

Project Name: C&SF: CERP Aquifer Storage and Recovery Regional Study
A/k/a ASR Regional Study
Project ID: 1203 (CERP Project WBS # 44)
Lead Agency: USACE / SFWMD
Authority: Programmatic Authority
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.2

Measurable Output(s): Data

April 1999 (Restudy) Project Synopsis: Not described.

Current Project Synopsis: While the CERP Restudy did not directly call for an ASR Regional Study, the USACE and the SFWMD agreed that a coordinated central data collection and regional modeling effort was required to address the large-scale ASR implementation issues under the CERP. The ASR Regional Study described in the PMP will take roughly nine years to complete.

The study will investigate regional and technical issues governing the feasibility of full-scale ASR implementation; and its potential effect on water levels and water quality within the aquifer systems, and on existing water users, surface-water bodies, and the flora and fauna that inhabit them. This study will conduct critical ASR-related research and develop scientific data required to help determine the scientific and engineering feasibility of large-scale ASR implementation as proposed in the CERP.

State and Federal scientist, engineers, and stakeholders proposed a list of significant uncertainties related to hydro-geologic processes, geotechnical evaluations, ecosystem effects and ASR operation and performance. The ASR pilot facilities are the platforms used to conduct scientific and engineering studies addressing the uncertainties identified with using the technology at the scale envisioned under the CERP. Objectives of the ASR Regional Study are to acquire a comprehensive understanding of the characteristics of the Floridan Aquifer system, its ability to support ASR as envisioned in the CERP, and to identify any limitations to applying full scale ASR. With this information, optimum implementation of regional ASR water storage and recovery can be determined. Goals of the ASR Regional Study include:

- Addressing outstanding issues of a regional nature that cannot be adequately addressed by the authorized ASR Pilot Projects.
- Reducing uncertainties related to full-scale CERP ASR implementation by conducting scientific studies based on existing and newly acquired data, evaluate the potential effects on water levels and water quality within the aquifer systems, as well as existing users, surface-water bodies, and the flora and fauna that inhabit them.
- Developing a regional groundwater model of the Floridan Aquifer System (FAS) and conduct predictive simulations to evaluate the technical feasibility of the proposed 333-well CERP ASR system, or if determined to be unfeasible, identify an appropriate magnitude of ASR capacity with minimal impact to the environment and existing users of the FAS.

If ASR is successful, the facilities to be constructed may store as much as 1.6 billion gallons of freshwater per day to ensure water for the Everglades, improve conditions in Lake Okeechobee and agriculture and to protect urban wells located near the coast from saltwater intrusion.

An interim report (June 2008) summarized efforts, including the pilots and other testing between 2003 and 2007.

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Current Status: An in-progress review was conducted with SAD and HQUSACE and model calibration is complete. Modeling of the envisioned CERP ASR wells (333) operations strategy began and will be ongoing thru 2011. Geotechnical analyses are completed. Groundwater and surface-water sampling continue at the pilot facility; along with regional eco-toxicological studies. Water quality risk analyses have also begun.

Est. Cost: \$ 85,806,000

NOTE: In addition to the ASR projects, the CERP April 1999 Restudy cost estimate included a total of approximately \$128,000,000 for ASR-related Planning, Engineering and Design studies for the six (6) proposed ASR components. Funding was provided from a redistribution of the established CERP ASR design estimates from these related projects.

Project Schedule:

2003 Start - Technical Design Report
 2017 Study completed.

Detailed Project Budget Information (rounded):

ASR Regional Study	Expenditures Thru 2009	FY
USACE	\$8,117,423	
SFWMD	\$7,080,772	
Total	\$15,198,195	

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_44_asr_regional.aspx

Contact: Wiener Cadet, Project Manager, Everglades Division, USACE
 (904) 232-1916, Wiener.Cadet@usace.army.mil
 Bob Verrastro, Lead Hydrogeologist, SFWMD
 (561) 681- 2563 x3723, bverras@sfwmd.gov

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999)*. Cost estimate information is updated to reflect current price levels in October 2009 dollars. Actual expenditures include all federal expenditures through FY09 (Sept, 2009) and sponsor verified and recorded in kind credit through 4th quarter FY07.

**CERP Restudy
 Estimated ASR Project's Wells**

Lake Okeechobee	200
Caloosahatchee	44
L-8 Basin	10
C-51 Basin	34
Central PBC	15
Hillsboro	30
Total	333

