

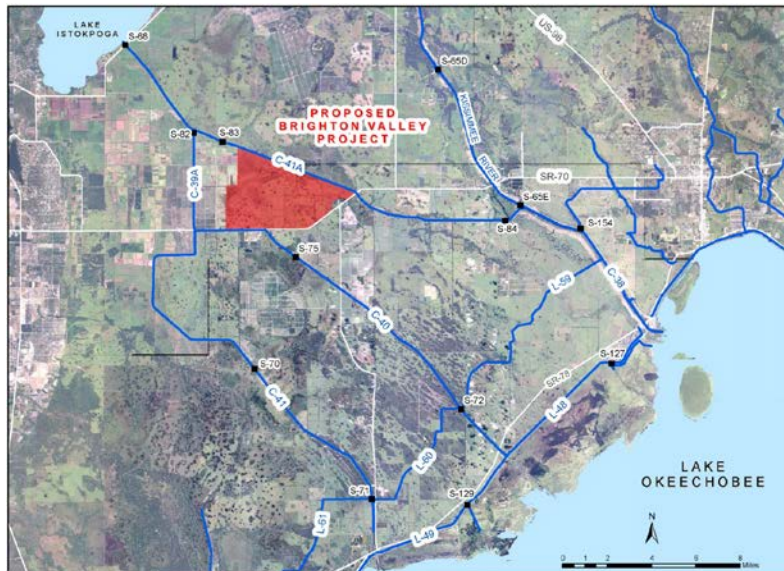
BRIGHTON VALLEY

An Action Plan Element for Lake Okeechobee and the Coastal Estuaries



THE CHALLENGE: Activities upstream of Lake Okeechobee over the last 50 years have led to a large increase in phosphorus flowing to the Lake. The phosphorus concentration within the Lake has doubled since the 1970's and the total inflow of phosphorus is 4 times the regulatory target load set by the Florida Department of Environmental Protection. FDEP is currently developing a Basin Management Action Plan for Lake Okeechobee with the goal of reducing the average inflow of phosphorus in surface water from 420 to 105 metric tons per year.

THE SETTING: The Indian Prairie / Lake Istokpoga sub watershed was identified as the largest contributor of phosphorus to the lake with 20% of the 420 metric tons coming from this basin. The Brighton Valley project is by far the largest project proposed in this sub-watershed. The initial project would make a significant start toward the BMAP target, with the potential for larger reductions in the future through further project refinements.



THE BENEFITS: The initial phase of the project has the potential to annually treat 95,000 acre-feet of stormwater before it enters the Lake, reducing the phosphorus load to Lake Okeechobee by 12 tons per year. In the most recent year, 2013, it would have reduced phosphorus flow to the Lake by **19.7 tons**.

THE DETAILS: The initial plan would consist of the following elements:

1. Lykes Ranch will convert an 8,200 acre pasture to a shallow marsh capable of storing water at a depth of 2 to 4 feet.
2. Pumping facilities with a capacity of approximately 560 cubic feet per second would be placed on the north boundary of the site to divert flow from the SFWMD C-41A Canal to the Brighton Valley project.
3. An internal levee would be constructed to divide the site into two cells to take advantage of the local topography.
4. An outflow structure would be constructed on the southern edge of the impoundment to release treated water into the C-40 Canal for conveyance to Lake Okeechobee.
5. All decisions to operate the project would be made by the SFWMD. All operations and maintenance will be carried out by Lykes Ranch staff.



THE FUNDING: The goal is to have the SFWMD propose the Brighton Valley project as one of its recommendations in the state's BMAP Process to be achieved within the next five years. Future funding would include:

1. Design. An initial grant of \$600,000 to accomplish engineering design and permitting.
2. Construction. A future grant to accomplish the construction of the levees, pumps and outflow structures, estimated to be approximately \$9 million.
3. Operations. An annual funding stream to support the land lease and operational costs as is currently being used for the West Waterhole and Nicodemus Slough projects, also on Lykes Ranch.

ABOUT LYKES RANCH: Lykes is the largest private property owner in the Lake Okeechobee watershed, with over 300,000 acres, mostly in low impact uses. It will not be possible to meet the phosphorus reduction goals for Lake Okeechobee without locating significant features on Lykes property. Lykes has already partnered with the SFWMD on two projects, the West Waterhole and Nicodemus Slough. The hallmark of the Lykes/SFWMD joint projects is relatively low cost, early implementation opportunity, and flexibility of operational and financial management. Lykes is, and will remain, an effective, efficient and cooperative partner in reaching the regulatory goals for Lake Okeechobee.