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MEDIA CONTACT: Gabe Margasak South Florida Water Management District Office/Cell (561) 682-2292

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Construction Nears Finish on Major Everglades Water Quality Project

A-1 shallow reservoir is set to be the first project completed for the State's Restoration Strategies plan



(Click on the image to view a photo gallery.)

West Palm Beach, FL — With 16,500 cubic yards of concrete, 2,100 tons of steel and 21 miles of levees, a massive new South Florida Water Management District (SFWMD) project to improve Everglades water quality is nearing completion and set to start operations.

Water already has begun flowing into the A-1 Flow Equalization Basin (FEB), which will help optimize wetlands that clean phosphorus from water before it reaches the Everglades. The basin will be the first project completed as part of the State's Restoration Strategies plan to improve water quality for the *River of Grass*.

"Completing this significant project and continuing progress on others is how we achieve water quality goals," said Jeff Kivett, SFWMD Director of Operations, Engineering and Construction. "The A-1 will soon be fully operating and providing its intended critical restoration benefits to the Everglades."

A-1: How it Works

With the capacity to hold 60,000 acre-feet of water at a site west of U.S. 27 in Palm Beach County, the A-1 was designed to capture and store peak stormwater flows during the wet season or during heavy rainfall events.

Emergent vegetation such as bulrush and cattail planted within the site will help reduce the concentration of phosphorus in the water.

A system of 21 miles of earthen levees and 15 water control structures – 10 with solar power – within A-1 gives water managers the new ability to deliver water at the right time and in the right quantity to the vast Stormwater Treatment Areas (STAs) 2 and 3/4 to the south and east.

Achieving optimal water flow to these constructed wetlands enables emergent and submerged aquatic vegetation such as southern naiad to most effectively and naturally remove nutrients from the water that eventually flows to Everglades National Park.



(Click the map for a larger version.)

The District operates a network of five STAs south of Lake Okeechobee with an effective treatment area of 57,000 acres. Since 1994, the treatment areas have retained more than 2,012 metric tons of total phosphorus that would have otherwise entered the Everglades.

Fast Facts

Construction of the A-1 required massive amounts of land, material and heavy equipment, including,

- 15,000-acre footprint
- 1.6 million cubic yards of fill material, all mined on-site
- 3.1 million cubic yards of muck was degraded and used as topsoil
- 23 massive, 40-ton articulated dump trucks
- 150 construction personnel on-site each day

Construction of the A-1 benefited from significant work already completed at the site for a reservoir originally planned to provide deep water storage, known as the EAA Reservoir.

Restoration Strategies Background

In June 2012, the State of Florida and the U.S. Environmental Protection Agency reached a consensus on new strategies for improving water quality in America's Everglades.

Based on months of scientific and technical discussions, these strategies will expand water quality improvement projects to achieve the ultralow phosphorus water quality standard established for the Everglades.

Key features of the plan include:

- Design and construction of 116,000 acre-feet of additional storage adjacent to existing Everglades STAs, better controlling water flow into the treatment wetlands and thereby improving their performance. These storage areas, known as Flow Equalization Basins, will be designed to assist all five Everglades STAs.
- Design and construction of the Stormwater Treatment Area 1 West expansion, increasing by 50 percent the treatment capacity of water quality facilities currently discharging into the Arthur R. Marshall Loxahatchee National Wildlife Refuge.
- Additional sub-regional source controls in areas of the eastern EAA where phosphorus levels in runoff have been historically higher, building on the District's existing Best Management Practices (BMPs) Regulatory Program.

For more information:

- Improving Water Quality
- <u>Restoration Strategies for Clean Water for the Everglades</u>
- <u>BMPs and Source Controls</u>

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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.