



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

NEWS RELEASE

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SFWMD, UMass Researchers to Measure Nutrient Changes in Estuaries
Benthic flux measurements to help identify projects needed for improved water quality in Caloosahatchee, St. Lucie estuaries

West Palm Beach, FL — In support of the Watershed Protection Plans for the Caloosahatchee and St. Lucie rivers, the South Florida Water Management District (SFWMD) Governing Board has approved a contract with the University of Massachusetts to study changes in nutrient levels in the rivers' estuaries during the 2009 wet season.

The \$260,000 study will involve UMass scientists taking measurements at 50 locations in each estuary for benthic fluxes — exchanges of nutrients, such as nitrogen and phosphorus, between sediments and the water column. The research will help identify where and when the sediments are a source for nitrogen and phosphorus.

The scientists conducted a similar study during the 2008 dry season in drought-like conditions. The combined data from the two studies will yield information critical to defining the role of sediments in the overall nutrient budgets for the Caloosahatchee and St. Lucie estuaries, and will support current and future water quality modeling efforts for these systems. Additionally, scientists will be able to identify "hot spots," or areas of particularly high benthic nutrient flux rates, and optimize future sampling efforts.

The project is managed by the Coastal Ecosystems Division of the SFWMD Watershed Management Department and is part of the Watershed Research and Water Quality Monitoring Plans for the Caloosahatchee and St. Lucie estuaries.

"This project is an important companion to the studies done in 2008," said Governing Board member Melissa Meeker. "The data collected will ultimately assist in identifying projects needed to achieve water quality enhancements for both estuaries and watersheds."

In 2007, the Florida Legislature expanded the Lake Okeechobee Protection Act to strengthen protection for the Northern Everglades, including the Lake Okeechobee Watershed and the Caloosahatchee and St. Lucie watersheds and estuaries. The Northern Everglades and Estuaries Protection Program recognizes the importance and connectivity of the entire Everglades ecosystem. Implementation of this program will improve the quality, quantity, timing and distribution of water to the natural system by enhancing land management to reduce nutrient runoff and by constructing local and regional water quality and water storage projects.

Subject to ratification by the Florida Legislature, the Caloosahatchee River and St. Lucie River Watershed Protection Plans will be implemented using a phased implementation approach. Phase I will include projects initiated or constructed between 2009 and 2012. The plans build upon existing and planned programs and projects, and successfully consolidate previous restoration efforts into a broader approach focused on restoring the entire Northern Everglades system.

Since 2000, the State has invested more than \$3.8 billion to improve the quality and the natural flow of water in America's Everglades. For more information about the Northern Everglades and Estuaries Protection Program, visit www.sfwmd.gov/northerneverglades.

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About the South Florida Water Management District – [Celebrating 60 Years \(1949-2009\)](#)

The South Florida Water Management District is a regional, governmental agency that oversees the water resources in the southern half of the state – 16 counties from Orlando to the Keys. It is the oldest and largest of the state's five water management districts. The agency mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems and water supply. A key initiative is cleanup and restoration of the Everglades.