



REPLY TO
ATTENTION OF

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

CESAD-CG

6 October 2017

MEMORANDUM FOR COMMANDER, U.S. Army Corps of Engineers, Mobile District

SUBJECT: Approval of Review Plan for the Project Implementation Report on the Comprehensive Everglades Restoration Plan: Western Everglades Restoration Project

1. References:

a. Memorandum, CESAJ-PD, 08 Sep 2017, subject: CESAJ-PD Review Plan Approval Request for Western Everglades Restoration Project (WERP).

b. Engineer Circular 1165-2-214, Civil Works Review, 15 December 2012.

c. Planning Bulletin 2016-02, Civil Works Review, 4 March 2016.

2. Jacksonville District prepared the enclosed Review Plan in accordance with Engineer Circular 1165-2-214. The District coordinated preparation of the review plan with the Ecosystem Restoration Planning Center of Expertise (ECO-PCX), which is the lead office to execute this Review Plan. The ECO-PCX recommends approval of the review plan. The Review Plan includes Type I Independent External Peer Review.

3. I hereby approve this Review Plan, which is subject to change as circumstances require, consistent with study development under the Project Management Business Process. Subsequent significant revisions to this Review Plan or its execution will require new written approval from this office. The District shall post the approved Review Plan and a copy of this approval memorandum to the District public internet website and provide a link to the ECO-PCX for their use. Before posting to the website, the names of Corps employees should be removed.

4. The point of contact for this action is [REDACTED]

[REDACTED]
Brigadier General, USA
Commanding

REVIEW PLAN

CENTRAL AND SOUTHERN FLORIDA PROJECT COMPREHENSIVE EVERGLADES RESTORATION PLAN

Western Everglades Restoration Project (456218) Integrated Project Implementation Report and Environmental Impact Statement

Jacksonville District

MSC Approval Date: 6 Oct 2017

Last Revision Date:



**US Army Corps
of Engineers®**

REVIEW PLAN

**CENTRAL AND SOUTHERN FLORIDA PROJECT
COMPREHENSIVE EVERGLADES RESTORATION PLAN**

**Western Everglades Restoration Project
Integrated Project Implementation Report and Environmental Impact Statement**

TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS	1
2. REVIEW MANAGEMENT ORGANIZATION COORDINATION	1
3. STUDY INFORMATION	1
4. DISTRICT QUALITY CONTROL	7
5. AGENCY TECHNICAL REVIEW	7
6. INDEPENDENT EXTERNAL PEER REVIEW	10
7. POLICY AND LEGAL COMPLIANCE REVIEW	12
8. COST ENGINEERING REVIEW AND CERTIFICATION	13
9. MODEL CERTIFICATION AND APPROVAL	13
10. CONSOLIDATED REVIEW SCHEDULES AND COSTS	15
11. PUBLIC PARTICIPATION	16
12. REVIEW PLAN APPROVAL AND UPDATES	16
13. REVIEW PLAN POINTS OF CONTACT	16
ATTACHMENT 1: TEAM ROSTERS	18
ATTACHMENT 2: STATEMENT OF COMPLETION OF THE DISTRICT QUALITY CONTROL REVIEW FOR THE Western Everglades Restoration Project	20
ATTACHMENT 3: STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS	22
ATTACHMENT 4: REVIEW PLAN REVISIONS	23

1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This plan defines the scope and levels of peer review for the Central and Southern Florida Project, Comprehensive Everglades Restoration Plan (CERP), Western Everglades Restoration Project (WERP), Integrated Project Implementation Report and Environmental Impact Statement.

b. References

- (1) Engineer Circular (EC) 1165-2-214, Civil Works Review, 15 Dec 2012
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
- (3) Engineer Regulation (ER) 1110-1-12, Quality Management, 11 Mar 2011
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- (5) Western Everglades Restoration Plan Project Management Plan, Last updated Oct 2016
- (6) Enterprise Standard (ES)-08101, Software Validation for the Hydrology, Hydraulics, and Coastal Community of Practice, 01 Jun 2011

c. **Requirements.** This plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products. The EC provides a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation. Four levels of review are detailed: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. Decision documents are subject to cost engineering review and certification per EC 1165-2-214 and planning models are subject to certification/approval per EC 1105-2-412. Guidance on quality assurance for engineering models is contained in ER 1110-2-1150, Engineering and Design for Civil Works Projects.

2. REVIEW MANAGEMENT ORGANIZATION COORDINATION

A Review Management Organization (RMO) manages the overall peer review effort described in this plan. The RMO for the peer review efforts is the Ecosystem Restoration Planning Center of Expertise (ECO-PCX). The RMO will coordinate with the Cost Engineering Mandatory Center of Expertise (MCX) to conduct ATR of cost estimates, construction schedules, and contingencies. WERP is a single-purpose ecosystem restoration project and coordination with other centers of expertise is not contemplated at this time.

3. STUDY INFORMATION

a. **Decision Document.** The Central and Southern Florida Project, Comprehensive Everglades Restoration Plan, WERP is intended to evaluate ecosystem problems and restoration opportunities in portions of Collier, Hendry, Broward, and Miami-Dade Counties, Florida. Approval for the Project Implementation Report (PIR) will be by the USACE Chief of Engineers. Congressional authorization will be required to construct the project components. An integrated Environmental Impact Statement (EIS) will be included to comply with the National Environmental Policy Act (NEPA). Currently, the WERP Project Implementation Report is scheduled to be submitted for approval in 2020.

b. Study/Project Description. Comprehensive Everglades Restoration Plan (CERP) components in this study area were approved by Congress as a part of the CERP authorization in the Water Resources Development Act of 2000. The non-federal sponsor is the South Florida Water Management District (SFWMD). The project, formerly known as the Big Cypress/L-28 Interceptor Modification project in CERP, is located in Collier, Hendry and Broward Counties, Florida, with a small portion of the project overlapping the western-most reach of Miami-Dade County, Florida. The study area consists of approximately 1,200 square miles. The L-1 Canal marks the northern study area boundary. The L-2 canal, stormwater treatment area (STA) 5/6, and the eastern boundary of the Miccosukee Tribe of Indians of Florida Reservation mark the eastern side of the study area. A natural watershed basin boundary marks the study area's western edge. The southern boundary encompasses portions of US Highway 41, Loop Road, and a southern Miccosukee Tribe of Indians of Florida Reservation area (Figure 1).

The purpose of this project within CERP is to reestablish sheet flow from the northern portion of the study area, across the Seminole Tribe of Florida Big Cypress Reservation and into the Big Cypress National Preserve (BCNP), while maintaining flood protection and ensuring that inflows to the North and West Feeder Canals meet applicable water quality standards. As of 2016 this project is known as the WERP. The purpose of WERP is to improve the quality, quantity, timing, and distribution of water needed to restore and reconnect the western Everglades ecosystem as part of CERP.

Recent scientific understanding indicates that WERP wetlands once connected headwaters from the northern study area to Water Conservation Area (WCA 3A) and estuaries along the southwest coast of Florida. Channelization and redirection of naturally existing water flows for urban growth, agriculture, and flood control has generated unintended adverse effects upon this unique natural environmental that constitutes this western flowway of the Everglades. Inland wetlands that once naturally stored water for slow release during the dry season have been drained, natural flows now follow unnatural routes, and the regional water table has been lowered. The study area may also benefit from bringing water south from Lake Okeechobee, rather than discharging waters from the lake to the eastern and western coastal estuaries at times when those estuaries do not need the fresh water. The intent of the project is to restore natural hydrology and oligotrophic conditions in the western flowway, while maintaining flood protection and Trust Responsibilities to both Tribes whose reservations are in the study area, to restore the structure, function, and dynamic processes of the aquatic ecosystems and associated wildlife in the area.

c. The overarching objectives of the WERP are:

- Reestablish ecological connectivity of wetland and upland habitats in the western Everglades with restored freshwater flow paths, flow volumes and timing, seasonal hydroperiods, and historic distributions of sheetflow.
- Restore low nutrient (oligotrophic) conditions to restore and sustain native flora and fauna.
- Reduce wildfires that damage the underlying geomorphic condition of the western Everglades.
- Promote system-wide resilience to future changes such as sea level rise and climate change.

The Project Deliver Team (PDT) has identified over 70 preliminary, structural and non-structural management measures to explore potential solutions to meet project goals and objectives. Management measures fall into four categories: water storage; water treatment via STAs and wetlands; water conveyance changes via levee/canal degrades, canal improvements, pump stations, weirs, culverts, and sheet flow restoration; and actions to restore vegetation impacted by changes in oligotrophic conditions.

The CERP authorized plan (the Yellowbook) identified management measures in the western flowway that focused on the L-28 portion of the C&SF canal system. The Yellowbook concept is the starting point for WERP planning. Cost for the WERP recommended plan is estimated between \$200 M and \$500 M. A more accurate estimate will be made as alternatives are developed and evaluated.

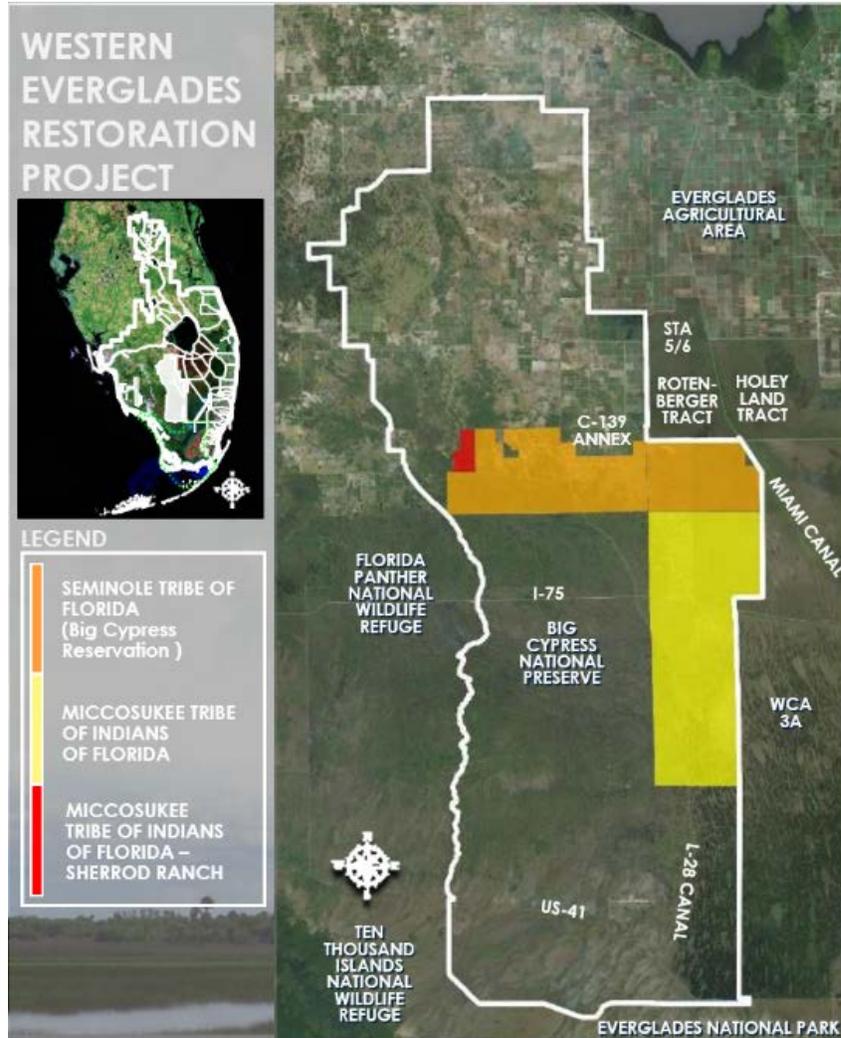


Figure 1. Western Everglades Restoration Project Area.

d. **Factors Affecting the Scope and Level of Review.** This section discusses factors pertinent to the risk informed decisions on the appropriate scope and level of review. The discussion is intended to be detailed enough to assess the level and focus of review needed to support the PDT, PCX, and vertical team decisions. The discussion will help to determine the types of expertise required on the various review teams to adequately review the document.

- Is total project cost estimated to exceed \$200M?

Based upon previous Everglades restoration projects and the complexity of issues in the study area the costs of the recommended actions in WERP are likely to exceed \$200 million.

- Does the project pose significant technical, institutional, social, or other challenges?

Yes. This is a technically complex, multi-component project with significant institutional interest, typical of any geographically large complex ecosystem restoration project. The project area encompasses two Native American tribal reservations and will consider applicable Federal Trust Responsibilities to the Tribes.

- Where are significant project risks likely to occur and at what magnitude (e.g., what are the uncertainties and how might they affect the success of the project)?

As part of the SMART Planning Process, an assessment of Risk and Uncertainty will be developed and displayed in a Risk Register. The register will include risk assessments of all pertinent issues regarding Plan Formulation and Policy, Environmental, Socioeconomics, Real Estate and Engineering. The Risk Register is being developed in coordination with the Vertical Team and will be available for use by other reviewers during the study. The register will be used to guide the team through the development of the PIR, and will determine the level of detail for analysis of any policy or technical issues. Uncertainties identified to date are related to water quality and land acquisition.

1. There are uncertainties related to water quality policies, as they relate to Tribal Trust Responsibilities. Typically water quality is a state responsibility and is not cost shared by the federal government in USACE restoration projects except under certain circumstances. At the time of writing this review plan, it is not clear yet whether some water quality features needed for this project would be cost shared per federal responsibilities to the Tribes, or not. The risks associated with this uncertainty are 1) potential legal issues, and 2) significant project delays and loss of support, if the federal government delays participation in water quality treatment.

Specifically, existing federal canals named the L-28 Canal and the L-28 Interceptor Canal currently deposit water into the Tribal reservations that does not meet water quality standards. We may have a federal responsibility for solving the existing problem of the 'dirty' water being deposited into Reservations. Water quality permitting and applicable policies are set by the Tribes within their lands, making this situation different than a typical project on non-Tribal lands. It should be noted that water being deposited anywhere in our study area needs to meet water quality standards to achieve ecological restoration in our study area.

2. Risks associated with maintenance of existing authorized levels of flood damage reduction will be modeled and subjected to adaptive management, such that level of risk is expected to be low. Water treatment via wetlands, as well as water conveyance improvements via canal modifications and pump stations is routine in the operation and modification of the existing Central and Southern Florida Project (C&SF), offering insignificant additional risk. Economic, environmental and social effects are expected to be positive, in that more water will be available to manage the ecosystem, with improved operational capability and flexibility to balance and adaptively manage the project benefits.

- Is the project likely to have significant economic, environmental, and/or social effects to the Nation?

An economic analysis and analysis of environmental effects will be conducted as part of the PIR development to ensure that a cost effective alternative is selected. The PIR will describe the alternatives that were analyzed and criteria used to evaluate, compare and select a

Recommended Plan. Implementation of the project is expected to result in positive, nationally significant environmental effects via the ecosystem restoration benefits. We have shown in recent Everglades restoration studies that ecosystem restoration in the Everglades brings significant economic and social benefits and we are expecting this project will follow suit. Potential negative environmental and social effects resulting from implementation of the project will be disclosed and documented within the EIS. The Corps commits to avoiding, minimizing or mitigating for adverse effects and will develop a robust adaptive management and monitoring plan for the project.

- Does the project likely involve significant threat to human life/safety assurance?

No. The proposed project will involve modifications to the C&SF Project for Flood Control and Other Purposes. In accordance with the Programmatic Regulations developed for the CERP, the proposed project cannot reduce the levels of flood risk below those existing in December 2000. Non-performance of the C&SF Project or modifications to the C&SF Project system could result in increased risk to human life by potentially reducing the levels of flood protection the system provides. Flood risk will function as a constraint for the study and will be considered in alternative formulation and evaluation. Additionally, an analysis will be conducted for the project to ensure that flood risk management will not be diminished.

- Is the project/study likely to have significant interagency interest?

Yes. The expedited planning process for WERP will require extensive coordination with the public and Federal, Tribal, State, and local resource management and regulatory agencies. An interagency project team has been formed. The PDT consists of individuals designated by the Corps and the SFWMD, the implementing agencies, and representatives designated by other governmental agencies or Tribes. Interagency participation is encouraged to take advantage of technical skills and knowledge of other agencies. Participants include the Bureau of Indian Affairs (BIA), Department of the Interior, Florida Department of Transportation, National Marine Fisheries Service, United States Environmental Protection Agency, U.S. Department of Agriculture, United States Fish and Wildlife Service (USFWS), United States Geological Survey, National Park Service, Natural Resources Conservation Service, Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida, Florida Fish and Wildlife Conservation Commission (FWC), Florida Department of Agriculture and Consumer Services, Florida Department of Environmental Protection (FDEP), BCNP and Everglades National Park. Representatives from counties in the project area also active participants.

Furthermore agencies including the SFWMD, the local sponsor, the BIA, the Miccosukee Tribe of Florida, the Seminole Tribe of Florida, and BCNP were asked to be cooperating agencies under NEPA. Both the BIA and Seminole Tribe of Florida have accepted cooperating agency status.

- Is the project/study highly controversial (discuss why or why not and, if so, in what ways)?

Yes, depending on the USACE stance on getting involved in water quality treatment in relation to Tribal Lands. Water quality treatment may be needed for some of the project alternatives. The size and location has not been determined.

Also, there may be controversy related to land acquisition. There are land acquisition proposals in the region that are meeting social resistance and, so far, our team has had difficulty

convincing stakeholders that our project is not one of the land-acquisition projects. Clarifying our independence from the other projects is a communication challenge. The impact on our planning is a strong leaning toward avoiding land acquisition, which could affect the selection of and support of a Tentatively Selected Plan (TSP).

- Is the project/study likely to contain influential scientific information or be a highly influential scientific assessment (with some discussion as to why or why not and, if so, in what ways)?

No. It is not anticipated that the project/study has, or will have, influential scientific information or be a highly influential scientific assessment.

WERP will incorporate fifteen years of updated science, new information, and improved hydrologic modeling tools since authorization of the CERP in 2000. This new science reveals that certain key attributes of quality, quantity, timing and distribution are needed to achieve restoration of the Everglades. Specifically, in the fifteen years since the formulation of CERP, published studies have identified needs within these ecosystems to achieve a more natural, restored state resembling recent pre-drainage centuries. For example, paleoecological studies have revealed, with reasonable agreement among scientists, the quantity of water necessary flowing through the Everglades and into the receiving bays to achieve diversity and distributions of species that resemble the historic ecosystems. Further research has determined that to restore habitat features such as slough-ridge-tree island topography, which are essential to support the historic suite of species and contribute to the historic hydrologic timing and distribution patterns, water should flow uninhibited and parallel to the ground surface rather than ponding in areas where flow is impeded by structures. The increased scientific understanding of the greater Everglades system and its attributes allows for a more refined formulation in the western Everglades planning process through an awareness of the complex characteristics and timing that support a healthy ecosystem. The modeling strategy for WERP incorporates this new information into computer models used to guide plan formulation.

- Is there information in the decision document or proposed project design that will likely be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices (with some discussion as to why or why not and, if so, in what ways)?

Quantification of ecosystem benefits produced by a diverse, interconnected array of management measures, in such a large geographical area is inevitably challenging. Planning models employed to predict ecosystem benefits may be considered novel, or at least unique in application to CERP components. Alternative designs are expected to be neither novel nor precedent setting. The Integrated PIR and EIS will address alternatives that will likely include water quality treatment facilities, water storage, canal improvements, etc. - measures that are commonplace for the USACE and do not change the scope or function of the authorized project.

- Will the proposed project design require redundancy, resiliency, and/or robustness (with some discussion as to why or why not and, if so, in what ways)?

Project features may include proposed measures, such as canal backfill, canal plugs, and spreader channels, are not likely to include secondary or back-up systems. Pump stations and most other mechanical equipment may contain secondary or backup systems. These systems

would ensure that maintenance could be performed on the equipment without temporarily reducing ecosystem restoration benefits. Backup systems may be implemented to ensure operations of critical structures, and will be established in the Design phase. Designs will also comply with the USACE/SFWMD Design Criteria Memorandum 2, Wind and Precipitation Design Criteria for Freeboard.

- Does the proposed project have unique construction sequencing or a reduced or overlapping design construction schedule (discuss why or why not and, if so, in what ways)?

The construction sequencing for the project has not been determined yet. However, this project is part of CERP and South Florida restoration efforts, which means it is sequenced among several related projects in south Florida. This project will work in conjunction with the Central Everglades Planning Project where both projects influence water levels in Water Conservation Area 3A (WCA-3A) and with the Lake Okeechobee Watershed Project, which is expected to provide storage that will allow for more flexibility in the Lake regulation schedule.

- e. **In-Kind Contributions.** Products and analyses provided by non-Federal sponsor as in-kind services are subject to DQC, ATR, and IEPR. The non-Federal sponsor, the South Florida Water Management District, will perform the majority of the hydrologic modeling and the ecological benefits calculations. The Jacksonville District will provide or manage DQC; the ECO-PCX will manage ATR and IEPR services. All products, regardless of attributions will be subjected to the full range of quality control that is appropriate for the product.

4. DISTRICT QUALITY CONTROL

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan. The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home Major Subordinate Command (MSC).

- a. **Documentation of DQC.** The DQC process for the PIR will be documented. The DQC review will be finalized with a report and memorandum for record including the comments and responses or DrChecks report if utilized. DQC documentation will be provided to the ATR and IEPR teams.
- b. **Products to Undergo DQC.** At a minimum, the Draft and Final PIR and EIS, with technical appendices, will be submitted to DQC prior to formal ATR. DQC of interim products, in a “continuous” process, will be documented at least by memorandum. Continuous DQC will generally be of limited scope and managed by the office generating the work product.
- c. **Required DQC Expertise.** Experienced Jacksonville District staff, representing all pertinent disciplines, will participate in DQC, including: plan formulation, Tribal relations, economics, environmental compliance, engineering (design, hydraulics and hydrology, geotechnical, and cost), and real estate.

5. AGENCY TECHNICAL REVIEW

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria,

guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. The ECO-PCX will manage the ATR. A qualified team from outside the home district that is not involved in the day-to-day production of the study products will perform the ATR. To assure independence, the ATR team leader shall be from outside the home MSC.

- a. **Products to Undergo ATR.** ATR will be performed on the Numeric Water Quality Goals, Selection of the TSP, Draft PIR and Final PIR. Leading up to review of the Draft PIR, where practicable, technical products that support subsequent analyses will be reviewed prior to being used in the study and may include: Study Area Description, Purpose and Scope, Study Authority, Federal Interest and USACE Interest, Future Without Project condition, Problems and Opportunities, Plan Formulation including Modeling Strategy and Formulation Strategy, geotechnical investigations, economic, environmental, cultural, and social inventories, cost estimates, etc.
- b. **Required ATR Team Expertise.** The ATR team will be finalized by the ECO-PCX and will be comprised of individuals from all the technical disciplines that were significant in the preparation of the report. Skilled and experienced personnel who have not been associated with the development of the study products perform the ATR. The key factor is extensive, expert knowledge in their field of expertise. ATR team members may be employees of USACE Districts, other Federal agencies, state or local government agencies, universities, private contractors or other institutions.

An ATR Team Leader and technical disciplines were determined to be appropriate including: plan formulation, economics, environmental resources, Hydraulic Engineering and Modeling, geotechnical engineering, civil engineering, cost engineering and real estate. All should be well-versed in ecosystem restoration studies and projects. Each reviewer should be familiar with SMART Planning and possess more than five years of experience. The reviewers for planning disciplines should be certified to conduct ATR. Reviewers will be from outside of the Jacksonville District and the review lead will be from outside of the MSC. The names, organizations, and contact information of the ATR members will be included in Attachment 1 once the ATR team is established.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	Extensive experience in preparing Civil Works decision documents under SMART Planning and in conducting ATR. The lead should have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline such as planning, economics, environmental resources, etc.
Planning	A senior water resources planner approved to perform ATR on ecosystem restoration studies with experience in large scale, component-based ecosystem restoration and benefit development and predictive models used for these studies.
Economics	An economist approved to perform ATR on ecosystem restoration studies with experience evaluating USACE ecosystem restoration project benefits and costs. Experience evaluating the appropriateness of cost effectiveness and incremental cost analysis (CE/ICA), as applied to dollar costs & ecosystem restoration benefits; must be familiar with the USACE tool IWR-PLAN. Experience in identifying incidental benefits (preferably flood risk management and water supply) is required.

ATR Team Members/Disciplines	Expertise Required
Environmental Resources/NEPA Compliance	A biologist/ecologist/environmental engineer approved to perform ATR on ecosystem restoration studies with experience in ecosystem restoration and familiarity with freshwater, coastal and estuarine systems and experience with habitat-focused models used for ER studies. Ability to review for NEPA compliance (including cultural resources coordination) and quality and applicability of ecosystem benefits evaluations is required. Experience with evaluating Environmental Resources/NEPA Compliance completed under SMART Planning is required.
Hydrology, Hydraulic Engineering and Modeling	An engineer with experience in hydrology, hydraulics and H&H modeling, including a general knowledge of southwestern Florida hydrology and water management. The reviewer should have a thorough understanding of water storage and conveyance and sediment control in southwest Florida and be knowledgeable of associated H&H model applications, with the ability to understand the application of these models to south Florida conditions. Experience with evaluating H&H modeling completed under SMART Planning is required. The reviewer should have a working knowledge of and be able to apply the USACE guidelines on Sea Level Rise impact evaluation and Climate Change analysis. A minimum of 8 years of experience is preferred.
Geotechnical Engineering	Experience in geotechnical aspects of water storage and conveyance features, with familiarity of southwest Florida geology. An understanding of local geology, including aquifer characteristics and ground water quality, is required. A minimum of 5 years of experience is preferred.
Civil Engineering	A minimum of 5 years of experience in engineering/construction management for water storage and conveyance in structural and non-structural systems, wetland restoration, and sediment control.
Cost Engineering	The cost engineering reviewer will be a senior cost engineer with a minimum of 5 years of experience in Ecosystem Restoration projects. This team member will be designated by the Cost MCX.
Real Estate	Expertise in the real estate planning process for cost shared and full federal civil works projects, relocations, report preparation and acquisition of real estate interests. The reviewer should have a full working knowledge of EC 405-2-12, Real Estate Planning and Acquisition Responsibilities for Civil Works Projects, and Public Law 91-646. The reviewer will be able to identify areas of the REP that do not comply with EC405-2-12 and recommend actions to bring the report into compliance. All estates suggested for use should be termed sufficient to allow project construction, and the real estate cost estimate should be validated as being adequate to allow for real estate acquisition.
Water Quality	The panel member should be familiar with large, complex civil works projects, planned under SMART Planning, with high visibility to the public with competing interests amongst various stakeholders and regulatory agencies. Experience with <u>Tribal Nation, Florida State, and Federal laws</u> and regulations related to air, water quality, nutrient loading, and TMDLs. Additionally, the member should have technical experience with the subject matter, water quality modeling/analysis, and downstream effects due to water quality.

c. **Documentation of ATR.** DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- (2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
- (4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, ATR team members may seek clarification in order to then assess whether further specific concerns may exist. The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for draft report and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW

IEPR may be required for decision documents under certain circumstances. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR: Type I is generally for decision documents and Type II is generally for implementation products.

- **Type I IEPR.** Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and an biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all the underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.
 - **Type II IEPR.** Type II IEPR, or Safety Assurance Review (SAR), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.
- a. Decision on IEPR.** Types I and II IEPR will be conducted for this project/study. This is a large, technically complex, multi-component ecosystem restoration project with significant institutional interest. The project cost is estimated between \$200 M to \$500 M. This decision on Type II IEPR will be reassessed at the start of the design phase. Since Type II IEPR may be required, Safety Assurance will be addressed during the Type I IEPR per Paragraph 2.c.(3) of Appendix D of EC 1165-2-214.
- b. Products to Undergo Type I IEPR.** The Draft PIR and technical appendices will be reviewed.
- c. Required Type I IEPR Panel Expertise.** Each panel member should be a professional from academia, a public agency, consulting firm, or similar vocation with a minimum of 10 years of experience in their area of expertise. Members should be familiar with large, complex civil works projects with high public and interagency interests. Experience evaluating work completed under SMART Planning is required.

IEPR Panel Members/Disciplines	Expertise Required
Economics	A senior economist with experience evaluating USACE ecosystem restoration project benefits and costs. Experience with evaluating the appropriateness of CE/ICA, as applied to dollar costs and ecosystem restoration benefits; familiarity with the USACE tool IWR-PLAN is required. Experience in identifying incidental benefits (preferably flood risk management and water supply) is required.

IEPR Panel Members/Disciplines	Expertise Required
Aquatic Ecology	The Panel Member should be familiar with the ecology of southwest Florida freshwater systems and coastal wetlands; and USACE methods to evaluate ecological benefits in those environments.
Design and Construction Cost Engineering	The Panel Member should have experience in performing cost engineering/construction management for water storage and conveyance and sediment control. Familiarity with similar projects across US and related Cost Engineering. Experience in associated contracting procedures, total cost growth analysis and related cost risk analysis is desired. Panel member should be familiar with construction industry and practices used in Florida and/or the southeastern US.
Hydrology, Hydraulic Engineering and Modeling	A senior engineer with experience in the field of hydrology, hydraulics and H&H modeling, including a general knowledge of southwestern Florida hydrology and water management. A thorough understanding of water storage and conveyance and sediment control in southwest Florida and knowledgeable of associated H&H model applications, with the ability to understand the application of these models to south Florida conditions. Models currently under consideration include RSM (RSM-BN and RSM-GL), DMSTA and HEC-RAS. Experience evaluating H&H modeling under SMART Planning is required.
Water Quality	The member should be experienced with <u>Tribal Nation, Florida State, and Federal laws</u> and regulations related to air, water quality, nutrient loading, and TMDLs. The member should have technical experience with the subject matter, water quality modeling/analysis, and downstream effects due to water quality.

d. **Documentation of Type I IEPR.** The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-214. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions; and
- Include a copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public on the internet.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews determine whether the recommendations in the reports, supporting analyses, and coordination comply with law and policy, and warrant approval or further recommendation to higher

authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. COST ENGINEERING REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Cost Engineering MCX, located in the Walla Walla District. The MCX will assist in determining the expertise needed on the ATR team and in the development of the review charge(s). The MCX will also provide the Cost Engineering MCX certification. The RMO is responsible for coordination with the Cost Engineering MCX.

9. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates using certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is the responsibility of the users and is subject to DQC, ATR, and IEPR.

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used when appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR. Additional guidance pertaining to the process applied by the Hydrology, Hydraulics, and Coastal Community of Practice (HH&C CoP) to use and validate engineering software for use in planning studies and to satisfy the requirements are documented in ES-0801.

- a. Planning Models.** The WERP Planning Model is being specifically developed to evaluate project alternatives within the project domain (ecoregion and/or watershed) in south Florida. The planning model will be used to quantify ecological benefits and support plan evaluation, comparison and selection and will be developed by the USACE's Jacksonville District with support from multiple federal, state and local agencies. The WERP planning model will be used to calculate and aggregate the results of project performance measures. To make the correlation between hydrologic output and ecosystem functions, the project team will utilize performance measures developed based on the Big Cypress Conceptual Ecologic Model published in the peer reviewed scientific journal *Wetlands* in 2006. Each project performance measure has a predictive metric and a desired target, which is essentially a goal of historic conditions or full restoration that is based on empirical or theoretical ecological thresholds. The WERP project team, where possible will utilize performance measures and model output that have been tested on prior CERP projects, which have been reviewed by an interagency science coordination team called REstoration COordination and VERification (RECOVER). Where performance measures and associated model outputs are not

available and/or appropriate, new performance measures will be developed. IWR-PLAN Decision Support Software will be used to conduct cost effectiveness and incremental cost analysis (CE/ICA).

The following table contains a preliminary list of performance measures, to date, that may be used to evaluate, compare and select a plan. For the final subset, full details of the methodology will be included in model documentation provided to the ECO-PCX for review and approval for individual use. ECO-PCX approval is currently targeted for February 2018. Approval of the WERP Planning Model is expected 6 months prior to the Tentatively Selected Plan Milestone. Review of the WERP Planning Model will initiate prior to use of the tool.

Performance Measure	Brief Description of the Performance Measure and How It Will Be Applied in the Study
Sheet Flow *	Habitat Suitability Indices (HSIs) will be based on measures of the timing, distribution and continuity of sheetflow across the landscape. Resumption of sheet flow and related patterns of hydroperiod and water depth will significantly help to restore and sustain the microtopography, directionality, and spatial extent of ridges and sloughs and improve the health of tree islands in the ridge and slough landscape, without significantly infringing on adjacent marl prairies, where short-hydroperiod, tussock growth habitats will persist.
Vegetation Suitability	HSIs will be based on matching preferred inundation durations and wet and dry season water depths for several valuable ecosystem vegetation communities (Mesic Flatwood, Mesic (Oak) Hammock, Hydric Flatwood, Hydric Hammock, Depression Marsh, Wet Prairie, Strand Swamp, Dome Swamp) locations within the project area.
Inundation Duration in the Ridge and Slough Landscape *	HSIs will be based on pre-drainage patterns of multi-year hydroperiods in the ridge and slough landscape. Reversal of soil loss and restoration of organic soil accretion will only be achieved through reducing the percent of time that soils are dry and vulnerable to fires.
Slough Vegetation Suitability *	HSIs will be based on hydrologic optima for maintaining slough vegetation (continuous hydroperiod, continuous dry down events below 0.7 feet, average wet season depths of 2-3 feet and average dry season depths of 1.5-2.0 feet).
Hydrologic Surrogate for Soil Oxidation *	HSIs will be based on processes which result in organic soil accretion. Performance measure evaluates peat exposure to oxidation by using pre-drainage drought intensity indexes as a target. Drought intensity is measured by multiplying depth to water table from ground surface by the duration (days) of belowground water levels to yield a ft-days below land surface summary for portions of the ridge and slough landscape.
Fire Risk	HSIs will be based on hydrologic measures (proxies) to reduce the risk of wildfires. Altered fire regimes are currently a major stressor on the existing landscape. Fire is known to strongly affect the species composition of forests, shrubs, grasses, and herbaceous plants (i.e., the plant "community") in the project area.

Note: the performance measures in the table above that are marked with an asterisk were previously certified for single-use in the Central Everglades Planning Project.

The study team also plans to use the Institute for Water Resources Planning Suite, a certified model, to assist in cost effectiveness and incremental cost analysis.

b. Engineering Models. This is a comprehensive list of engineering models that may be used to evaluate, compare and select a plan. For the final subset, full details of the methodology will be

provided to the USACE SET team for review and approval for individual use if not already approved for use. The following engineering models are anticipated to be used to develop the decision document.

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
Hydrologic Engineering Center-River Analysis System Ver. 5.0.3 (HEC-RAS)	Used to perform one-dimensional steady, one and two-dimensional unsteady flow river hydraulics calculations, sediment transport, and water temperature/water quality modeling. HEC-RAS version 5.0.3 has capabilities that allow changes to culvert inlet/outlet controls, lateral structures connected to 2-dimensional flow areas, and a suite of RAS Mapper output options. The program allows the model to apply complex operation of gated structures and pump stations, which can change in time or water level conditions anywhere in the system. HEC-RAS will allow the 1-dimensional channel flow to interact with 2-dimensional floodplain flow allowing for more accurate floodplain mapping. In areas where the interaction of open channel flow and aquifer groundwater needs to be explicitly modeled, a new integrated tool based on the original HEC-RAS and MODFLOW models can be used to accurately simulate the aquifer/canal flow exchange.	HH&C CoP Approved: Preferred Model
Regional Simulation Model – Basins Ver. 3.1 (RSMBN)	A link-node based model used to simulate the transfer of water from a pre-defined set of watersheds, lakes, reservoirs or any “waterbody” that receives or transmits water to another adjacent waterbody. The RSMBN uses the same source code as the mesh-based RSM, which includes the RSMGL regional model. The model assumes that water in each waterbody is held in level pools. The model domain covers Lake Okeechobee and four major watersheds: Kissimmee, Lake Okeechobee, St. Lucie River, Caloosahatchee River and the Everglades Agricultural Area.	HH&C CoP Approved: Allowed for use only by Jacksonville District
Regional Simulation Model – Glades-LECSA Ver. 3.1 (RSMGL)	A tool to simulate the natural hydrology and the water management operations of several important basins in South Florida. The Glades-LECSA (Lower East Coast Service Area) implementation uses the RSM developed by the Hydrologic and Environmental Systems Modeling Section of the SFWMD. The RSM is an implicit, finite-volume, continuous, distributed, and integrated surface-water and ground-water model. It can simulate one-dimensional canal/stream flow and two-dimensional overland and groundwater flow in arbitrarily shaped areas using a variable triangular mesh. The overland and groundwater flow components are fully coupled in the RSM for a more realistic representation of runoff generation. It has physically-based formulations for the simulation of overland and groundwater flow, evapotranspiration, infiltration, levee seepage, and canal and structure flows.	HH&C CoP Approved: Allowed for use only by Jacksonville District
Dynamic Model for Stormwater Treatment Areas (DMSTA) Ver. 2	This model was developed and calibrated to information specific to south Florida (http://www.wwwalker.net/DMSTA/), and to predict phosphorus removal performance of Stormwater Treatment Areas and storage reservoirs. Parameters were calibrated based on data from fully functional treatment cells with viable vegetation communities. The model generates error/warning notices if simulated conditions exceeded the range of the calibration characteristics. DMSTA does not allow dry outs, and does not reproduce the vegetative responses and phosphorus dynamics (e.g., post-dry-out spikes) observed in treatment cells that periodically go dry. Phosphorus removal performance simulated for large wetland systems with limited water availability may be overly optimistic.	HH&C CoP Approved: Allowed for use only by Jacksonville District

10. CONSOLIDATED REVIEW SCHEDULE AND COSTS

The WERP schedule is under revision. The following dates are estimates. The estimated cost of ATR is \$200K. The estimated cost of the IEPR is \$250K.

- DQC of formulation of alternatives for Alternatives Milestone, NOV 2016 (Est. Cost \$20K)
- Planning Model Certification/Approval for Use, FEB 2018 (Est. Cost \$31K)
- ATR-Numeric-Water-Quality, AUG 2017(Est. Cost \$30K)
- DQC of selection of the TSP, SEP 2018 (Est. Cost \$25K)
- ATR-1: selection of the TSP, OCT 2018 (Est. Cost \$50K)
- DQC of the Draft Report, MAR 2019 (Est. Cost \$25K)
- District Legal Review of the Draft Report, MAR 2019 (Est. Cost \$5K)
- ATR-2: Draft Report, MAY 2019 (Est. Cost \$70K)
- Division Policy Review of Draft Report and EIS, MAY 2019
- Policy and Legal Review by USACE Headquarters and South Atlantic Division, MAY 2019
- Independent External Peer Review (IEPR), JUN 2019 (Est. Cost \$250K)
- DQC of the Final Report, NOV 2019 (Est. Cost \$25K)
- ATR-3: Final Report, DEC 2019 (Est. Cost \$50K)
- District Legal Review of the Final Report, DEC 2019 (Est. Cost \$5K)
- Public and Agency review of Final Integrated Report and EIS, Jan 2020
- Policy and Legal Review by USACE Headquarters and South Atlantic Division, JAN 2020

11. PUBLIC PARTICIPATION

As required by EC 1165-2-214, the approved Review Plan will be posted on the District public website (<http://www.saj.usace.army.mil/Missions/CivilWorks/ReviewPlans.aspx>). The Corps and its local sponsor have continued to engage the public and other resource agencies (USFWS, FWC, FDEP, etc.). Public reviews of the Draft PIR and Final PIR are listed in Section 10. Document availability will be noticed using the Federal Register, press releases, email notifications, and posting to the Jacksonville District's website and the Everglades Restoration website. The public will have 45 days to provide comments on the Draft report. Comments and PDT responses will be provided to the technical reviewers. The review period for the Final report will be 30 days. The IEPR final report will be posted to the district website. After responses to IEPR comments have been approved by USACE HQ, the approved responses will be posted to the district website.

12. REVIEW PLAN APPROVAL AND UPDATES

The South Atlantic Division Commander is responsible for approving this Review Plan. The MSC Commander's approval reflects vertical team (district, MSC, RMO, and HQUSACE) input as to the appropriate scope and level of review for the decision document. The Review Plan may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the plan since the last MSC Commander approval will be documented in Attachment 3. Significant changes to the plan (such as changes to the scope and/or level of review) must be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, should be posted on the district's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

Public questions or comments on this review plan can be directed to the following points of contact:

- Project Manager, Jacksonville District, 904-232-2187
- Everglades Program Manager, South Atlantic Division, 404-562-5206
- Review Management Organization POC, ECO-PCX, 651-290-5259

ATTACHMENT 1: TEAM ROSTERS

PROJECT DELIVERY TEAM

Discipline	Agency	Team Member Name
Project Management	USACE	[REDACTED]
Plan Formulation	USACE	[REDACTED]
Real Estate	USACE	[REDACTED]
Project Assurances	USACE	[REDACTED]
Economics	USACE	[REDACTED]
Archaeology/ Cultural Resources	USACE	[REDACTED]
Biology/NEPA	USACE	[REDACTED]
Hydrologic/Hydraulic Modeling	USACE	[REDACTED]
Water Control/Operations	USACE	[REDACTED]
Civil Engineering Design	USACE	[REDACTED]
Geology	USACE	[REDACTED]
Cost Engineering	USACE	[REDACTED]
Water Quality	USACE	[REDACTED]
Value Engineering	USACE	[REDACTED]
Office of Counsel	USACE	[REDACTED]
Project Management	SFWMD	[REDACTED]
Planning, Project Assurances	SFWMD	[REDACTED]
Ecology	SFWMD	[REDACTED]
Water Quality	SFMWD	[REDACTED]
State Compliance	SFWMD	[REDACTED]
Hydrologic/Hydraulic Modeling	SFWMD	[REDACTED]
Civil Engineering Design	SFWMD	[REDACTED]
Water Control	SFWMD	[REDACTED]
Biology/Project Assurances	USFWS	[REDACTED]
Biology/Water Quality	FDEP	[REDACTED]

ATTACHMENT 2: STATEMENT OF COMPLETION OF THE DISTRICT QUALITY CONTROL (DQC) REVIEW FOR THE Western Everglades Restoration Project

District Quality Control: The Jacksonville District has completed a District Quality Control review of the Western Everglades Restoration Project. EC 1165-2-214 states that all work products and reports, evaluations, and assessments shall undergo necessary and appropriate District Quality Control/Quality Assurance (DQC). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the responsible MSC; product issues identified via DQC should be resolved prior to ATR and IEPR. The DQC of products and reports shall also cover any necessary National Environmental Policy Act (NEPA) documents, other environmental compliance products, and any in-kind services provided by local sponsors.

The DQC process reviews the basic science, economics, and engineering focused on fulfilling the project quality requirements and assures compliance with established policy principles and procedures. This included review of assumptions; methods, procedures, and material used in analysis; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer’s needs consistent with law and existing Corps policy.

Project Description:

[include brief description of the project, reason for the DQC, and phase of the project.]

The following Jacksonville District team members conducted the District Quality Control review between DD-MMM-YYY and DD-MMM-YYY:

Project Delivery Team Review

Reviewer Name	Focus of Review	Office	Phone

Supervisory Review

Reviewer Name	Focus of Review	Office	Phone

Summary:

[Include review comments from DrChecks (if used), tabulated comments, or redlined comments from the review. Discuss any critical or significant comments from the review. Explain/discuss any unresolved comments.]

CERTIFICATION OF DISTRICT QUALITY CONTROL REVIEW

All concerns resulting from the District Quality Control review of the project have been mutually resolved and comments incorporated. The ***Project Name***, and all associated documents required by the National Environmental Policy Act have been fully reviewed.

[NAME]
Chief, Planning and Policy Division

Date

[NAME]
Chief, Engineering Division

Date

[NAME]
Chief, Real Estate Division

Date

[NAME]
Chief, Water Resources Branch
Programs and Project Management Division

Date

ATTACHMENT 3: STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager

Office Symbol

Date

SIGNATURE

Name

Architect Engineer Project Manager¹

Company, location

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: Describe the major technical concerns and their resolution.

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE

Name

Chief, Engineering Division

Office Symbol

Date

SIGNATURE

Name

Chief, Planning Division

Office Symbol

Date

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 4: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number