

**CENTRAL AND SOUTHERN FLORIDA PROJECT
WINSBERG FARM WETLANDS RESTORATION PROJECT**

**DRAFT
INTEGRATED PROJECT IMPLEMENTATION REPORT
AND
ENVIRONMENTAL ASSESSMENT**

***EXECUTIVE SUMMARY**

PURPOSE AND NEED FOR THE STUDY

The tentatively selective plan (TSP) described in this Project Implementation Report is the environmentally preferred alternative in accordance with the National Environmental Policy Act (NEPA). This plan includes creation of about 114 acres of wetlands in western Palm Beach County, Florida, on agricultural lands now owned by Palm Beach County. **Figure E-1** shows the general location in aerial view of the Winsberg Farms Wetlands Restoration study site. **Figure E-2** displays an aerial view of the TSP with descriptions of components. The wetlands will use treated wastewater from the County's Southern Regional Wastewater Reuse Facility (SRWRF) located on Hagen Road.

The Winsberg Farm project presents a unique opportunity to create a wetland habitat for fish and wildlife on agricultural lands in an urbanized area of Palm Beach County, Florida. In addition, since the project uses treated wastewater, this water, which was previously injected into a confining layer of the aquifer via deep wells can now be returned to the surficial aquifer and made available for the natural system. The Winsberg Farm site is located in the vicinity (west of) Boynton Beach in Palm Beach County, Florida, between Jog Road on the east and Hagen Road on the west. The Lake Worth Drainage District's L-29 Canal is the northern boundary and the L-30 Canal is the southern boundary of the project site. To comply with a condition of the real estate purchase agreement, the non-federal sponsor, Palm Beach Water Utilities District (PBWUD), has already constructed a portion of the project on the western part of the site that constitutes Phase 1 of the recommended plan. PBWUD has named this portion Green Cay Wetlands. This report presents the results of intensive problem identification, modeling and alternatives analysis. A multi-agency, interdisciplinary team evaluated alternative plans consisting of various combinations of components and operating plans. Alternative 1, the TSP, is recommended for implementation.

Figure E-1 shows the general location in aerial view of the Winsberg Farms Wetlands Restoration study site.

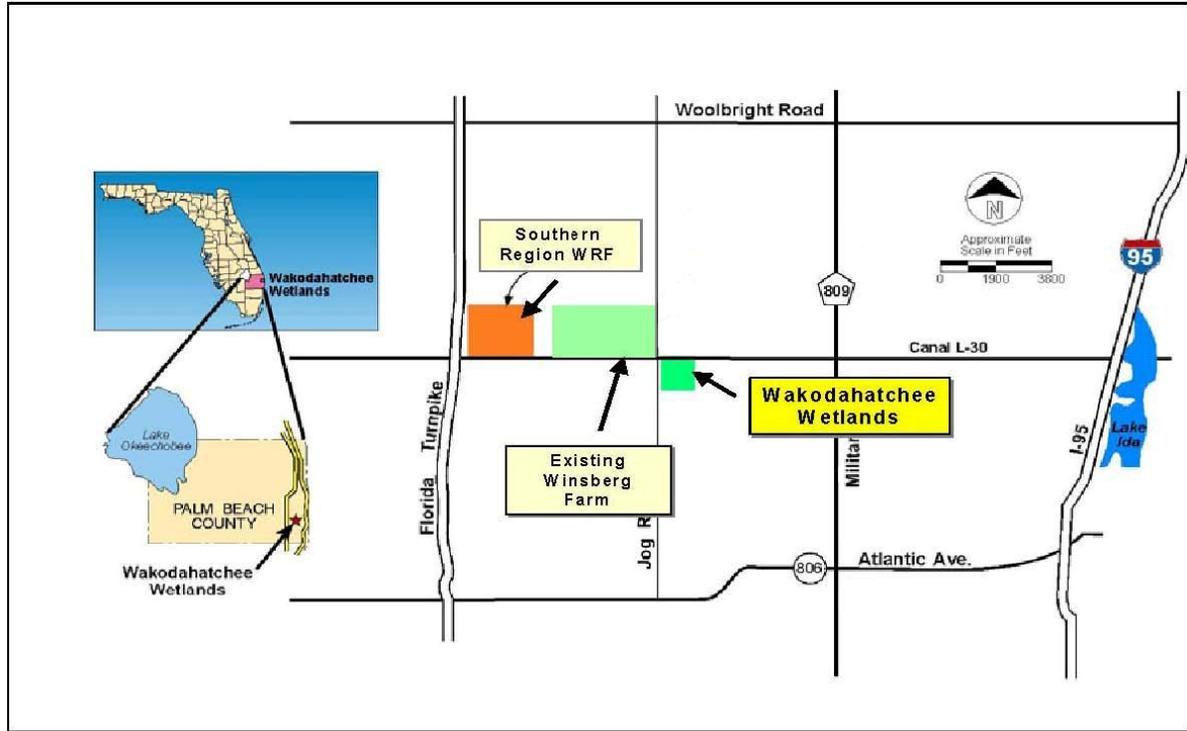
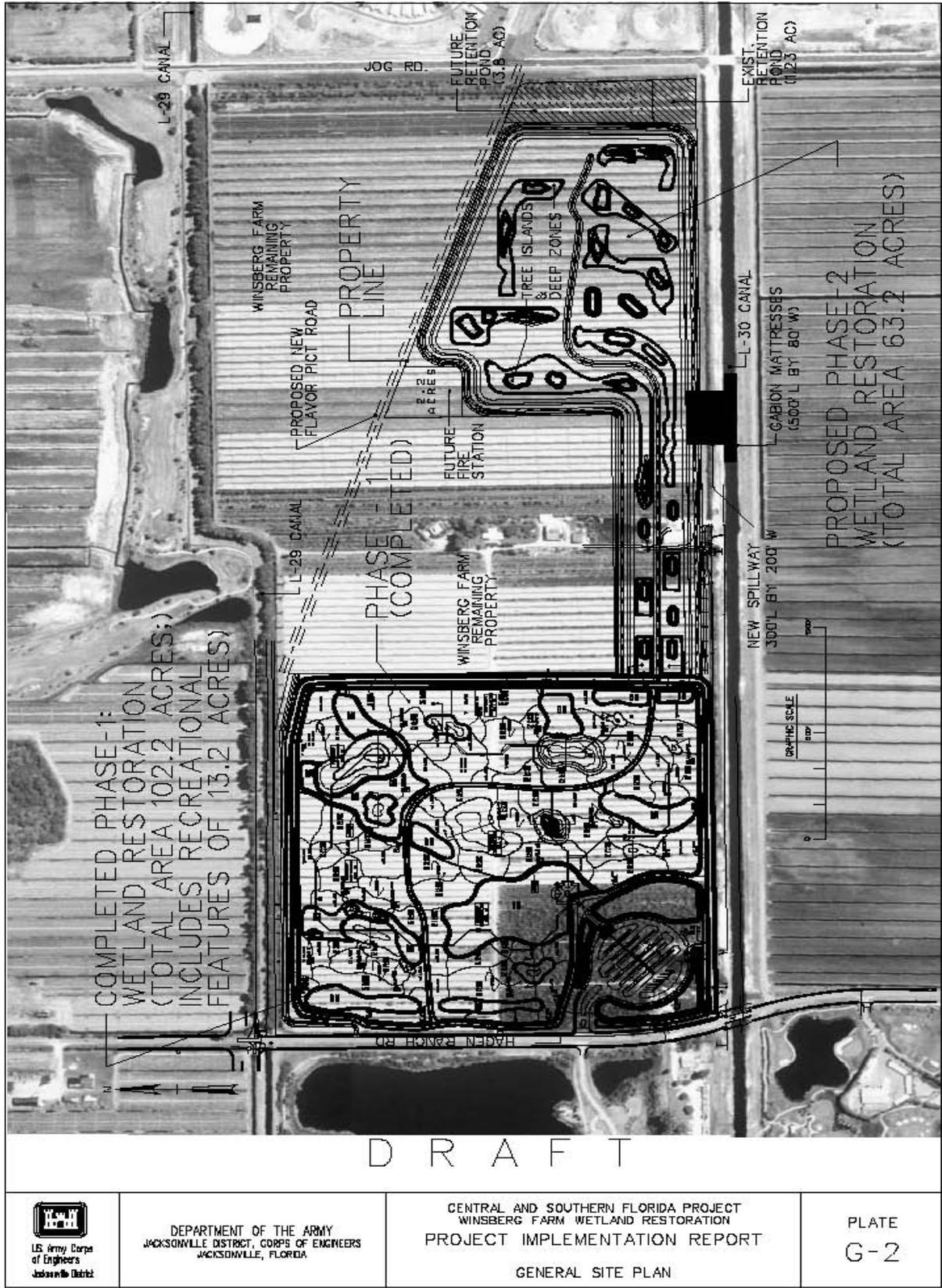


FIGURE E-1: GENERAL LOCATION OF THE PROJECT STUDY AREA

Figure E-2, on the next page, displays an aerial view of the TSP with descriptions of components.



 <p>US Army Corps of Engineers Jacksonville District</p>	<p>DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA</p>	<p>CENTRAL AND SOUTHERN FLORIDA PROJECT WINSBERG FARM WETLAND RESTORATION PROJECT IMPLEMENTATION REPORT</p> <p>GENERAL SITE PLAN</p>	<p>PLATE G-2</p>
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FIGURE E-2 WINSBERG FARM TSP

Relationship of the CERP and the Winsberg Farm Wetlands Restoration Project

In Section 601 of the Water Resources Development Act of 2000 (WRDA 2000) (PL 106-541), Congress approved the Central and Southern Florida (C&SF) Project Comprehensive Review Study Integrated Feasibility Report and Programmatic Environmental Impact Statement (aka “The Restudy”). The Comprehensive Everglades Restoration Plan (CERP) contained in that report was approved as a framework for modifications and operational changes to the Central and Southern Florida (C&SF) Project that are needed to create, preserve and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The CERP includes 68 components that, once implemented, will work together to achieve the purposes of the Plan. These 68 components include several components referred to as Other Project Elements (OPEs) that were not initially formulated at a level of detail commensurate with other CERP components, but were collectively viewed as important steps toward realizing regional ecosystem restoration benefits. The Winsberg Farm Project is one of these OPEs.

While Section 601 of WRDA 2000 approved the CERP as a framework for the restoration of the South Florida ecosystem, it only initially authorized a small number of projects. Many of the projects within the CERP must be individually authorized by Congress. However, WRDA 2000 did contain language directing that the Secretary of the Army may authorize smaller CERP projects, including Winsberg Farm, under the Programmatic Authority without additional congressional authorization.

Due to its size and complexity, the CERP is being implemented as a series of projects. In accordance with the requirements of WRDA 2000, each project is studied in a finer level of detail than was possible in the Restudy. These detailed studies are referred to as Project Implementation Reports (PIRs), which must be completed and approved prior to implementation of a CERP project. The PIR is similar to a traditional feasibility report, which addresses the project’s economic and environmental benefits, engineering feasibility, and plan formulation and evaluation. Additional unique requirements for CERP PIRs include evaluating project effects on sources of water and flood protection, and identifying quantities of water made available to be reserved or allocated for the natural system and made available for other water-related needs of the South Florida region.

Alternatives Evaluated

Based on the initial plan formulation conducted as part of the Restudy effort, this Draft PIR reaffirms that constructing a wetland for fish and wildlife habitat

at the Winsberg site is cost effective and that none of the conditions affecting project purposes and need have changed substantially from those at the time of the Comprehensive Review Study. A detailed discussion of the reaffirmation analysis of the Winsberg Farm project originally described in the 1999 Comprehensive Review Study (Restudy) Report (a.k.a. “Yellow Book”) is contained in Section F.3 of **Appendix F** (Plan Formulation) of this Draft PIR. For this PIR, plan formulation was conducted for the entire project, which is to be implemented in two phases (Phase 1 and Phase 2), since the non-federal sponsor has already constructed and is successfully operating a portion of the project. The plan formulation process involved comparing three wetland designs (including variations in structures and operations) in order to identify an alternative that optimizes the ecological benefits of a wetland on the Winsberg site. The primary difference between the three alternatives was the proposed hydroperiod (i.e., depth and duration of standing water) on the site, which exerts significant influence over the growth and distribution of plant species and fish and wildlife utilization within the wetland.

- Alternative 1: 114-acre wetland using an intermediate hydroperiod.
- Alternative 2: 114-acre wetland using a short hydroperiod.
- Alternative 3: 114-acre wetland using a long hydroperiod

Findings and Conclusions

All alternatives except the No-Action Alternative would result in creation of additional wetlands and fish and wildlife habitat and would re-use treated wastewater by returning it to the natural system. The intermediate hydroperiod wetland (Alternative 1, the TSP) would provide optimal conditions for wetland habitat development. It would also use more wastewater than the short hydroperiod design (Alternative 2) and would have a lower construction cost than would be associated with the construction of more deep zones in the long hydroperiod design (Alternative 3).

Tentatively Selected Plan

The recommended alternative plan (Alternative 1) for this wetland restoration project is located on about 175 acres of former farmland just east of the SRWRF. About 114 acres of the site would be hydrated using treated SRWRF wastewater. The proposed concept would result in creation of a wetland system about three times the size of the nearby Wakodahatchee Wetlands project, an already completed wetland creation project utilizing treated wastewater. Winsberg Farm is in close proximity to the Wakodahatchee site and would leverage the recently created ecosystem restoration benefits there by expanding the spatial extent of wetlands in the study area to create an integrated wetland and fish and wildlife habitat system having greater regional significance. The TSP will

create 114 acres of wetland habitat on lands previously used for agriculture and will provide benefits for many species of wildlife including some threatened and endangered species. In addition, the project will provide new source of water beneficial to the natural system by treating and percolating approximately 5 million gallons per day of treated wastewater that was previously lost from the regional water management system through deep-well injection.

The recommended alternative includes a Phase 1 design and construction (already completed by the non-federal sponsor), which includes about 72 acres of wetlands created in the western half of the project. The remaining 42 acres of the project area on the east half of the Winsberg Farm property would constitute Phase 2 of the project and would contain the same habitat types as Phase 1. The recommended plan is configured assuming constant inflow of water to maintain continuous inundation. Inflow from the SRWRF facility enters the western half of the project (Phase 1). The western half of the project is divided by an internal levee, which creates a Cell 1 to the north and a Cell 2 to the south. Water-levels in each cell can be independently managed by operation of inflow gate valves and butterfly valves and outflow at control structures. Each cell has a gated control structure with a 24-inch RCP culvert.

The control structure can be operated to allow flow:

1. To the eastern half of the project (Phase 2);
2. To circulate in the western half of the project with a 15-HP recirculation pump; or
3. In the event pool elevations rise beyond a set point due to direct rainfall, flows can be directed to deep-well injection via a 250-HP discharge pump

Phase 2 of the project will be constructed and operated consistent with the design principles and operational rules utilized to successfully construct and operate the Wakodahatchee project and Phase 1 of this project.

Water for the Natural System and Other Water-Related Needs

Approximately five million gallons per day (5 MGD) of treated wastewater will be delivered to the project site. All of this water will initially be made available for fish and wildlife habitat. Approximately 75 percent of the water delivered to the project will remain within the wetland, evaporate, or be taken up through transpiration. The remaining 25 percent of the water will percolate into the surficial aquifer, which will then be available for consumptive use and to protect the aquifer from salt water intrusion.

The Savings Clause

Since the source of water to be delivered to the project site is treated wastewater that is currently injected into a non-potable aquifer, no existing legal sources of water will be eliminated or transferred as a result of project implementation.

With respect to effects on the level of service for flood protection, the project not expected to cause significant or adverse impacts to any system outside its local aquifer system. The average daily flow to the project site on an annual basis is estimated to be approximately 5 MGD per day (approximately 7.7 cubic feet per second), most of which will be contained on the project site or taken up through evaporation or transpiration.

Project Costs and Cost Apportionment

The total initial estimated cost of the project, including all costs for construction, lands, easements, relocations, rights-of-way and disposals (LERRD), and pre-construction engineering and design (PED) efforts and construction management costs is approximately \$19,135,000 (see Table E-1). This amount includes approximately \$4,500,000 for recreation features, the cost for which were apportioned primarily to the non-federal sponsor in accordance with USACE policy. The federal share of the total project cost is estimated to be approximately \$7,509,434. The non-federal share is estimated to be approximately \$11,625,917.

TABLE E-1: ESTIMATE COSTS AND COST APPORTIONMENT

Work Phase	Total	USACE	PBCWMD
PMP	\$59,620	\$29,810	\$29,810
PIR	\$2,298,203	\$1,149,102	\$1,149,102
P&S	\$850,000	\$425,000	\$425,000
Real Estate	\$2,647,774	\$57,000	\$2,590,774
Construction 1A (Boardwalk, Interpretive Center, Parking Lot -- Phase 1)	\$4,508,149	\$1,462,720	\$3,045,429
Construction 1B (Wetlands Phase 1)	\$3,988,604	\$1,994,302	\$1,994,302
Construction 2 (Wetlands Phase 2)	\$4,783,000	\$2,391,500	\$2,391,500
Total Cost/Partner		\$7,509,434	\$11,625,917
Total Cost of Project		\$19,135,351	

Stakeholder Perspectives

Palm Beach County Water Utilities District has already constructed the first phase of the project, which has been operating since mid-2005. The local citizens are using the nature center and the boardwalk through the wetland in large numbers. They are very pleased with the wildlife education and viewing

opportunities provided by the project. The US Fish and Wildlife Service, Environmental Protection Agency, and the Florida Department of Environmental Protection fully support the project.

Environmental Operating Principles

The proposed project is consistent with the USACE “Environmental Operating Principles” (<http://www.hq.usace.army.mil/cepa/envprinciples.htm>), particularly with respect to the south Florida ecosystem-wide approach for plan formulation, evaluation, and selection, and a holistic consideration of water resources needs and solutions to water resources problems in the study area. The TSP incorporates monitoring, and there is an adaptive assessment and management program in place to ensure that CERP projects, including the Winsberg Farm project, are achieving intended purposes from a system-wide perspective. Project implementation, including plan formulation, involved collaborative interactions with the multiple agencies represented on the Project Delivery Team (PDT). Study area stakeholder groups and members of the general public have had multiple opportunities to receive information on the project and to provide comments and recommendations via public meetings, internet postings, teleconferences, and interagency PDT meetings.

Independent Technical Review

An Independent Technical Review (ITR) is a critical examination by a qualified person or team, predominantly within the Corps of Engineers (Corps), which was not involved in the day-to-day technical work that supports a decision document. ITR is intended to confirm that such work was done in accordance with clearly established professional principles, practices, codes and criteria informed by Engineering Regulation (ER) 1105-2-100. An ITR of the draft PIR was conducted by an independent team, consisting of Corps of Engineer reviewers from 5 different offices external to the Jacksonville District. This review was completed on August 24, 2007. All concerns resulting from this review were considered and were addressed in this draft or will be addressed during the preparation of the Final PIR/EA.

Peer Review

External Peer Review (EPR) is in addition to ITR and is added to the Corps existing review process in special cases where the risk and magnitude of the proposed project are such that a critical examination by a qualified person or team outside of the Corps and not involved in the day-to-day production of a technical product is necessary. EPR will similarly be added in cases where information is based on novel methods, presents complex challenges for interpretation, contains precedent-setting methods or modes, presents conclusions that are likely to change prevailing practices, or is likely to affect policy decisions that have a significant impact. In the absence of a technical requirement high project cost, by itself, may necessitate EPR. For this project, it is being proposed that EPR is not necessary.

Unresolved Issues

Pursuant to a condition of the real estate purchase agreement between the original property owner (Winsberg family) and the non-federal sponsor (Palm Beach County Water Utilities District), Phase 1, including recreation features, of the recommended plan for this project has already been constructed by PBCUWD without federal funds (see Table E-1). Construction was completed prior to the execution of a Project Cooperation Agreement by the U.S. Army Corps of Engineers and PBCWUD. Credit and appropriate reimbursement for costs already incurred, and federal funding, cost-sharing, and crediting for work to be performed by PBCWUD for Phase 2 remain as significant concerns for the non-federal sponsor.