

MEMORANDUM

TO: Governing Board Members
FROM: Chip Merriam, Deputy Executive Director, Water Resources
DATE: February 5, 2007
SUBJECT: Eagle Bay Island Habitat Enhancement Dredging Design Project

Background: Lake Okeechobee has been inundated by phosphorus-rich sediments for many years. These mud sediments have been primarily located in the pelagic regions of the lake where their negative impacts are related to periodic re-suspension into the water column. In recent years, these sludge sediments have been transported into near-shore bays, where they have covered the natural sand bottom and seed bank. One severely impacted area is the eastern edge of Eagle Bay Island. This near-shore region traditionally supported emergent and submergent plants, healthy and diverse macro invertebrate communities and habitat for fish and wading birds. Since aquatic vegetation growth is inhibited by intrusive mud sediments, the near-shore region of Eagle Bay has lost its habitat value.

This project is building off of the previous Lake Okeechobee Dredging Project and the Lake Trafford Dredging Project. It is the intent of this design project to develop an effective dredging and disposal method to remove the overlying muck sediments in the designated area down to the original lake bottom sediments. The design phase of this project will allow engineers and scientists to plan, design and permit the best approach to sediment management, removal, and stabilization within Lake Okeechobee.

How this helps meet the District's 10-Year Strategic Plan: This project supports the District's strategic priority to restore the health of Lake Okeechobee by focusing on improving the ecosystem through habitat enhancement and removal of problematic sediment in a near-shore region of the lake.

Funding Source: This 14 month contract with BCI Engineers & Scientists, Inc. for the Eagle Bay Habitat Enhancement Dredging Design Project, which is budgeted in an amount not to exceed \$780,000, will be financed through dedicated funds (Lake Okeechobee Trust Fund).

This Board item impacts what areas of the District, both resource areas and geography: This project will have a great impact on Lake Okeechobee and the community of the Okeechobee Watershed. Resource areas include the Lake Okeechobee Division of the Watershed Management Department, and the Construction and Engineering Division of the Operations and Maintenance Department.

What concerns could this Board item raise? The dredging and construction phase of this project could total in excess of \$15-\$20 million over the next two years. An approximate quantity of sediment to be removed and a unit price per volume will be determined during the design phase. The District would continue to seek state funding and could seek collaboration from stakeholders to obtain future funding to ensure success of the project.

Why should the Governing Board approve this item? The Eagle Bay Habitat Enhancement Dredging Design Project will demonstrate a chosen technology for effective sediment stabilization and potential beneficial reuse of dredged material.

CM/sp
Attachments – Resolution, Map