At the heart of South Florida's ecosystem is Lake Okeechobee, the second largest freshwater body located wholly within the continental United States.

Early explorers heard rumors of what Native Americans called “big water” and though it was a myth. Today, the lake remains elusive as a 35-foot-high dike surrounds it, hiding the lake from view. Yet, the lake encompasses 730 square miles – so big, it impacts weather patterns, producing clouds and rain in a doughnut-like pattern.

Containing the Lake’s Waters
A huge wetland once encircled Lake Okeechobee. Early farmers built small muck levees to hold back the water in the late 1800s. Hurricanes in the 1920s lifted water out of the lake, flooding property and killing thousands. By the end of the 1920s, major drainage canals were in place from Lake Okeechobee to the ocean. The Caloosahatchee Canal ran from the western shore to the Gulf of Mexico; the St. Lucie Canal extended from the eastern side to the Atlantic Ocean. The West Palm Beach, Hillsboro, North New River and Miami canals all ran from various points on the southern shore to the Atlantic Ocean. Major construction began in 1930 to enclose the lake behind the Herbert Hoover Dike. The Caloosahatchee River was deepened, and the U.S. Army Corps of Engineers began regulating the water level of Lake Okeechobee (between 14 and 17 feet) through discharges to the St. Lucie Canal and the Caloosahatchee River.

Activities Impact the Lake’s Health
Constructed outlets replaced natural inflow streams, overflow marshes and sloughs. Lake levels, once controlled by rainfall, were now controlled by gates and locks. Extreme variations impacted grassy beds, especially in the lake’s marshy west side. Flood control improvements also resulted in intense agricultural development around the lake. Sugarcane and winter vegetables were planted south, and dairy farms and cattle ranches sprang up north. These activities produced unnaturally high concentrations of nutrients, especially phosphorus, which flowed or were pumped with storm water into the lake. When lake levels were high, the water was discharged into estuaries east and west. This practice continues today.

Improving the Health of the Lake and Estuaries
Restoration programs are under way to buffer and relieve impacts to Lake Okeechobee and the connecting Caloosahatchee and St. Lucie rivers and estuaries. Improved land management practices are reducing nutrient run-off, and constructed treatment wetlands are improving water quality. More water storage north of the lake will achieve healthier lake levels and reduce harmful discharges to the estuaries.