

MEMORANDUM

TO: Governing Board Members

FROM: George L. Horne, Deputy Executive Director, Operations and Maintenance

DATE: December 16, 2009

SUBJECT: 40600001988 - Nutrient Removal Efficacy and Uptake Pathways of Several Native Wetland Plant Species (STA-1W Mesocosm Phosphorus Study)

Background: Stormwater Treatment Areas (STAs) are large treatment wetlands operated by the South Florida Water Management District (District) to achieve water quality goals mandated by the 1994 Everglades Forever Act. The primary objective of the STAs is to reduce the long-term average concentration of total phosphorus (TP) in surface runoff to levels that are protective of the downstream Everglades ecosystem. Although the STAs have substantially reduced TP loading to the Everglades over the past decade, the District continues to investigate new strategies to enhance the treatment performance of these wetlands.

How this helps meet the District's 10-Year Strategic Plan: This study is part of an on-going effort to help achieve the goals of the Long-Term Plan by further enhancing the STAs' ability to remove nutrients.

Funding Source: This project is a 3 year contract with the Ohio State University, subject to successful negotiations using ad valorem (Everglades Trust Fund) in the amount of \$270,000 of which \$85,000 is budgeted and the remainder is subject to Governing Board approval of the FY11-FY12; providing that, if negotiations are unsuccessful with Ohio State University, the District will proceed in ranked order until a contract has been successfully negotiated.

This Board item impacts what areas of the District, both resource areas and geography: The item will be implemented at STA-1W Research Facility. The results from this project will potentially apply to all of the STAs (STA-1E, STA-1W, STA-2, STA-3/4, STA-5 and STA-6, map attached). The District's STA management optimization staff will be involved in the implementation of the terms of this agreement.

What concerns could this Board item raise? Budgetary constraints preclude utilizing the public sector.

Why should the Governing Board approve this item? The Long-Term Plan requires the District to continue research to optimize treatment performance of the STAs. This study is intended to evaluate the potential value of using alternative plant species to further enhance phosphorus uptake and removal in the STA.

GLH/sm

Attachment:

Map showing relative locations of the Everglades Construction Project Stormwater Treatment Areas (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, and STA-6). The study will be conducted in the STA-1W Research Facility.

