

## LYKES LAND & WATER RESOURCES PROJECTS

### West Waterhole

#### PROTECTING LAKE OKEECHOBEE THROUGH NATURAL WATER TREATMENT

The West Waterhole Project is a pioneering water quality initiative on Lykes Ranch that removes excess nutrients from canal water before it enters Lake Okeechobee. Launched in 2006 as part of the Florida Ranchlands Environmental Services Project (FRESP), this 2,500-acre treatment area demonstrates how working ranchlands can deliver meaningful environmental benefits while remaining productive agricultural landscapes.

#### THE CHALLENGE

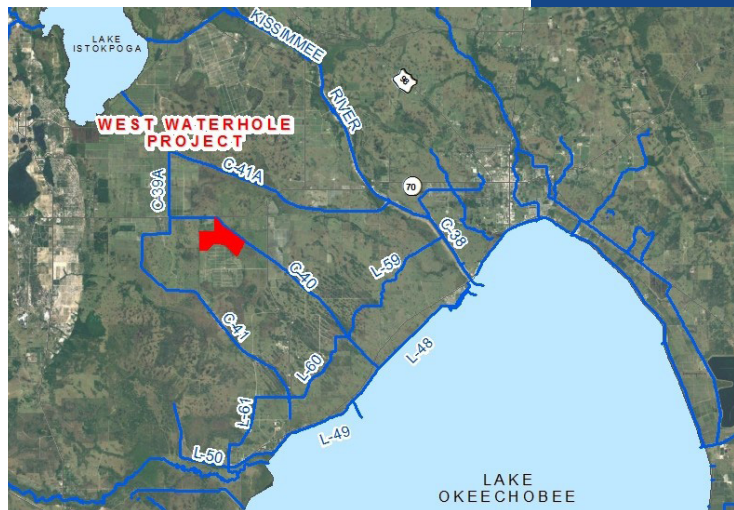
Phosphorus concentrations in Lake Okeechobee have doubled since the 1970s, and total phosphorus inflow is four times the regulatory target set by the Florida Department of Environmental Protection. A Basin Management Action Plan (BMAP) has been adopted with the goal of reducing average phosphorus inflow from 355 to 105 metric tons per year.

#### THE SETTING

The Indian Prairie/Lake Istokpoga sub-watershed was identified as one of the largest contributors of phosphorus to Lake Okeechobee, accounting for 24 percent of the total inflow. The West Waterhole Project was initiated to remove excess nutrients from water in the Indian Prairie Canal before it reaches the lake.



West Waterhole by Linda McCarthy



### THE PROJECT

The project encompasses approximately 2,500 acres in the Indian Prairie Basin, located south of State Road 70 and west of Lykes Ranch headquarters at Brighton. Water from the Indian Prairie Canal (C-40) is pumped into the project area at its northeastern edge and flows south through the site before being returned—post-treatment—to the canal downstream.

### THE RESULTS

From 2008 to 2024, the West Waterhole Project has removed 70.4 metric tons of phosphorus and 309 metric tons of nitrogen from C-40 Canal water—capturing and retaining an average of 71 percent of the phosphorus and 42 percent of the nitrogen before it reaches Lake Okeechobee.

Phosphorus removal has routinely exceeded initial estimates. The project removes an average of 4.4 metric tons of phosphorus per year—more than 20 times the original estimate of 0.2 metric tons per year. The West Waterhole agreement with South Florida Water Management District has been extended through December 2030, reflecting the project's continued success.



*Wood Storks by Linda McCarthy*



*Great Egret by Linda McCarthy*