

CASE STUDY / LAKE HICPOCHEE HYDROLOGIC ENHANCEMENT

RESTORING A SOUTH FLORIDA WATERWAY

The South Florida Water Management District launched an ecosystem restoration project to improve wetland areas near historic Lake Hicpochee, enhancing wildlife habitat and improving water quality.



PROVIDING SUSTAINABLE WATER RESOURCES

By reversing over 100 years of human impact to the lakebed, the community will be able to receive improved water resources.

CHALLENGE

In 2013, the South Florida Water Management District made plans to reverse over 100 years of damage to Lake Hicpochee. The lake was divided in the 1800s by a canal, which caused it to shrink to only 25% of its initial size. From low-quality marsh to toxic algae blooms and insufficient freshwater levels, the area experienced significant deterioration over time.

The hydrologic enhancement project was initiated to redirect stormwater runoff and provide a more controlled water flow from a new equalization basin into Lake Hicpochee.

SOLUTION

The South Florida Water Management District issued work orders totaling \$1.4 million to our team to prepare conceptual, preliminary and detailed designs for the project, which consisted of a 670-acre flow equalization basin, 74,000-gpm inflow pumping station, and a spreader canal approximately 6,600 feet in length to deliver flows to Lake Hicpochee. The engineering efforts consisted of preparation of construction plans, specifications and support during construction. As part of the project, the team performed

regulatory assessment, hydrologic analysis, hydraulic analysis, and levee embankment and canal design.

Complex strategies were solved regarding the passage of stormwater flows from surrounding farmlands through and around the project. The pumping station was designed to be capable of delivering flows to the flow equalization basin and to a future, larger and deeper storage area with only minimal changes to equipment. This allows the equipment to be left in service as opposed to requiring replacement in only a few years.

RESULTS

The hydrologic enhancement provided solutions for reversing the damage Lake Hicpochee has faced over the years. The work that was provided helped rehydrate a portion of the historic lakebed, increasing natural wetland vegetation and improving approximately 1,279 acres of freshwater wetlands and habitat.

The project is one of several initiatives geared toward environmental restoration of Lake Hicpochee and offering more sustainable water resources for the community.

PROJECT STATS

CLIENT

South Florida Water Management District

LOCATION

Moore Haven, Florida

COMPLETION DATE

2019

\$11.3M

RESTORATION

670

ACRES IN BASIN

6,527

LENGTH OF SPREADER CANAL, IN FEET

74K

GPM PUMP STATION