L-8 Reservoir/Flow Equalization Basin

The L-8 Reservoir is included in a suite of projects in the State of Florida’s $880 million Restoration Strategies plan to improve water quality in the Everglades. Initially, the deep-ground reservoir will capture, store and deliver water to the federally designated “Wild and Scenic” Loxahatchee River and protect water quality in the Lake Worth Lagoon. The reservoir will eventually become one of three Flow Equalization Basins in the Restoration Strategies plan, providing 110,000 acre-feet of storage for delivery of consistent flows needed to optimize performance of Stormwater Treatment Areas. The District is working to provide replacement storage to continue delivering water to the Loxahatchee River as the L-8 Reservoir transitions to operating as a Flow Equalization Basin.

Quick Stats

• The project builds on a strategically located 950-acre former rock mine.
• The location’s unique geology allows for deep, below-ground storage, reduces water loss through seepage and minimizes levee safety concerns.
• Initially approved in 2002, the District expedited completion of the reservoir’s storage cells along with several water control structures in the Loxahatchee watershed designed to reconnect historical flow paths.
• The 53-feet-deep reservoir is capable of storing 15 billion gallons of water – enough to fill 34,000 football fields one foot deep.
• When the additional infrastructure improvements are in place, the Flow Equalization Basin will be able to accept up to 3,000 cubic feet per second (cfs) of stormwater inflows. As needed, the stored water can then be pumped out at a discharge rate of up to 450 cfs.

Project Benefits

• Supports Loxahatchee watershed restoration (interim measures)
• Expands water storage south of Lake Okeechobee
• Reduces freshwater discharges to tide
• Maximizes water quality improvement capabilities to the Everglades
• In addition to restoration, offers flood control and water supply benefits

Provisional Uses

• In 2012, approximately 3.1 billion gallons of water from Tropical Storm Isaac were directed into the reservoir to help alleviate flooding.
• The City of West Palm Beach utilized more than 600 million gallons of water from the reservoir for water supply during the 2007 drought and again drew from the reservoir during a prolonged dry period in 2011.
• During a 2011 pilot project, the District used small pumps to send fresh water from the reservoir north to benefit the Loxahatchee River.
• Florida Power & Light (FPL) has used reservoir water for its cooling system, reducing the demand on groundwater supplies.
• The reservoir also was used for flood control to protect local communities during major rain events, including the 2004 and 2005 hurricanes.

Flow Equalization Basin/Pump Station - Status

• Contract awarded September 2012 for design and construction, which includes the inlet structure, outflow pump station and revetment features for the surrounding levees. Target construction completion date is 2016.