

APPENDIX A
SECTION 404(B) EVALUATION

SECTION 404(b) EVALUATION

Aquifer Storage and Recovery Technology Study
Aquifer Storage and Recovery Pilot Project
Palm Beach, Hendry, Okeechobee, Glades, and
Martin Counties, Florida

I. Project Description

a. Location. The proposed work will be performed at 5 geographically separate pilot site locations; 3 proposed around Lake Okeechobee, one adjacent to the Caloosahatchee River in Hendry County, Florida; and one adjacent to the Hillsboro Canal in Southern Palm Beach County.

b. General Description. The CERP Aquifer Storage and Recover (ASR) pilot projects will consist of up to seven ASR wells (one at each of five sites and one three-well cluster), each single well site with an estimated capacity of 5 million gallons per day (mgd) per well and the three-well cluster with an estimated capacity of 3.3 mgd each for a total of about 10 mgd. Monitoring wells and surface facilities will be constructed at each of these sites. The wells will be used to store and recover surface water from the Lake and its tributaries. Extensive water quality characterization and treatment testing will take place during the permitting and design phase. Once constructed, the ASR pilot project systems will be cycle tested to evaluate their ability to achieve established water quality and volumetric levels of performance, as well as provide data collection opportunities to aid in recommendations to be made for facility expansion. Baseline and post cycle testing ecological data will be collected to determine the potential impacts of a larger scale ASR system. This pilot project together with information collected under the ASR Regional Study will determine the feasibility, operational considerations, and impacts of implementing a full-scale ASR Project as identified in the Comprehensive Everglades Restoration Plan.

c. Authority and Purpose. Section 101 (a)(16) of the Water Resources Development Act of 1999 (WRDA 1999) (Pub. L. 106-53) authorized construction of two pilot projects, Lake Okeechobee ASR and Hillsboro ASR. Although these two pilot projects were authorized separate from the C&SF Project, they are also integral elements of the Comprehensive Everglades Restoration Plan (CERP) as authorized in Title VI of WRDA 2000 (Pub.L. 105-541, Section 601). Enacted in December 2000, Title VI of WRDA 2000 approved the Comprehensive Plan, providing authorization of an initial suite of projects, and included a number of other provisions including outreach and periodic reports to Congress. The Caloosahatchee River ASR pilot was authorized by Section 601 (b)(2)(B) of WRDA 2000.

The specific purpose of the ASR pilot projects is to test the feasibility of utilizing ASR technology for storage at each test site and other sites identified in the CERP. Information gained from the pilot project will be used to develop an implementation and operating plan for the system, to refine the long-term operational goals of these and other ASR wells at the site, and to provide insight for future ASR projects that may be constructed for similar purposes. Results

from the pilot project will also be useful in determining the feasibility of utilizing ASR technology at other locations specified in CERP.

d. General Description of Dredged or Fill Material. No dredging will take place for this project. The only fill will consist of five intake structures. Each intake will consist of approximately 150 cubic yards of material, except for Port Mayaca, which will consist of about 300 cubic yards of concrete and metal. The discharge structures will be cut into the existing canal banks resulting in no net increase in fill.

e. Description of the proposed Discharge Site. There will be no discharge of dredge material for this project.

f. Description of Disposal Method. There will be no disposal of dredge material for this project.

II. Factual Determinations

a. Physical Substrate Determinations. Not applicable.

b. Water Circulation, Fluctuation and Salinity Determination. Not applicable

c. Suspended Particulate/Turbidity Determinations. Not applicable

d. Contaminant Determinations. Not applicable

e. Aquatic Ecosystem and Organism Determinations. Not applicable

f. Proposed Disposal Site Determinations. Not applicable

g. Determination of Cumulative Effects on the Aquatic Ecosystem. Not applicable

h. Determination of Secondary Effects on the Aquatic Ecosystem. Not applicable

III. Findings of Compliance or Non-compliance with the Restrictions on Discharge.

a. No significant adaptations of the guidelines were made relative to this evaluation.

b. No practicable alternative exists which meets the study objectives that does not involve discharge of fill into waters of the United States.

c. After consideration of disposal site dilution and dispersion, the discharge of fill materials will not cause or contribute to, violations of any applicable State water quality standards for Class III waters. The discharge operation will not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act

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d. The construction and operation of ASR pilot projects will not jeopardize the continued existence of any species listed as threatened or endangered or result in the likelihood of destruction or adverse modification of any critical habitat as specified by the Endangered Species Act of 1973, as amended.

e. The placement of fill material will not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. The life stages of aquatic species and other wildlife will not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values will not occur.

f. On the basis of the guidelines, the proposed disposal site for the discharge of dredged material is specified as complying with the requirements of these guidelines.

