FACT SHEET

COMPREHENSIVE EVERGLADES RESTORATION PLAN

Aquifer Storage Recovery Regional Study

Construction General (C)

Congressional Districts: 17, 18, 19, 20, 21, 22, 23, 25

1. DESCRIPTION

The April 1999 Comprehensive Everglades Restoration Plan (CERP) proposed regional-scale implementation of aquifer storage and recovery (ASR) facilities as the preferred method of providing freshwater storage in subsurface permeable zones, to supplement surface reservoirs. CERP was approved in the Water Resources Development Act (WRDA) 2000, Public Law (P.L.) 106-541, Section 601(b)(2)(C), December 1999, and authorized some initial projects plus overall design studies. CERP ASR components are proposed to provide storage, and to attenuate releases of nutrient-rich water from Lake Okeechobee to the St. Lucie and Caloosahatchee estuaries in Palm Beach, Martin, Okeechobee, Glades, Lee, and Hendry counties. The estimated total cost of the proposed, fully implemented CERP ASR program (approximately 333 ASR wells plus surface facilities for pumping and treatment), is approximately $1,700,000,000. Estimated costs shown below are for preliminary engineering and design of the overall CERP ASR program. The final number and location of the proposed ASR wells will be determined through further scientific and engineering investigations. The National Academy of Sciences and the Florida Department of Environmental Protection (FDEP) identified seven specific areas of technical uncertainty associated with the ASR implementation on such an expansive scale. The ASR Regional Study was developed and funded to address these uncertainties, which include aspects of technical and engineering feasibility, and effects and influences of recovered water on the Everglades ecosystem and Lake Okeechobee. Several significant products will result from the ASR Regional Study. These include: 1) regional-scale ground water and surface water modeling products; 2) ecotoxicology studies to quantify the effects of recovered water on representative Floridan plants, macroinvertebrates, and fish; and 3) definition of the processes between Floridan Aquifer matrix and stored water that affect water-quality during storage and recovery; and 4) evaluation of aquifer hydraulics and geotechnical characteristics during expanded ASR implementation.

2. FUNDING

Estimated Total Cost	$25,268,000
Estimated Federal Cost	13,988,000
Allocation thru FY15	13,981,055
Carry In to FY16	0
Allocation for FY16	0
President's Budget FY17	0

3. SPONSOR

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

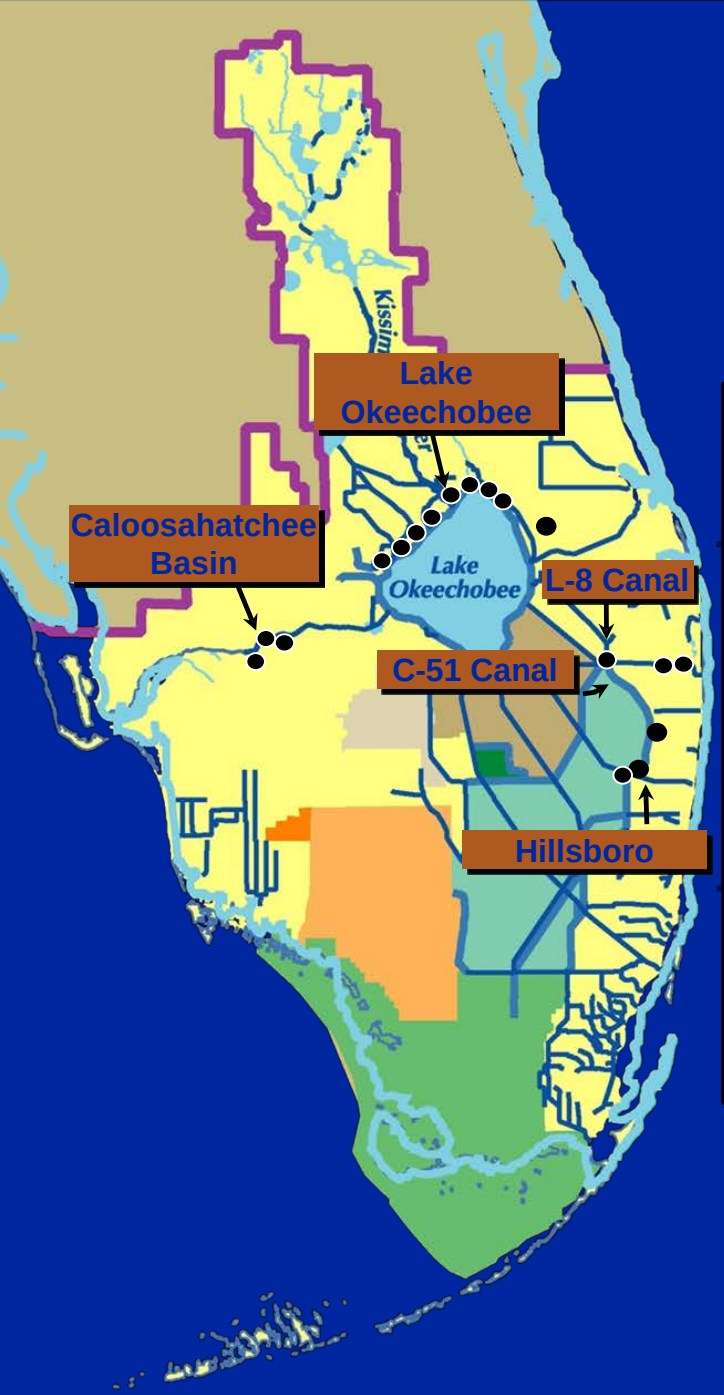
4. STATUS

Several scientific and engineering studies are complete and a non-decisional, interim report for the public was published in 2009. The report was completed with participation from multi-agency, multi-disciplinary state and Federal team members.

The Aquifer Storage and Recovery (ASR) Regional Study Technical Data Report (TDR) underwent external peer review by the National Research Council and was completed in 2015. The TDR was developed with multi-agency, multi-disciplinary state and Federal team participation in 2014. Two types of regional-scale groundwater flow models were calibrated in FY 2009. Regional-scale pumping scenarios were simulated using these flow models in FY 2010. Ecotoxicology studies were conducted at both ASR pilot sites during FY 2009 and FY 2010. Water-quality changes during ASR testing and effects of recovered water on surface water impoundments ongoing as well as other technical studies to assess uncertainties in regional-scale implementation of ASR are included in the ASR Regional Study TDR. The Lake Okeechobee ASR Pilot Project TDR findings and the various hydrogeological, geophysical and geotechnical studies including those that determine the potential for rock fracturing related to pressures during aquifer recharge, microbiological investigations, groundwater modeling, and an ecological risk assessment are included in the ASR Regional Study TDR. Additionally, the report includes a response to the questions and concerns identified by the CROGEE and the 1999 ASR Issue Team.

The ASR Regional Study TDR reports that phased implementation of regional-scale ASR is feasible and can provide beneficial water storage and availability for Everglades restoration efforts. Groundwater modeling indicates that the overall number of ASR wells should be reduced from 333 wells to approximately 131 wells, to avoid adverse effects to the aquifer, groundwater and existing users.

CERP ASR REGIONAL STUDY



CERP ASR SYSTEM	NUMBER OF WELLS	
LOCATIONS BY BASIN	PLANNING ESTIMATE	SUITABLE FOR IMPLEMENTATION
Lake Okeechobee	200	78
Caloosahatchee	44	10
L-8 Basin	10	6
C-51 Basin	34	14
Central Palm Beach County	15	13
Hillsboro	30	10
TOTAL	**333**	**131**