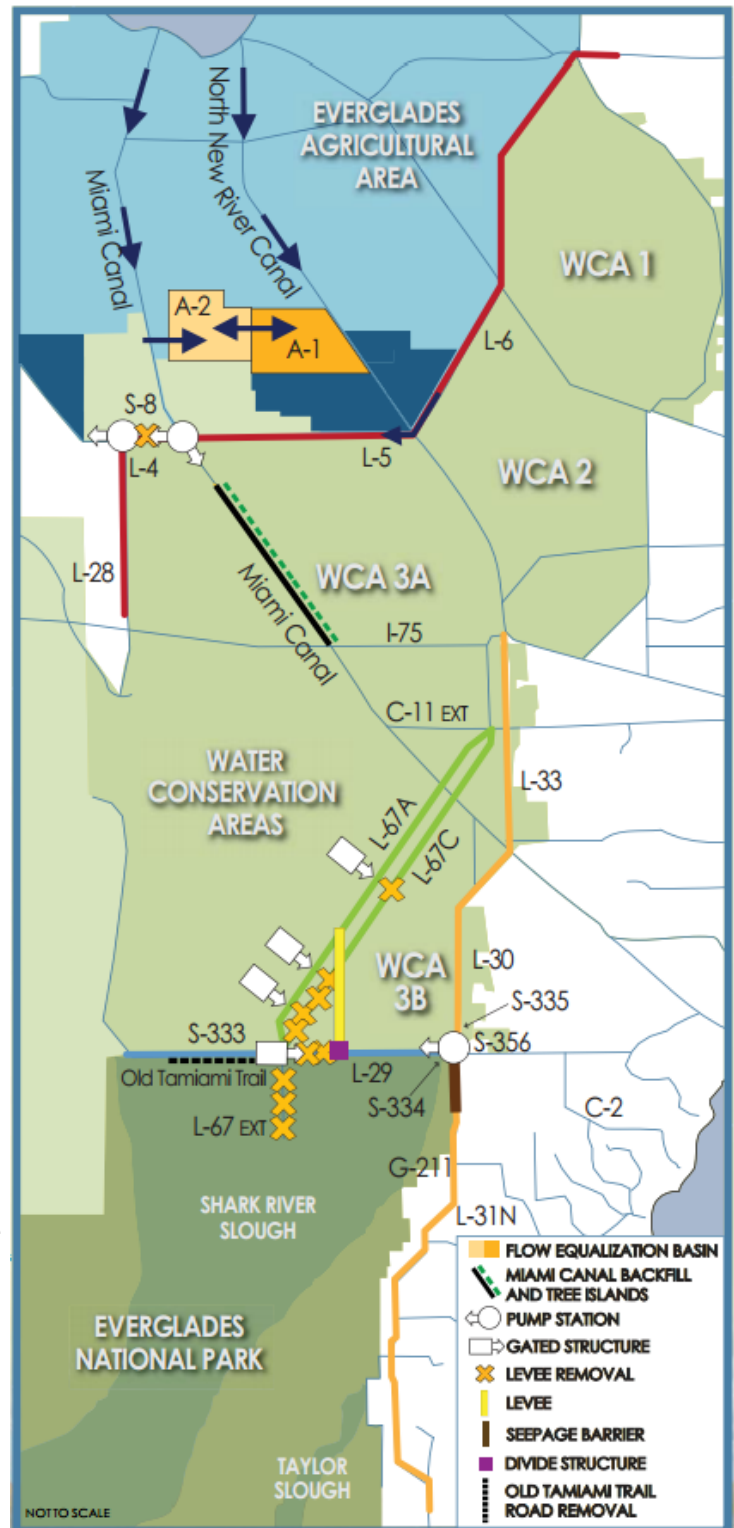


Figure 1: The CEPP Tentatively Selected Plan. Map by SFWMD.

³. Committee on Independent Scientific Review of Everglades Restoration Progress, National Research Council. *Progress toward Restoring the Everglades: The Second Biennial Review*. Washington, D.C.: National Academies, 2008. Available: https://download.nap.edu/login.php?record_id=12469&page=%