

November 2009



just the FACTs

This fact sheet is provided as a reference to encourage a greater understanding of the various issues related to managing water in South Florida.

MEDIA QUESTIONS

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Progress in Everglades Water Quality Continues

More than twenty years ago, the United States filed suit in federal district court compelling the State of Florida and the South Florida Water Management District to implement and enforce state water laws to protect Everglades National Park and the Arthur R. Marshall Loxahatchee National Wildlife Refuge. As a result, the State and federal government entered into a Settlement Agreement, which was approved by the Court and sets out an adaptive, comprehensive plan for controlling and reducing phosphorus.

Achieving the Requirements of the Federal Settlement Agreement

- Florida has invested more than \$1.8 billion to improve water quality in the Everglades and has made well-documented progress.
- For more than a decade (February 1999 – June 2009), phosphorus levels have continued a statistically significant downward trend within the interior marsh of the Arthur R. Marshall Loxahatchee National Wildlife Refuge, based on the 14-station monitoring network prescribed in the Settlement Agreement.
 - The downward trend is even stronger in the most recent 5-year period.
 - For the last 12 compliance data sets, the average phosphorus level at the 14 monitoring sites was 7.9 parts per billion (ppb).
- In Everglades National Park, the District has been in compliance with the phosphorus requirements since they went into effect.

Investments that Improve Everglades Water Quality

- The District has constructed treatment wetlands, known as Stormwater Treatment Areas (STAs), to improve Everglades water quality. They use “green technology” to remove excess phosphorus from water flowing into the Everglades.
- More than 52,000 acres of land south of Lake Okeechobee have been converted to STAs, yielding 45,000 acres of treatment areas.
 - This includes construction of 5,270 acres of additional wetlands completed in December 2006 as part of a \$300 million effort to expand the STAs by approximately 18,000 acres.
 - Construction of another 12,000 acres of wetlands is under way.
 - Placed more than 400,000 cubic yards of fill material in remnant slough in STA-5 Cell 1A to improve water flow and treatment.
- Since inception, the STAs have retained more than 1,200 metric tons of phosphorus that would have otherwise entered the Everglades.
- In Water Year 2009, the constructed wetlands treated more than 1.1 million acre-feet of water. They retained 82 percent of the phosphorus load received.
- Phosphorus concentrations in STA discharges to the Refuge dropped from 36 ppb in Water Year 2008 to 29 ppb in Water Year 2009.

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Progress in Everglades Water Quality Continues

Weather Extremes and Everglades Water Quality

- Years of monitoring data have demonstrated that extreme weather such as prolonged droughts, tropical storms or hurricanes can impact STA performance.
 - However, these impacts are temporary – and can be repaired. The STAs have proven to be remarkably resilient following extreme weather events.
- Hurricanes in 2004 and 2005 severely damaged several STA treatment cells.
 - A combination of rehabilitation and optimization activities – aided by low rainfall levels during the 2007-2008 water shortage – returned STA vegetation and water quality conditions to pre-hurricane condition.
 - The District successfully completed a \$3 million major rehabilitation of STA-1 West, which is now recovered from the severe damage.
- More recently, rainfall during the 2008-2009 dry season (November 2008–April 2009) was the driest on record, followed immediately by the wettest May on record.
 - In the Refuge, rainfall during this dry season produced a 1-in-50 year drought. The EAA East region (which includes the S-5A basin flowing into the Refuge) experienced a 1-in-100 year drought.
 - This was followed by the wettest May ever recorded in the District, based on records dating to 1932. In the Refuge and Water Conservation Area 2, May rainfall was nearly double the historic average.
- **Monitoring has shown that when intense rainfall follows extremely dry periods, temporary adverse impacts in water quality may occur.**
 - For this reason, District scientists anticipated negative impacts following the November–May rainfall extremes.
 - Arrival of South Florida’s wet and dry seasons each year presents ongoing opportunities to better understand rehydration impacts.
 - The District continues to direct scientific and operational efforts toward minimizing weather-related impacts to Everglades water quality.

Best Management Practices (BMPs)

- Improved farming methods, known as Best Management Practices, provide additional phosphorus reductions in water flowing to the Everglades.
- Florida’s Everglades Forever Act requires a 25-percent reduction in phosphorus leaving the Everglades Agricultural Area, a 500,000-acre farming region south of Lake Okeechobee.
- The average phosphorus reduction from the implementation of BMPs over the program's 14-year history is 54 percent, more than twice the amount required by law.
 - Over the past 14 years, the BMP program has kept 2,061 metric tons of phosphorus out of the Everglades.
 - Data for the most recent annual monitoring period (May 1, 2008 to April 30, 2009) show a 68-percent reduction in phosphorus, equating to 278 metric tons.
- **Through April 2009, BMPs and STAs combined have prevented more than 3,200 metric tons of phosphorus from entering the Everglades.**