SOUTH FLORIDA WATER MANAGEMENT DISTRICT

NEWS RELEASE

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Phosphorus Reductions Again Improve Water Quality

Improved farming techniques help EAA, C-139 achieve phosphorus reduction goals

West Palm Beach, FL — For the 17th consecutive year, water flowing from farmlands in the Everglades Agricultural Area (EAA) achieved phosphorus reductions that exceeded those required by law. Implementation of improved farming techniques, known as Best Management Practices (BMPs), produced a 71-percent phosphorus reduction in the 470,000-acre EAA farming region south of Lake Okeechobee for the 2012 monitoring period. An approved model is used to compute the reductions and makes adjustments to account for the influences of rainfall.

Just west of the EAA, the C-139 Basin also met its goal of reducing phosphorus discharges to historic levels. The 170,000-acre C-139 farming region consists primarily of pasture land, row crops, citrus and sugarcane. Results show 15 metric tons flowed from the basin during the 2012 monitoring period, less than half the target load of 32 metric tons.

"Year after year, science-based Best Management Practices deliver reductions in nutrients that are greater than required by state law, helping to significantly improve Everglades water quality," said Joe Collins, Chairman of the South Florida Water Management District (SFWMD) Governing Board. "Together with treatment wetlands, BMPs provide a solid foundation for our collective efforts to achieve the ultra-low water quality standards in the *River of Grass*."

In the EAA, the most commonly used BMPs are more precise fertilizer application methods, refined stormwater pumping practices and erosion controls to reduce the amount of phosphorus transported in stormwater runoff to the Everglades and connected water bodies. In the C-139 Basin, the District recently worked with landowners to develop more comprehensive and stringent BMP plans for each farm that better address the unique nutrient challenges in this basin. These plans are anticipated to result in greater phosphorus reduction results.

Monitoring Data Documents the Nutrient Reductions
Phosphorus can impact the Everglades ecosystem when stormwater runoff carries excess amounts into protected wetlands. To meet the requirements of Florida's Everglades Forever Act, the amount of phosphorus leaving the EAA must be 25 percent less than the amount before phosphorus reduction efforts started. Data show that a 71-percent phosphorus reduction was achieved for the 2012 monitoring period. The overall average reduction from the implementation of BMPs over the program's 17-year history is 55 percent, more than twice the amount required by law.

When measured in actual mass, 154 metric tons of phosphorus were prevented from entering the regional canal system, which sends water into the Everglades, during the 2012 monitoring period. Over the past 17 years, the BMP program has prevented 2,565 metric tons of phosphorus from leaving the EAA.

In the C-139 Basin, a BMP program has been in place for the past nine years with the goal of reducing phosphorus discharges to historic levels. In November 2010, the program requirements were enhanced to better control nutrient runoff. The District uses a model to determine the phosphorus load that the agricultural region must achieve each year based on rainfall. For the 2012 monitoring period, the target load was 32 metric tons. Data show the actual mass of phosphorus discharged from the basin during that time was 15 metric tons.

Stormwater Treatment Areas Provide Additional Improvements
Water leaving the EAA and C-139 Basin receives additional treatment in one of several Stormwater Treatment Areas (STAs) before entering the Everglades. These SFWMD-constructed wetlands are filled with native vegetation and use "green" technology to further reduce phosphorus levels.

Since 1994, the network of five STAs south of Lake Okeechobee — with 45,000 acres of effective treatment area — have treated 12.3 million acre-feet (4 trillion gallons) of water and retained more than 1,560 metric tons of phosphorus that would have otherwise entered the Everglades. Last year, the STAs treated approximately 700,000 acre-feet of water and recorded their best performance year to date, retaining 83 percent of phosphorus from water flowing through the treatment cells and treating water to a flow-weighted mean of 19 parts per billion of phosphorus.

Through the end of April 2012, more than 4,060 metric tons of phosphorus have been prevented from entering the Everglades through treatment wetlands and the BMP program. Overall, Florida has invested more than $1.8 billion to improve Everglades water quality since 1994.

This year, the District is completing several water quality improvement projects to further enhance its water-cleaning efforts:

- Construction is complete and pump station commissioning is in progress for an STA expansion that will nearly double the size of STA-2 in western Palm Beach County to 15,500 acres. Known as Compartment B, the 6,817-acre expansion will help the STA achieve optimal performance.
- A 4,656-acre expansion of treatment wetlands in southeast Hendry County, known as Compartment C, is complete and pump station commissioning is set to begin. Compartment C will further improve water quality flowing into the Everglades. This $47.5 million investment will connect two existing Stormwater Treatment Areas (STA-5 and STA-6) in the EAA and more than double water treatment capability at the site.

Last month, the state announced an agreement with the U.S. Environmental Protection Agency (EPA) to expand water quality treatment that will lead to achievement of the ambient water quality standard for the Everglades. Highlights of the state's Everglades water quality improvement strategy includes:

- **Design and construction of 110,000 acre-feet of additional storage adjacent to existing Everglades STAs**, better controlling water flow into the wetlands and thereby improving their performance.
- **Doubling the size of Stormwater Treatment Area 1-West adjacent to the Loxahatchee National Wildlife Refuge**, increasing by 50 percent the treatment capacity of water quality facilities currently discharging into the Refuge.
- **Improving treatment in the western Everglades** by adding 11,000 acre-feet of associated storage in the C-139 Basin that is capable of storing 3.5 billion gallons and constructing 800 acres of additional wetlands in STA-5.
- **A robust science plan** to ensure continued biological, ecological and operational research to improve and optimize the performance of water quality treatment technologies.
- **Regional and sub-regional source controls** in areas of the eastern Everglades where phosphorus levels in runoff has been historically higher.

For more information on the SFWMD's water quality improvement initiatives, please see *Just the Facts: Providing Clean Water for the Everglades*. A multimedia look at how STAs work and what water quality improvements they have delivered can be found on the District's Improving Water Quality website.

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About the South Florida Water Management District

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.