DEPARTMENT OF THE ARMY
SOUTH ATLANTIC DIVISION, CORPS OF ENGINEERS
ROOM 10M15, 60 FORSYTH ST., S.W.
ATLANTA GA 30303-8801

REPLY TO
ATTENTION OF

CESAD-PDS-P

15 MAY 2009

MEMORANDUM FOR Commander, Jacksonville District (CESAJ-PD)

SUBJECT: Approval of Peer Review Plan for Biscayne Bay Coastal Wetlands – Tidal Wetland Restoration PIR

1. References:

a. Memorandum, CESAD-PD, 20 November 2008, subject: Approval of Peer Review Plan (PRP) for Biscayne Bay Coastal Wetlands – Tidal Wetland Restoration (BBCW PIR 1).

b. EC 1105-2-410, Review of Decision Documents, 22 August 2008.

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

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

2. In accordance with EC 1105-2-410, "Review of Decision Documents," the subject PRP for Biscayne Bay Coastal Wetlands – Tidal Wetlands Restoration Project Implementation Report (PIR), Biscayne Bay Coastal Wetlands PIR Number 1, has been coordinated with and concurred on by National Ecosystem Planning Center of Expertise (ECO-PCX). The plan (enclosed) has been reviewed by this office and is approved.

3. We concur with the conclusion that independent external peer review IEPR) of this project is required due project cost in excess of $45,000,000. Other requirements that could lead to IEPR are: (1) novel subject matter will be produced by the report, (2) controversial subject matter exists to include but not limited to environmental impact of modifications associated with improvements in the project area (3) subject matter is precedent-setting, (4) interagency interest is significant, and (5) there are significant environmental or social effects to the nation. While none of these specific triggers apply to this Project, as the cost of the project is in excess of $45,000,000 Independent External Peer Review is required. The PRP complies with all applicable policy and provides for adequate agency technical review (ATR) of the plan formulation, engineering, and environmental analyses, and other aspects of the plan development. Non-substantive changes to this PRP do not require further approval.

4. The district should take steps to the post the PRP is its web-site and provide a link to the ECO-PCX for their use. Before posting to the web-site the names of Corps/Army employees should be removed in accordance with reference 1.d. above.

5. The SAD point of contact is Mr. Terry D. Stratton, CESAD-PDS-P, (404) 562-5228.

FOR THE COMMANDER:

Encl

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

CF:
CEMVC-PD-N
CEMVD-RB-T

PEER REVIEW PLAN
FOR
BISCAYNE BAY COASTAL WETLANDS (BBCW) PROJECT
Project Implementation Report 1 (PIR 1), or
Biscayne Bay Coastal Wetlands - Tidal Wetland Restoration PIR
COMPREHENSIVE EVERGLADES RESTORATION PLAN (CERP)
MAY 2009

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

Title	Telephone	Email
Project Manager	904-232- 2121	Click here to email the Project Manager

THE INFORMATION CONTAINED IN THIS PEER REVIEW PLAN IS DISTRIBUTED SOLELY FOR THE PURPOSE OF PREDISSEMINATION PEER REVIEW UNDER APPLICABLE INFORMATION QUALITY GUIDELINES. IT HAS NOT BEEN FORMALLY DISSEMINATED BY THE U.S. ARMY CORPS OF ENGINEERS, JACKSONVILLE DISTRICT. IT DOES NOT REPRESENT AND SHOULD NOT BE CONSTRUED TO REPRESENT ANY AGENCY DETERMINATION OR POLICY.

PEER REVIEW PLAN
FOR
BISCAYNE BAY COASTAL WETLANDS (BBCW) PROJECT
Project Implementation Report 1 (PIR 1), or
Biscayne Bay Coastal Wetlands - Tidal Wetland Restoration PIR

COMPREHENSIVE EVERGLADES RESTORATION PLAN (CERP)
MAY 2009

Executive Summary

This document describes the Jacksonville District commitment to conduct, and general procedures for conducting, Agency Technical Reviews (ATR) and Independent External Peer Reviews (IEPR) in support of the Biscayne Bay Coastal Wetlands (BBCW) PIR 1, to insure compliance with Engineering Circular EC 1105-2-410. As well, commitment is made to undertake planning model certification in compliance with EC 1105-2-407.

The Biscayne Bay Coastal Wetlands (BBCW) project is one of the components of Comprehensive Everglades Restoration Program (CERP). BBCW PIR 1 generally includes the more coastal BBCW components and is intended to divert damaging canal discharges to Biscayne Bay and benefit tidal wetlands. The area to be impacted by BBCW PIR 1 is located in southeast Miami-Dade County. The land area to be impacted covers 13,600 acres, from the Deering Estate at C-100C in the north, south to the Florida Power and Light Turkey Point power plant, generally along L-31E. Work to be performed includes the installation/construction/operation of pump stations, spreader canals, flowways, levees, culverts, and backfilling canals. The current estimated total BBCW project cost at approximately $218 million.

The relevant National Planning Center of Expertise, in this case for Ecosystem Restoration (ECO-PCX), has ultimate responsibility for accomplishing ATR, IEPR and Planning Model Certification.

CONSOLIDATED PRELIMINARY COST ESTIMATE

- Planning Model Certification - $100
- Remaining ATR - $115K
- IEPR - $200K

CONSOLIDATED SCHEDULE

- ATR of FSM Package (completed)
- ATR of AFB Package (completed)
- ATR of Draft Report, December 2008
- Public and Agency review of Integrated Draft Report and EIS, August 2009
- Independent External Peer Review (IEPR), August 2009
- ATR of Final Report, December 2009

PEER REVIEW PLAN
FOR
BISCAYNE BAY COASTAL WETLANDS (BBCW) PROJECT
Project Implementation Report 1 (PIR 1), or
Biscayne Bay Coastal Wetlands - Tidal Wetland Restoration PIR

COMPREHENSIVE EVERGLADES RESTORATION PLAN (CERP)
MAY 2009

1.0 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.

This PRP is intended to describe the processes that will be 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). The ECO-PCX shall manage the peer review processes, which for this study includes Agency Technical Reviews (ATR) and Independent External Peer Review (IEPR).

ATR 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. ATR 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.

Independent External Peer Review (IEPR) is in addition to ATR, 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. IEPR will similarly be added in cases where information is based on novel methods, presents complex challenges for interpretation, contains precedent-setting methods or models, 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 IEPR.

2.0 REFERENCES

ER 1105-2-100, "Planning Guidance Notebook
EC 1105-2-410, "Review of Decision Documents", dated August 22, 2008
EC-1105-2-407, "Planning Models Improvement Program – Model Certification" , dated May 31, 2005

Water Resources Development Act of 2007 (WRDA 2007)

3.0 STUDY BACKGROUND

Overview

First authorized by Congress in as part of the Flood Control Act of 1948 (FCA 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.

In an attempt to mitigate or reverse the unintended adverse effects on the natural environment from the CS&F Project, and to protect the South Florida ecosystem while providing for other water-related needs of the region in 2000 Congress authorized the Comprehensive Everglades Restoration Plan (CERP) or "Plan" in the Water Resources Development Act of 2000 (WRDA 2000),. Over the next 35 years it is envisioned that CERP will bring about a variety of structural and operational modifications to structures installed as part of the C&SF Project.

The various components of the CERP are anticipated to benefit 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 existing levels of flood protection.

During the development of the Plan, the C&SF Project Restudy Team evaluated the 1996 list of Critical Restoration Projects developed by the South Florida Ecosystem Restoration Working Group to determine whether these projects should be included in the Comprehensive Plan. Most all of the construction projects were included in the Comprehensive Plan, including BBCW. It will require specific authorization by Congress.

Biscayne Bay Coastal Wetlands PIR 1 (BBCW PIR1)

The BBCW is one of the components of Comprehensive Everglades Restoration Program (CERP). BBCW PIR 1 generally includes the more coastal BBCW components and is intended to divert damaging canal discharges to Biscayne Bay and benefit tidal wetlands. The area to be impacted by BBCW PIR 1 is located in southeast Miami-Dade County (Figure 1). The land area to be impacted covers 13,600 acres, from the Deering Estate at C-100C in the north, south to the Florida Power and Light Turkey Point power plant, generally along L-31E (Figure 2). Work to be performed includes the installation/construction/operation of pump stations, spreader canals, flowways, levees, culverts, and backfilling canals. The current estimated total BBCW project cost at approximately $218 million.

The goals of the BBCW PIR 1 management measures are to rehydrate wetlands and reduce point source freshwater discharges into Biscayne Bay, by replacing lost overland flow and partially compensating for the reduction in groundwater seepage. This would be accomplished by redistributing, through a spreader system, available surface water entering the area from regional canals. The proposed redistribution of freshwater flow across a broad front is expected to restore or enhance tidal wetlands, and near shore bay habitat.

Restoration of tidal wetlands and near shore bay habitat is anticipated to be obtained through the re-establishment of sustained lower-than-seawater salinities, required in tidal wetlands and the near shore bay to provide nursery habitat for fish and shellfish. This project is expected to create conditions that will be conducive to the re-establishment of oysters and other components of the oyster reef community. Diversion of canal discharges into coastal wetlands, as opposed to their direct discharge into the Bay, is expected not only to re-establish productive nursery habitat all along the shoreline but also to reduce the abrupt freshwater discharges that are physiologically stressful to fish and benthic invertebrates in the bay near canal outlets.

Target freshwater flows will be based upon the quality, quantity, timing and distribution of flows needed to provide and maintain sustainable biological communities in Biscayne Bay, Biscayne National Park and the coastal wetlands.

A wealth of additional project information may be found at the following weblink:
http://www.evergladesplan.org/pm/projects/proj_28_biscayne_bay.aspx

Study Authority

Section 601 of the *Water Resources Development Act 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 (known as the "Comprehensive Plan"), which describes and outlines the Comprehensive Everglades Restoration Plan (CERP):

> *(b) Comprehensive Everglades Restoration Plan -*
>
> *(1) Approval -*
>
> *(A) IN GENERAL. —Except as modified by this section, the Plan is approved as a framework for modifications and operational changes to the Central and Southern Florida Project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The Plan shall be implemented to ensure the protection of water quality in, the reduction of the loss of fresh water from, and the improvement of the environment of the South Florida ecosystem and to achieve and maintain the benefits to the natural system and human environment described in the Plan, and required pursuant to this section, for as long as the project is authorized.*

4. 0 PROJECT DELIVERY TEAM

The project delivery team (PDT) is an interagency team of individuals directly involved in the development of the decision document. Team member and agency information are listed below.

Discipline	Agency
Project Management	U.S. Army Corps of Engineers (USACE)
Plan Formulation	USACE
Real Estate	USACE
Project Assurances	USACE
Economics	USACE
Archaeology/Cultural Resources	USACE
Biology/NEPA	USACE
Hydrologic/Hydraulic Modeling	USACE
Water Control/Operations	USACE
Civil Engineering Design	USACE
Geology	USACE
Cost Engineering	USACE
Water Quality	USACE
Value Engineering	USACE
Plan Formulation	USACE
Office of Counsel	USACE
Construction Operations	USACE
Regulatory	USACE
Project Management	South Florida Water Management District (SFWMD) Acceler8 Contractor
Planning, Project Assurances	SFWMD
Ecology	SFWMD
Water Quality	SFMWD
State Compliance	SFWMD
Hydrologic/Hydraulic Modeling	SFWMD
Water Control	SFWMD
Biology/Project Assurances	U.S. Fish and Wildlife Service (USFWS)
Biology/Water Quality	Florida Department of Environmental Protection (FDEP)
Biology/Plan Formulation	Miami-Dade Co. Department of Environmental Resources

	Management (DERM)
Plan Evaluation	National Park Service (NPS)

5.0 PLANNING MODELS EMPLOYED

A Criteria Based Ecological Evaluation Matrix (CBEEM) model was developed for use in evaluation of project alternatives. The CBEEM was submitted to the ECO-PCX for model certification, pursuant to Engineering Circular EC-1105-2-407. The contract was issued in November, 2008. The certification process will be complete at least prior to release of the draft report, for public review. Preliminary cost estimate for model certification is $60K.

6.0 AGENCY TECHNICAL REVIEW (ATR)

ATR is performed at key points in the study process to ensure the proper application of appropriate regulations and professional procedures. ATRs are typically performed at two Corps vertical team review points interim to the Draft Report: the Feasibility Scoping Meeting (FSM, completed) and Alternative Formulation Briefing (AFB, completed). Subsequently the Draft report is subjected to ATR 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 ATRs.

Skilled and experienced personnel who have not been associated with the development of the study products perform the ATR. ATR 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.

The ATR team will be nominated and identified by the ECO-PCX and will be comprised of individuals from all the technical disciplines that were significant in the preparation of the report. Technical disciplines determined to be appropriate for this review include: Plan Formulation, Economics, Environmental Restoration Analysis, Environmental Regulatory Compliance (e.g., NEPA documentation preparation), Engineering Design, Cost Estimating, H&H, H&H Modeling, Water Control, Geotechnical Engineering, and Real Estate. Cost of performing ATR of the draft and final PIRs is estimated at approximately $65K and $50K, respectively.

The relevant National Planning Center of Expertise, in this case for Ecosystem Restoration (ECO-PCX), has ultimate responsibility for accomplishing ATR. The ECO-PCX is requested to form an ATR Team, and to conduct ATR of the Draft and Final Reports.

Also, a Cost Engineering Directory of Expertise (Cost Dx) has been established, at the Corps Walla Walla District (NWW). The completed draft report cost estimate will be reviewed by the Cost Dx. The ECO-PCX is requested, herein, to coordinate cost estimation review with the Cost Dx.

7.0 INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

In order to determine if independent 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 models, disseminate influential scientific information or a highly influential scientific assessment, 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 1105-2-410.

External Peer Review Requirement Determination

The Jacksonville District opinion is that this project would be considered large, likely exceeding $200M in total cost. Magnitude of the project triggers the requirement for external peer review. Other criteria are not considered to be sufficiently significant to trigger IEPR. IEPR will be conducted on the draft report. Detailed scope of the IEPR will be determined in advance of the review. Preliminarily, the cost of IEPR is anticipated to be approximately $200K.

Evaluations of individual decision criteria are provided below, in support of the above-stated opinion.

Unusually high risk or magnitude indicated?

The proposed project does not appear to include risks that are greater than normally would be expected for actions of this type. Work to be performed includes the installation/construction/operation of pump stations, spreader canals, flowways, levees, culverts, and backfilling canals. Methods for which the Corps and SFWMD have extensive experience.

This project is considered low risk overall. The ability to adaptively make adjustments in freshwater quantity and distributions into the tidal wetlands and nearshore Biscayne Bay habitat will be built into the project.

Study conclusions based upon novel methods?

The project involves restoration of tidal wetlands. Designs are based on the Corps and SFWMD extensive history of installation/construction/operation of pump stations, spreader canals, flowways, levees, culverts, and backfilling canals.

Study conclusions present complex challenges for interpretation?

The project does not present unusually complex challenges for interpretation. Performance measures were evaluated for restoration of nearshore salinity regime, tidal

wetland salinity, reduction of nitrogen and phosphorus concentrations, reduction of non-native vegetation and restoring connections between basins and wetlands. This is intended to be accomplished by rehydrating wetlands and reducing point source freshwater discharges into Biscayne Bay, by replacing lost overland flow and partially compensating for the reduction in groundwater seepage. The uncertainty of predictions and outcomes of the project is low, and can be ameliorated through adaptive management.

Study conclusions contain precedent-setting methods or models?

The proposed construction/restoration methods are not precedent-setting. The potential for controversy regarding project implementation is low. The State of Florida supports the project as demonstrated by their continuing commitment to the project.

Study conclusions likely to change prevailing practices?

The project is unlikely to affect policy decisions that have a significant impact.

Proposed general scope of independent external peer review (IEPR)

The total cost of the project is the primary driver of the requirement to perform IEPR for this project. The scope of IEPR should include:

- General review of the draft report for completeness and adequate telling of the story.
- Completeness and appropriateness of ecosystem restoration analyses
- Completeness and appropriateness of economic analyses
- Completeness and appropriateness of engineering analyses

The IEPR will be conducted by a panel of reviewers that will be selected by an eligible organization as defined in Section 2035(l) Definitions of WRDA 2007. At this time it is not anticipated that the public will be asked to nominate potential peer reviewers. It is anticipated that the IEPR team will be comprised of individuals from all the technical disciplines that were significant in the preparation of the report. Technical disciplines determined to be appropriate for this review include: Plan Formulation, Economics, Environmental Restoration Analysis, Engineering Design, Cost Estimating, H&H, H&H Modeling, Water Control, Geotechnical Engineering, and Real Estate.

Current consolidated schedule (See Section 8.0 below) provides for concurrent IEPR and public and agency review of the integrated draft report and EIS. Significant or relevant public or agency comments received prior to or during IEPR will be provided to the panel of reviewers.

8.0 SUMMARY

This document describes the Jacksonville District commitment to conduct, and general procedures for conducting, Agency Technical Reviews (ATR) and Independent External Peer Reviews (IEPR) in support of the Biscayne Bay Coastal Wetlands (BBCW) PIR 1, to insure compliance with Engineering Circular EC 1105-2-410. As well, commitment is made to undertake planning model certification in compliance with EC 1105-2-407.

CONSOLIDATED PRELIMINARY COST ESTIMATE

- Planning Model Certification - $100
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CONSOLIDATED SCHEDULE

- ATR of FSM Package (completed)
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- Independent External Peer Review (IEPR), August 2009
- ATR of Final Report, December 2009

9.0 PLANNING CENTER OF EXPERTISE POINT OF CONTACT

The email address for the USACE Planning Center of Expertise is: ECO-PCX@usace.army.mil**.**

Figure 1: Biscayne Bay Coastal Wetlands LOCATION MAP

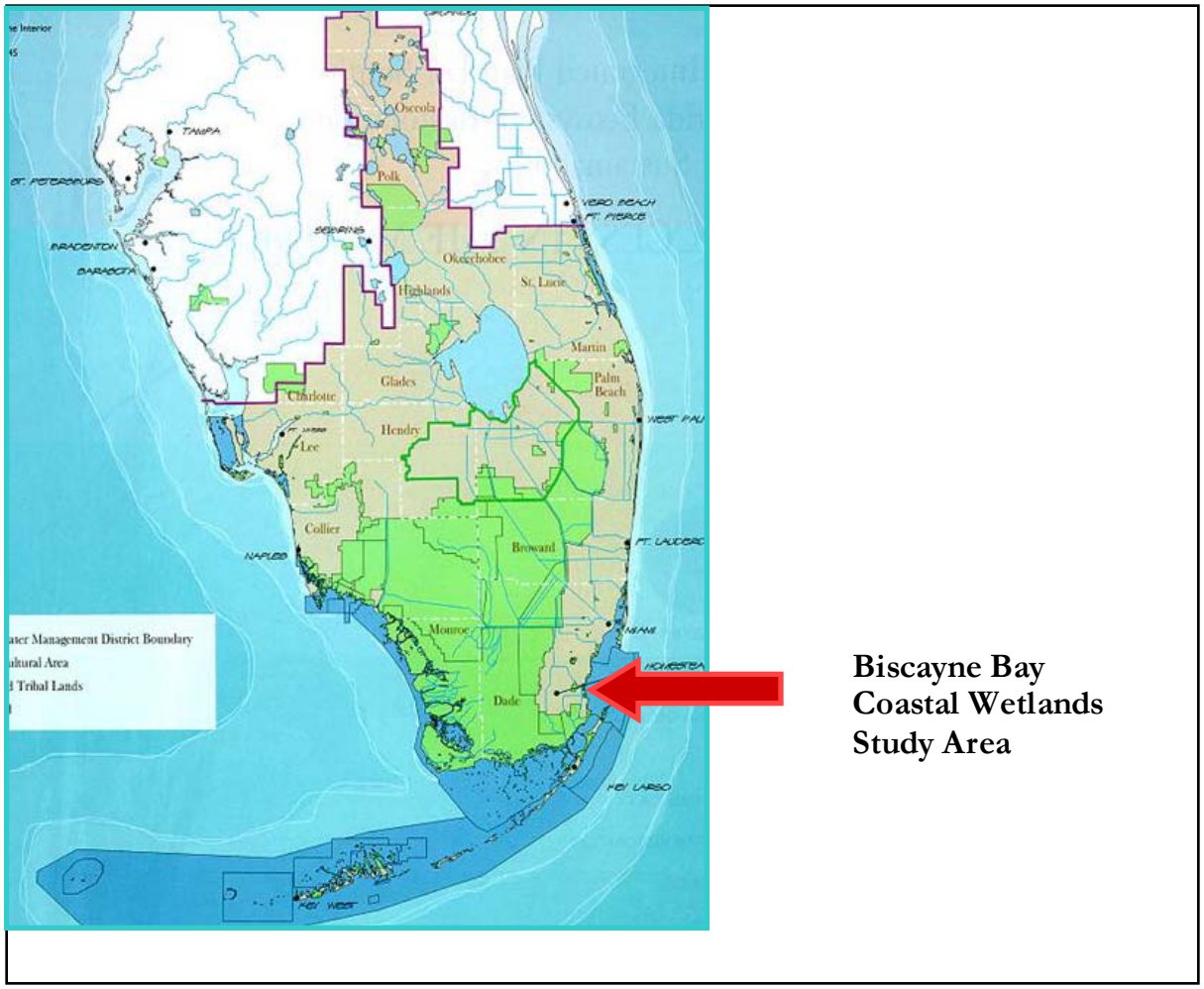

Figure 2: Biscayne Bay Coastal Wetlands Project Area