

MEMORANDUM

TO: Governing Board Members

FROM: Chip Merriam, Deputy Executive Director, Water Resources

DATE: November 21, 2008

SUBJECT: Lake Okeechobee Benthic Macroinvertebrate Community Structure as an Indicator of Nutrient Status

Background: Benthic macroinvertebrates are important and well accepted indicators of the ecological health of water bodies as well as being the base of the food chain which supports Lake Okeechobee's commercial and sport fishery. This is a three-year cost-share contract that continues a long term macroinvertebrate data set for Lake Okeechobee, providing important baseline data against which to measure the ecological health of the Lake and future changes as the Comprehensive Everglades Restoration Plan (CERP) and other management changes and stochastic events occur.

How this helps meet the District's 10-Year Strategic Plan: This project is identified in the Restoration Coordination and Verification (RECOVER) monitoring and assessment plan. The project also assists in meeting the 10-year strategic plan for Lake Okeechobee by providing biological data to help in the assessment of the ecological condition of the Lake.

Funding Source: This is a 3-year cooperative agreement with the Florida Fish and Wildlife Conservation Commission (FFWCC) to support the Lake Okeechobee Benthic Macroinvertebrate Sampling Program in the amount of \$243,000 of which dedicated funds (Comprehensive Everglades Restoration Plan Fund) in the amount of \$70,916.66 are budgeted and the remainder is subject to Governing Board Approval of the FY10-FY11 budgets.

This Board item impacts what areas of the District, both resource areas and geography: This RECOVER sampling project will be managed by Lake Okeechobee Division staff of the Watershed Management Department and involves sampling in the nearshore regions of Lake Okeechobee. The sampling sites are displayed on the attached Lake Okeechobee Macroinvertebrate sites map. FFWCC is providing an in-kind cost share of at least \$165,000 for the life of the cooperative agreement.

What concerns could this Board item raise? The Governing Board may be concerned that baseline ecological monitoring is being conducted too early in relation to the CERP project implementation schedule. However, various best management practices and other phosphorus control measures are already underway in the Lake Okeechobee watershed. This sampling also provides additional benefits in assessing other operational changes and the effects of major stochastic events such as hurricanes and droughts.

Why should the Governing Board approve this item? This type of baseline data is critical to the overall assessment and adaptive management of CERP and other Lake Okeechobee restoration and operational changes. Additionally, the condition of the benthic macroinvertebrate community is a key component of the health of the Lake's commercial and sport fishery.

CM/jf

Attachment – Resolution, Map