

MEMORANDUM FOR Commander, Jacksonville District (CESAJ-PD)

SUBJECT: Approval of the Peer Review Plan (PRP) for the CERP: Winsberg Farm Wetlands Restoration Project (aka Green Kay Wetlands) Draft PIR/EA

1. References:

a. Memorandum, CESAJ-PD, 8 January 2008, subject: Approval of the Peer Review Plan (PRP) for the CERP: Winsberg Farm Wetlands Restoration Project (aka Green Kay Wetlands) Draft PIR/EA.

b. EC 1105-2-408 Peer Review of Decision Documents, 31 May 2005.

c. Memorandum, CECW-CP, 30 March 2007, subject: Peer Review Process.

d. Supplemental information for the "Peer Review Process" memo, dated March 2007.

2. In accordance with EC 1105-2-408, Peer Review of Decision Documents," the PRP for the CERP: Winsberg Farm Wetlands Restoration Project (aka Green Kay Wetlands) Drafts PIR/EA has been developed, coordinated and concurred with the Ecosystem Center of Expertise (ECO-PCX) Mississippi Valley Division (MVD). The plan as prepared has been reviewed by this office and is approved.

3. We concur with the conclusion that external peer review (EPR) of this project is not required as it does not trigger criteria provided in references 1.b. and c., above. Further, the project does not include any of the following: (1) no novel subject matter will be produced by the report, (2) controversial subject matter is minor with team consensus, (3) subject matter is not precedent-setting, (4) interagency interest has not been unusually significant, and (5) there are no unusually significant environmental or social effects to the nation. The PRP complies with all applicable policy and provides for adequate independent technical review of the plan formulation, engineering, and environmental analyses, and other aspects of the plan development. Non-substantives changes to this PRP do not require further approval.

CESAD-PDS-P
2008

6 February

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4. The district should take steps to post the PRP to its website and provide a link to the ECO-PCX for their use. Before posting to the website the names of Corps/Army employees should be removed in accordance with reference 1.d. above.
5. The SAD point of contact is Mr. Wilbert V. Paynes, CESAD-PDS-P.

/s/

WILBERT V. PAYNES
Chief, Planning and Policy Community
of Practice

**PEER REVIEW PLAN
FOR
COMPREHENSIVE EVERGLADES RESTORATION PLAN
WINSBERG FARM WETLANDS RESTORATION PROJECT
(ALSO KNOWN AS GREEN KAY WETLANDS)
DRAFT INTEGRATED PROJECT IMPLEMENTATION REPORT
AND ENVIRONMENTAL ASSESSMENT
FEBRUARY 2008**

For questions or comments regarding this Peer Review Plan, please forward your comments to:

Title	Telephone	Email
Project Manager	904-232- 1065	Click here to email the Project Manager

THE INFORMATION CONTAINED IN THIS PEER REVIEW PLAN IS
DISTRIBUTED SOLELY FOR THE PURPOSE OF PREDISSEMINATION PEER
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**PEER REVIEW PLAN
FOR
COMPREHENSIVE EVERGLADES RESTORATION PLAN
WINSBERG FARM WETLANDS RESTORATION PROJECT
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1. PURPOSE

This Peer Review Plan (PRP) provides a technical peer review mechanism ensuring that quality products are developed during the course of the study by the Jacksonville District (SAJ). All processes, quality control, quality assurance, and policy review will be done to complement each other producing a review process that identifies and resolves technical and policy issues during the course of the study and not during the final study stages.

For this project the PRP is confirmatory. All Independent Technical Reviews (ITR) have been completed at the time of preparation. The PRP is intended to describe the processes that were implemented to independently (of the Project Team) evaluate the technical sufficiency of the planning study. The PRP is a collaborative product of the Project Delivery Team (PDT) and the National Planning Center of Expertise for Ecosystem Restoration (ECO-PCX).

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. For this project, the last ITR, that of the Draft Report and Environmental Assessment, was set up prior to PCX involvement. However, the ECO-PCX was advised of the process.

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, EPR was found to not be necessary given the modest estimated cost (approximately \$19M) and the absence of substantive triggering factors.

2. REFERENCES

ER 1105-2-100, "Planning Guidance Notebook
EC 1105-2-408, "Peer Review of Decision Documents", dated May 31, 2005
CECW-CP Memorandum, "Peer Review Process", dated March 30, 2007
Water Resources Council's Economic and Environmental Principles and Guidelines for
Water and Related Land Resources Implementation Studies, Chapter II - (National
Economic Development NED) Benefit Evaluation Procedures (March 10, 1983).

3. PROJECT/STUDY BACKGROUND

First authorized by Congress in 1948, the Central and Southern Florida (C&SF) Project provides the South Florida ecosystem with flood control, regional water supply, prevention of saltwater intrusion, preservation of fish and wildlife, recreation, and navigation. In fulfilling these objectives, the project has had unintended adverse effects on the natural environment that constitutes the Everglades and South Florida ecosystem. As a result, in 2000 Congress authorized the Comprehensive Everglades Restoration Plan (CERP) or "Plan" to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region. CERP consists of structural and operational modifications to the C&SF Project and will be implemented over about 35 years. Together these components are expected to deliver benefits to improve the ecological functioning of over 2.4 million acres of the South Florida ecosystem, improve urban and agricultural water supply, improve deliveries to coastal estuaries, and improve regional water quality conditions, while maintaining the existing levels of flood protection.

CERP included construction of the Winsberg Farm Wetlands in Palm Beach County, Florida. The recommended plan would hydrate about 114 acres of farmland previously owned by the Winsberg family, creating a wetland located on about 175 acres of farmland just east of the Southern Region Water Reclamation Facility (SRWRF). About 114 acres of the site would be hydrated using treated wastewater from the Southern Regional Water Reclamation Facility SRWRF. When fully operational, the wetland will reclaim approximately 5 million gallons per day of the treated wastewater. The water will leave the wetlands through evapotranspiration and percolation to the aquifer. There will be no discharge to surface water. Due to the small volume of water involved in hydrating the wetlands, an operating level of 1 foot of water, no impact is expected outside the project footprint.

A wealth of additional project information may be found at the following weblink:
http://www.evergladesplan.org/pm/projects/proj_91_winsberg.aspx

3.1 Study Authority

In Section 601 of the Water Resources Development Act (WRDA) of 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 as a framework for modifications and operational changes to the Central and Southern Florida 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. This framework is known as the Comprehensive Everglades Restoration Plan (CERP). It contains 68 components (projects) that, once implemented, will work together to achieve overall Plan purposes. The Plan is commonly referred to as the “Yellow Book.” In addition, there are a series of Other Project Elements (OPEs) that collectively were viewed as important first steps toward realizing regional ecosystem restoration benefits. The Winsberg Farm Project is one of these OPEs.

While Section 601 approved the framework and projects, it authorized only a small number of projects, and many CERP projects must be individually authorized by Congress. The Secretary of the Army may authorize smaller CERP projects, including Winsberg Farm, under the program authority without additional congressional authorization. The following excerpt from Section 601 is the specific authority for this Winsberg Farm Wetlands Restoration study and report:

“(c) ADDITIONAL PROGRAM AUTHORITY-

(1) IN GENERAL- To expedite implementation of the Plan, the Secretary may implement modifications to the Central and Southern Florida Project that--

(A) are described in the Plan; and

(B) will produce a substantial benefit to the restoration, Preservation and protection of the South Florida ecosystem.

(2) PROJECT IMPLEMENTATION REPORTS- Before implementation of any project feature authorized under this subsection, the Secretary shall review and approve for the project feature a project implementation report prepared in accordance with subsections (f) and (h).

(3) FUNDING-

(A) INDIVIDUAL PROJECT FUNDING-

(i) FEDERAL COST- The total Federal cost of each project Carried out under this subsection shall not exceed \$12,500,000.

(ii) OVERALL COST- The total cost of each project carried out under this subsection shall not exceed \$25,000,000.

(B) AGGREGATE COST- The total cost of all projects carried out under this subsection shall not exceed \$206,000,000, with an estimated Federal cost of \$103,000,000 and an estimated non- Federal cost of \$103,000,000.”

3.2 Location / Study Area Maps

The overall study area (Figure 1) encompasses a major portion of southeastern Palm Beach County immediately east of the East Coast Protective Levee (ECPL) that in this part of South Florida separates the remaining Everglades in the form of the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge) from the urbanized and agriculturally developed lands to the east. Prior to development, these lands were part of the short-hydroperiod wetland system that existed along the eastern Everglades where it

abutted the coastal ridge. The level of development in the area is non-reversible. However, there are remaining patches of natural wetlands in the study area, and CERP activities are focused on preserving, enhancing or restoring wetlands and other natural-area habitats where this is deemed possible. Creation of greenways of functional wetland and upland habitat is an objective of Palm Beach County's Department of Environmental Resources Management, as well as state and federal natural resource management agencies.

The Palm Beach County Water Use District (PBCWUD) owns and operates a variety of water and wastewater management systems throughout the urbanized portion of the county. One of its major facilities is the Southern Regional Water Reclamation Facility (SRWRF) located in Delray Beach. The SRWRF service area is shown in Figure 1-3. It covers an area of 90 square miles and extends from the Hillsboro Canal on the south to Hypoluxo Road on the north. The western margins extend in some areas as far west as the ECPL and on the east half way to the Intracoastal Waterway. Land use in this portion of Palm Beach County is dominated by low- to high-density residential areas and agricultural lands. Agricultural lands and remaining open spaces are rapidly being replaced by residential and commercial development.

Within the service area, there is a mandatory water reuse zone that encompasses approximately 6.5 square miles centered around the SRWRF. One award-winning reuse project that PBCWUD has implemented within this zone is the Wakodahatchee Wetlands Project. This project which the county designed and constructed during the early 1990s. Using about 50 acres of former effluent percolation ponds which were converted into a series of wetland cells vegetated with native plant species with construction completed in November 1996. The mosaic of wetland habitats designed into the Wakodahatchee Wetlands supports a diverse wildlife assemblage of resident and migratory birds, fish, amphibians and reptiles, as well as several species of mammals. The design included a boardwalk and interpretive signage that promote public education and passive recreational uses. More than 150 different species of birds have been documented using this constructed wetland, and the site has become an important bird watching spot for South Florida residents and visitors.

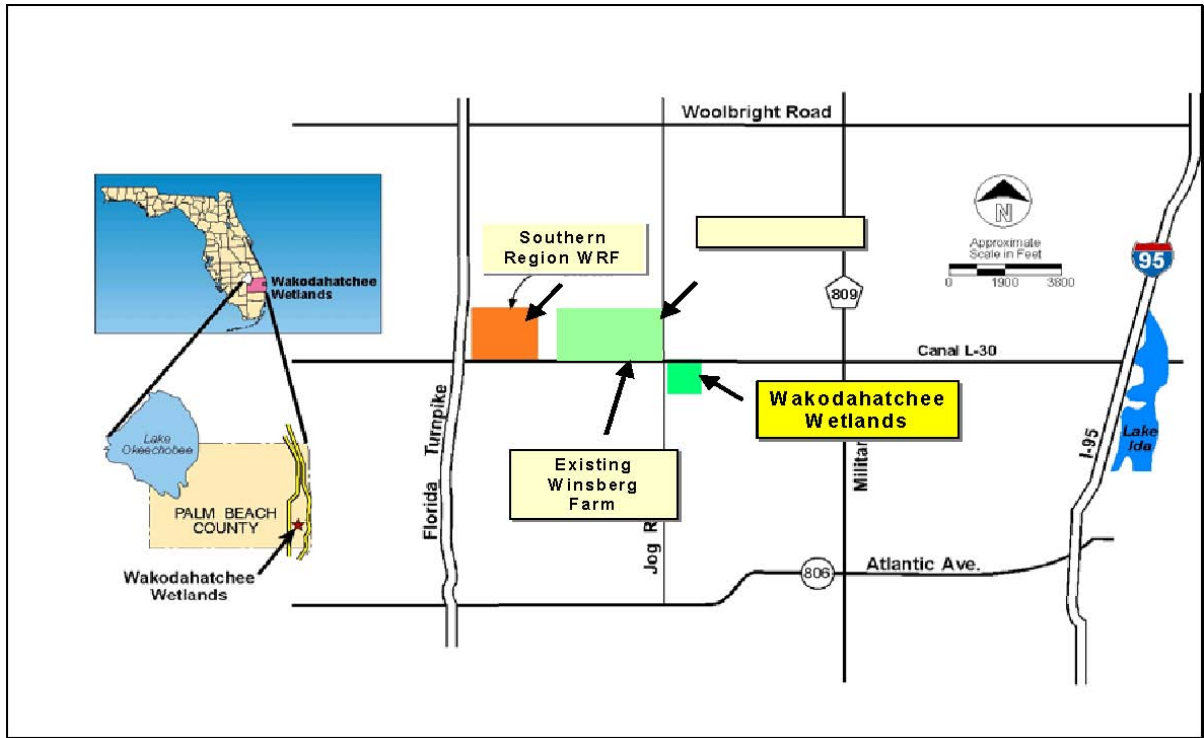


Figure 1: Project Location Map

3.3 Planning Models/Alternatives Evaluation Methods

Plan formulation for the Winsberg Farm Wetlands Restoration Project is to reaffirm the Yellow Book plan, which is to construct a wetland on the Winsberg site. The Winsberg site, along with other sites in the area, were evaluated to verify that the Winsberg site is cost-effective. After verifying and selecting the Winsberg site as cost-effective, alternatives were developed to optimize the design of a constructed wetland on the Winsberg site.

To develop alternatives, management measures were developed, screened and evaluated. The management measures that best met project objectives were selected. Management measures were then combined to develop alternatives. These alternatives were, in turn, evaluated to identify the alternative that was cost-effective and best met the project objectives.

Benefits Evaluation Methodology

a) Environmental Benefits Using Wetland Rapid Assessment Procedure (WRAP) and Wetland Quality Index (WQI)

The ecological benefits of alternative plans were assessed through two separate analyses. First, existing, future without-project, and future with-project conditions were assessed using a modified Wetland Rapid Assessment Procedure (WRAP) (Miller and Gunsalus 1997). Biologists from the U.S. Fish and Wildlife Service (USFWS) and U.S. Army Corps of Engineers (USACE) conducted this assessment to quantify differences in habitat quality between a farm (the existing condition), residential development (the future without-project condition), and a created wetland (future with-project condition). This WRAP analysis was not refined enough to distinguish between differing hydroperiod operations at the wetlands, so an intermediate hydroperiod was utilized to determine base habitat units associated with the creation of a wetlands at the Winsberg site.

b) Wetland Quality Index Methodology

This second approach, Analyzing Alternative Wetland Designs, was assessed using the Wetland Quality Index (WQI) (Lodge 1997) method. This assessment was conducted by CH2MHILL in partial fulfillment of a contract with USACE (CH2MHILL, 2003), and allowed for discrimination between three proposed wetland designs: Alternative 1) long hydroperiod wetland, Alternative 2) long/short hydroperiod wetlands in combination, and Alternative 3) long hydroperiod wetlands in combination with deepwater habitat.

The WQI method was developed to evaluate wetlands created for mitigation purposes. The methodology uses 17 parameters to assess wetland quality. Three alternative wetland designs were analyzed using this method. Since a Wakodahatchee-like system has already been constructed on the western portion of the project, all three alternatives share that design. Differences are found on the eastern portion of the project, where Alternative

1 has a Wakodahatchee-like system, Alternative 2 has short hydroperiod wetlands, and Alternative 3 has deepwater habitat.

The expected ecological quality of the three, short-listed alternatives was compared using the Wetland Quality Index (WQI), a wetland functional assessment methodology originally designed for Everglades-type habitats (Lodge, 1997). This method was selected for application to this analysis from a variety of wetland functional assessment methods because of its flexibility in allowing attributes of proposed conceptual plans to be compared. The WQI methodology is appropriate for evaluation of proposed designs because the criteria used include water levels, presence and diversity of wetland plant species, hydroperiod, surrounding environment, and other attributes measurable at the design level.

c) Combining the WRAP and WQI Analysis

Ecological benefits of alternative plans were assessed through two separate analyses. First, existing, future without-project and future with-project conditions were assessed using a modified Wetland Rapid Assessment Procedure (WRAP) on an intermediate hydroperiod wetland of 120 acres at the Winsberg site. This WRAP analysis was not refined enough to distinguish between differing hydroperiods, so it became important to further refine wetland alternative hydroperiods by using a second ecological model. This second approach involved using the Wetland Quality Index (WQI) method to scale habitat units based on variations from the intermediate hydroperiod. This analysis utilizes the calculation of 49.79 average annual habitat units from the WRAP analysis and equating this with the WQI intermediate hydroperiod score of 24. The next step is to examine the percent deviation from this WQI score for the long and short hydroperiods, and then adjusting the WRAP habitat unit score accordingly.

Cost Effectiveness and Incremental Cost Analysis (CE/ICA)

The US Army Corps of Engineers Institute for Water Resources IWR-PLAN Decision Support Software was employed.

ECO-PCX Review and Certification/Approval of Planning Models

The District will supply to the ECO-PCX documentation for the WRAP and WQI Analysis for certification/approval in early January, 2008. The certification/approval process is anticipated to require approximately 2 weeks.

IWR-Plan Decision Support Software, a product of the Corps Institute for Water Resources, does not require additional certification/approval by the PCX.

3.4 The Project Delivery Team

Project Manager	Civil Engineer	Jacksonville District
Planning Technical Lead	Water Resource Planner	Jacksonville District
Environmental Analysis	Biologist	Jacksonville District
Economic Analysis	Economist	Jacksonville District
Engineering Design	Civil Engineer.	Jacksonville District
Hydraulics and Hydrology	Hydraulic Engineer	Jacksonville District
Water Management	Hydraulic Engineer	Jacksonville District
Real Estate Evaluation	Real Estate Spec.	Jacksonville District
Legal Evaluation	Attorney	Jacksonville District

4. INDEPENDENT TECHNICAL REVIEW PLAN

ITR is performed at key points in the study process to ensure the proper application of appropriate regulations and professional procedures. ITRs are typically performed at two Corps vertical team review points interim to the Draft Report: the Feasibility Scoping Meeting (FSM) and Alternative Formulation Briefing (AFB). Subsequently the Draft report is subjected to ITR and the Final Report in the case of projects requiring an Environmental Impact Statement (EIS). DrChecks document review and comment software will be used to document the ITRs. Public comments and results of vertical team reviews are provided to the ITR Team.

Skilled and experienced personnel who have not been associated with the development of the study products perform the ITR. ITR team members may be employees of U.S. Army Corps of Engineer Districts, other Federal agencies, state or local government agencies, universities, private contractors or other institutions. The key factor is extensive, expert knowledge in their field of expertise, including approval for use and acceptability of employment of planning models discussed in Section 3.3, above.

The ITR team comprised all technical disciplines that were significant in preparation of the report. Technical Disciplines determined to be appropriate for this review include: plan formulation, economics, environmental/NEPA compliance, hydraulics and hydrology, engineering design, cost engineering, water management, and real estate.

The relevant National Planning Center of Expertise, in this case for Ecosystem Restoration (ECO-PCX), has ultimate responsibility for accomplishing ITR. In this case, the ITR Team was formed prior to involvement of the PCX. The team consisted of qualified members of other SAD Districts and the Corps Institute for Water Resources, for review of the draft report and Environmental Assessment. However, review of the Draft Report and Environmental Assessment was coordinated with the ECO-PCX. Also, the final review, for that of the Draft PIR, was conducted prior to the requirement of involvement of the Corps National Cost Directorate. However, the District, at the request of the ECO-PCX will fund further review of the draft report cost estimating to allow for the Cost Engineering ITR team member to complete the Cost Dx checklist and for Cost

Dx quality assurance of the cost engineering review. This process is anticipated for early January, 2008.

5. EXTERNAL PEER REVIEW (EPR) PLAN

In order to determine if external peer review is warranted for this particular project, an evaluation was conducted of the risk and magnitude of the proposed project, including consideration of whether or not study conclusions were based on novel methods, present complex challenges for interpretation, contain precedent-setting methods or modes, present conclusions that are likely to change prevailing practices, or are likely to affect policy decisions that have a significant impact, as called for in EC 1105-2-408, Section 4.b.

External Peer Review Requirement Determination

For this study, it has been determined that EPR is not warranted, given the modest estimated cost (approximately \$19M) and the absence of substantive triggering factors. The risk and magnitude of the proposed project is low, is not based upon novel methods, does not present complex challenges for interpretation, does not contain precedent-setting methods or modes, and does not present conclusions that are likely to change prevailing practices, or likely to affect policy decisions that have a significant impact. This report will not disseminate influential scientific information or highly influential scientific assessment.

Vertical team consensus will be achieved through their review of this PRP. Once the PCX has completed its review/approval process, vertical team consensus is expected, but if the vertical team decides to include EPR, then the PRP would be revised and resubmitted for PCX

6. ADDITIONAL REVIEW CONSIDERATIONS

Public and Agency Comment and Dissemination

Public involvement occurs throughout preparation of the Decision Document. Public information meetings are conducted to inform the general public, other federal and state agencies and interested stakeholders of the status of the project and alternatives being considered. At a minimum, public meetings have/will be conducted as part of the National Environment Policy Act (NEPA) compliance process, including: Public scoping meetings and the public review period of the Environmental Assessment.

The two meetings of the full Project Delivery Team (PDT) held to date were both open to the public, with interested citizens from the local community attending. The meetings were held at the Palm Beach County Southern Region Water Reclamation Facility (SRWRF), which is located adjacent to the Winsberg Farm property. The PDT meetings were held March 8 2002 and January 23, 2003. A number of other agencies have taken

part in the PDT and National Environmental Policy Act (NEPA) scoping process. Public meetings on the draft Project Implementation Report will now be conducted.

7. CONSOLIDATED SCHEDULE

- ITR of FSM Package (completed)
- ITR of AFB Package (completed December 2004)
- District Review of Draft Report (completed)
- ITR of Draft Report, (completed September 2007)
- Cost Dx Checklist Review and QA, for Draft Report, Jan 08.
- ECO PCX Review and Certification/Approval of Planning Models, Jan 08
- Public and Agency review of Integrated Draft Report and EA, to be determined

8. POINTS OF CONTACT

Due to confidentiality law requirements with posting documents on websites for public review, only the Project Manager is listed as the point of contact for any questions concerning this Peer Review Plan and qualifications of members of the PDT team:

Title	Telephone	Email
Project Manager	904-232- 1065	Click here to email the Project Manager