DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION
60 FORSYTH ST, SW, ROOM 10M15
ATLANTA, GEORGIA 30303-3490

REPLY TO
ATTENTION OF:

16 NOV 2011

CESAD-PDP

MEMORANDUM FOR Commander, Jacksonville District (CESAJ-PD/Baker)

SUBJECT: Review Plan Approval for the Southwest Florida Comprehensive Watershed Plan

1. References:

a. Memorandum, CESAJ-PD, 23 Sept 2011, subject: Southwest Florida Comprehensive Watershed Plan.

b. Memorandum, CEMVD-PD-N, 21 September 2011, subject: Southwest Florida Comprehensive Watershed Plan, Jacksonville District, Ecosystem Planning Center of Expertise Recommendation for Review Plan Approval.

c. EC 1165-2-209, Civil Works Review Policy, 31 January 2010.

2. The South Atlantic Division has completed its review of the subject Review Plan. In response to review recommendations and comments previously provided by this office on the draft Review Plan, the District made revisions to the original draft Review Plan. The revised Review Plan (enclosure 1) has been reviewed by this office in accordance with reference 1.c. and is hereby approved.

3. The District should take steps to 1) post the approved Review Plan and a copy of this approval memorandum to the SAJ District public website and 2) provide a link to the Water Management and Reallocation Studies Planning Center of Expertise for their use. Before posting to the website the names of Corps/Army employees should be removed.

4. Questions may be directed to Mike Magley, (404) 562-5206.

FOR THE COMMANDER:

Wilbert V. Paynes

Encl

WILBERT V. PAYNES
Chief, Planning and Policy Division

REVIEW PLAN

Southwest Florida
Comprehensive Watershed Plan

Jacksonville District

MSC Approval Date: 16 NOV 2011
Last Revision Date: None

US Army Corps
of Engineers ®

REVIEW PLAN

Southwest Florida
Comprehensive Watershed Plan

TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Southwest Florida Comprehensive Watershed Plan (SWFCWP), which primarily addresses ecosystem restoration plans although it also identifies seven flood risk management studies that are recommended to be conducted. Although not required for the SWFCWP, some National Environmental Policy Act (NEPA) documentation was prepared and is included with the draft SWFCWP. Per guidance contained in EC 1165-2-209, the SWFCWP has been determined to be an "other work product." This determination impacts the types of review to be accomplished for the report. The determination of an "other work product" was reached based on the purpose of the SWFCWP, which is to produce a regional restoration plan that addresses water resources issues within all watersheds in southwest Florida. This strategic framework includes activities that are not appropriate for Federal participation but address certain water resources issues. The plan also sets forth the framework that a potential non-Federal sponsor would use as a starting point to develop a project with which the Corps could participate. Consequently, a "decision document" would be generated at a later time if a non-Federal sponsor is identified and a project is developed for which the Corps could assess the potential for Federal participation. For the SWFCWP, District Quality Control and Agency Technical Review will be accomplished, but Independent External Peer Review is not recommended as explained below.

b. References

(1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
(2) EC 1105-2-412, Planning: Assuring Quality of Planning Models, 31 Mar 2011
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 21 Jul 06 and 30 Sep 06 and 31 Mar 2011 changes
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) EC 1105-2-411, Watershed Plans, 15 Jan 2010
(6) PMP for study

c. Requirements. This review plan was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-209) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for the peer review effort described in this Review Plan is the Ecosystem

Restoration Planning Center of Expertise (ECO–PCX). At this time, coordination with other PCX or the RMC is not recommended. Because the SWFCWP does not contain cost estimates that are at a feasibility level of development, RMO coordination with the Cost Engineering Directory of Expertise (Cost DX) is not required at this time.

3. STUDY INFORMATION

a. Study/Project Description. In 2000, Congress authorized the Comprehensive Everglades Restoration Plan (CERP) to restore, preserve and protect the South Florida ecosystem, while providing for other water-related needs of the region. The CERP consists of structural and operational modifications to the Central and Southern Florida (C&SF) Project, which provides the South Florida ecosystem with flood risk management, regional water supply, prevention of saltwater intrusion, preservation of fish and wildlife, recreation, and navigation. First authorized by Congress in 1948, the C&SF Project has had unintended adverse effects on the natural environment that constitutes the Everglades and South Florida ecosystem.

The Water Resources Development Act of 1996 was enacted on October 12, 1996. Section 528 of the Act (Public Law 104-303) entitled "Everglades and South Florida Ecosystem Restoration" authorizes a number of ecosystem restoration activities and provides specific direction and guidance for the CERP. The specific provisions of Section 528 concerning the SWFCWP are the following:

"(b) RESTORATION ACTIVITIES-
(1) COMPREHENSIVE PLAN-
(A) DEVELOPMENT-
(i) PURPOSE- The Secretary shall develop, as expeditiously as practicable, a proposed comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem. The comprehensive plan shall provide for the protection of water quality in, and the reduction of the loss of fresh water from, the Everglades. The comprehensive plan shall include such features as are necessary to provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central and Southern Florida Project.
(ii) CONSIDERATIONS- The comprehensive plan shall -
(I) be developed by the Secretary in cooperation with the non Federal project sponsor and in consultation with the Task Force; and
(II) consider the conceptual framework specified in the report entitled "Conceptual Plan for the Central and Southern Florida Project Restudy", published by the Commission and approved by the Governor.

(B) SUBMISSION- Not later than July 1, 1999, the Secretary shall--
(i) complete the feasibility phase of the Central and Southern Florida Project comprehensive review study as authorized by section 309(l) of the Water Resources Development Act of 1992 (106 Stat. 4844), and by 2 resolutions of the Committee on Public Works and Transportation of the House of Representatives, dated September 24, 1992; and

(ii) submit to Congress the plan developed under subparagraph (A)(i) consisting of a feasibility report and a programmatic environmental impact statement covering the proposed Federal action set forth in the plan.

(C) ADDITIONAL STUDIES AND ANALYSES - Notwithstanding the completion of the feasibility report under subparagraph (B), the Secretary shall continue to conduct such studies and analyses as are necessary, consistent with subparagraph (A)(i).

The CERP recognizes that, in spite of the efforts to address the Caloosahatchee River Basin water resource issues, southwest Florida needs to review comprehensively all of the water resource issues it faces. Other hydrologic watersheds in southwest Florida have not been studied in a comprehensive fashion. Thus, SWFCWP is one of the CERP recommendations, but a non-CERP project. It is intended to address all of the watersheds of southwest Florida.

The SWFCWP primarily addresses ecosystem restoration, although it also recommends seven flood risk management studies to investigate water resources problems and opportunities in all or parts of Lee, Collier, Hendry, Glades, Charlotte, and Monroe counties, Florida. The need for the flood risk management studies was identified through interviews with the non-Federal sponsor's field supervisor, and further 905(b) scope investigations may be required. The goal of the SWFCWP is to produce a regional restoration plan that addresses water resources issues within all watersheds in southwest Florida. Issues addressed by the study include loss of natural ecosystems, fragmentation of natural areas, degradation of wildlife habitat, alteration of natural freshwater flows to wetlands and estuaries (altered surface water hydrology), and water quality degradation in surface waters.

The SWFCWP study area covers approximately 4,300 square miles including all of Lee County, most of Collier and Hendry Counties, and portions of Charlotte, Glades, and Monroe Counties. There are 11 municipalities in the study area: Bonita Springs, Cape Coral, Clewiston, Everglades City, Fort Myers, Fort Myers Beach, LaBelle, Marco Island, Moore Haven, Naples, and Sanibel. In addition, the study area includes the unincorporated areas of Lehigh Acres, Golden Gate Estates, and Immokalee. The project boundary corresponds to that of the South Florida Water Management District (SFWMD) Lower West Coast Water Supply Plan (LWCWSP) Planning Area. The SWFCWP study area is shown in Figure 1.

Historically, the area was a low, flat mosaic of wetlands and uplands characterized by slow sheet-flow drainage patterns. A shallow regional water table supported short hydroperiod wetlands dominated by mesic and hydric flatwoods and hammock communities. Naturally dispersed water patterns served to distribute nutrients over broad areas of wetland vegetation, so nutrient levels remained low in undrained areas. Seasonal fluctuations in flow due to rainfall created a salinity regime in estuaries which supported estuarine health and productivity.

Regional problem descriptions developed by the project delivery team (PDT) with extensive public involvement include:

- Loss of natural ecosystems and landscape connectivity/degradation of critically endangered wildlife habitat;

- Altered, unnatural freshwater flows to wetlands and estuaries (Altered Surface Water Hydrology);
- Water quality degradation in surface waters;
- Saltwater intrusion into aquifers and surface waters; and
- Flooding and/or drought in various locations within the study area.

Problems and opportunities were also evaluated for the following watersheds within the Southwest Florida region:
- Tidal Caloosahatchee Watershed;
- Freshwater Caloosahatchee Watershed;
- Estero Bay Watershed; and
- Big Cypress Basin Watershed.

Objectives of the study include the following:

1. By the year 2050, establish total freshwater flows discharging into coastal estuaries within the project area from point discharges in channels, overland sheet flow, and groundwater seepage, to be within 10 percent of the pre-development natural system flow quantity conditions.
2. By the year 2050, increase habitat connectivity for large mammals (such as the Florida panther and black bear) throughout the project area by 20 percent above 2050 without project.
3. By the year 2050, establish freshwater flows to the coastal estuaries in the study area to maintain an annual average salinity of 10 - 25 parts per thousand (ppt) in the Caloosahatchee Estuary; 15 - 25 ppt in Estero Bay; 20 - 30 ppt in Rookery Bay, Blackwater Bay, Buttonwood Bay, and Pumpkin Bay; 10 - 30 ppt in Faka Union Bay; 20 - 30 ppt in Fakahatchee Bay; and 16 - 30 ppt in the Ten Thousand Islands and Barron River Estuary.
4. By the year 2050, establish an annual average Total Nitrogen load reduction of 5.7 Million lbs/yr in the freshwater Caloosahatchee watershed, 12.0 Million lbs/yr in the tidal Caloosahatchee watershed, 753 Thousand lbs/yr in the Estero Bay watershed, and 3.5 Million lbs/yr in the Big Cypress Basin watershed.

The SWFCWP Project Delivery Team used the evaluation criteria below to score, organize and prioritize functional groups of management measures. The management measures are listed in Table 1. The measures were grouped geographically at critical hydrologic locations throughout the study area to provide synergistic, comprehensive regional restoration and other water resource development opportunities, resulting in achievement of the planning objectives. Functional Capacity is defined as the total score for each of the following functional groups:

- Ecosystem Influence Area,
- Ecosystem Components,
- Landscape Linkages,
- Improves Flows to Coast,
- Addresses Area of Need / High Habitat Loss / Alteration,
- Biodiversity,

- Listed Species,
- Water Quality,
- Ground Water Level, and
- Sustainability / Operations and Maintenance Costs.

A host of management measures were identified at problem sites and combined into components within a specific geographic area. Components were combined into functional groups to provide synergistic, comprehensive regional restoration and other water resources needs at critical hydrologic locations to achieve planning objectives. The PDT scored each functional group using the evaluation criteria (discussed above) and combined the highest scoring functional groups into the Comprehensive Watershed Master Plan (CWMP). The functional groups in the CWMP were then separated into three tiers:

- Tier 1 = Corps & SFWMD cost sharing interest.
- Tier 2 = Other federal or state cost sharing interest.
- Tier 3 = Local cost sharing interest.

The Tier 1 functional groups of the highest scoring thirteen functional groups were modeled and evaluated to develop Habitat Units (HUs), and real estate and construction rough order magnitude (ROM) costs were estimated. The HUs and ROM costs were evaluated with IWR-Plan and then compared. The most cost effective of the Tier 1 functional groups were identified as the USACE Mission Appropriate Plan (UMAP). The following outlines the process used to develop the CWP and the UMAP:

- Identify and compile management measures at problem sites into components.

- Group components into functional groups.

- Each of the four PDT sub-teams (estuarine, landscape connectivity / sensitive lands, surface water hydrology and water quality) scored each functional group using evaluation criteria (discussed above) pertinent to their sub-team.

- A collaborative PDT developed the Comprehensive Watershed Plan by combining the highest scoring functional groups.

- Functional groups within the Comprehensive Watershed Plan were separated into three Tiers.

- Modeling was conducted to evaluate Tier 1 of Comprehensive Watershed Plan to develop Habitat Unit (HU) scores. Tiers 2 & 3 described qualitatively.

- IWR-Plan was applied to Tier 1 of Comprehensive Watershed Plan.

- IWR-Plan output was compared.

- Selected most cost effective combination of Functional Groups within the Comprehensive Watershed Plan = UMAP.

The PDT is comprised of those individuals directly involved in the development of the SWFCWP.

Discipline	Agency
Project Management	U.S. Army Corps of Engineers (USACE)
Planning Technical Lead	USACE
Construction-Operations	USACE
Planning	USACE
Planning-Environmental Lead	USACE
Engineering	USACE
Planning-Environmental	USACE
Engineering—Water Resources	USACE
Planning—Cultural Resources	USACE
Engineering Technical Lead	USACE
Engineering—Geology	USACE
Engineering—Cost Estimating	USACE
Project Management	USACE
Engineering—Value Engineering	USACE
Engineering—Design	USACE
Real Estate—Appraisal	USACE
Engineering—Design	USACE
Engineering—Operations	USACE
Planning—Water Quality	USACE
Construction-Operations	USACE
Engineering—Design	USACE
Planning—Recreation	USACE
Engineering—Water Resources	USACE
Regulatory	USACE
Planning—Socioeconomics	USACE
Real Estate	USACE
Participating Agency	Collier County
Non-Federal Sponsor	SFWMD
Participating Agency	Charlotte County
Participating Agency	City of Bonita Springs
Participating Agency	City of Naples
Participating Agency	Southwest Florida Regional Planning Council

Discipline	Agency
Participating Agency	Lee County
Participating Agency	National Park Service—Everglades National Park
Participating Agency	City of LaBelle
Participating Agency	Florida Gulf Coast University
Participating Agency	US Fish and Wildlife Service
Participating Agency	Florida Department of Agriculture and Consumer Services
Participating Agency	UF Institute for Agriculture and Food Sciences
Participating Agency	University of Florida
Participating Agency	U.S. Environmental Protection Agency (EPA)
Participating Agency	City of Cape Coral
Participating Agency	Hendry County
Participating Agency	Florida Dept. of Transportation
Participating Agency	Florida Department of Environmental Protection
Participating Agency	US Department of Agriculture
Participating Agency	US Geological Survey
Participating Agency	Florida Fish and Wildlife Conservation Commission
Participating Agency	US Department of Agriculture
Participating Agency	City of Ft. Myers

Vertical Team. The Vertical Team includes District management, District Support Team (DST) and Regional Integration Team (RIT) staff as well as members of the Planning Community of Practice (PCoP).

Organization	**Discipline**
CESAJ	Planning and Engineering
CESAD	Chief, Plan Formulation
CECW-SAD	RIT Manager
CECW-PC	Office of Water Project Review Manager
CEMVD	Ecosystem Restoration PCX (ECO-PCX) Director
CEMVD	ECO-PCX Deputy Director

Organization	Discipline
CEMVD	ECO-PCX Technical Director
CEMVR-PM-F	ECO-PCX Action District

b. Factors Affecting the Scope and Level of Review. This section discusses the factors affecting 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 and support the PDT, PCX, and vertical team decisions on the appropriate level of review and types of expertise represented on the various review teams. Factors are addressed within the context of an "Other Work Product" that does not recommend a Tentatively Selected Plan. If, in the future, a viable project stems from the SWFCWP, then a review plan will be prepared for the project document(s). This phased approach is consistent with EC 1105-2-411, paragraph 9.g, to conserve resources and preclude duplication of effort. Pertinent SWFCWP factors include the following:

- If parts of the study will likely be challenging: The SWFCWP does not recommend implementation authority for any specific management measures. The subject issues may come up at a later date if specific study authorization arises for any of the management measures, in partnership with a non-Federal sponsor.

- A preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be: Implementation authority is not being requested. Therefore there is no project to pose risks.

- If the project will likely be justified by life safety or if the project likely involves significant threat to human life/safety assurance: Implementation authority is not being requested. and there are no applicable projects to assess.

- If there is a request by the Governor of an affected state for a peer review by independent experts: There has not been such a request.

- If the project/study is likely to involve significant public dispute as to the size, nature, or effects of the project: Implementation authority is not being requested. Therefore, there is no project that would attract public dispute.

- If the project/study is likely to involve significant public dispute as to the economic or environmental cost or benefit of the project: Implementation authority is not being requested. Therefore, there is no project that would attract public dispute.

- If the information in the decision document or anticipated project design is likely to 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: Implementation authority is not being requested. Therefore, there is no project design.

- If the project design is anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule: Implementation authority is not being requested. Therefore, there is no project design.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to the same level of review as if it were a Federal product. The in-kind products and analyses to be provided by the non-Federal sponsor include:

Public Involvement

Impact Assessment: Prepare/Modify Scope of Work

Data Analyses and Assessments: Hydrology Review/Coordination, Field Data Collection, Component/Siting Analysis

Alternative Analyses: Application of Regional Hydrologic Model, Application of Natural Systems Model, Hydrodynamic Model Application, Subregional Model Application, Operational Studies, Hydraulic Design Final Alternatives, Flowway Restoration, Sea Level Rise

Plan Implementation: Establish Basis for Monitoring/Research Plan, Development of Monitoring Strategy

Monitoring Plan: Develop Monitoring Plan, Existing Hydrologic Data Evaluation, Ecologic Data Analysis and Evaluation, Develop Matrix of Actions from Monitor Findings, GIS Data Inventory, Collection and Land Use, Flow Profiles, Quality Assurance, GIS Analysis and Map Production

Plan Formulation Alternatives: Problem Identification, Initial Alternative Formulation, Initial Screening, Select Final Array of Alternatives, Selection of the Recommended Plan

Evaluation Methodology and Tools: Workshop to I.D. Overall Restoration Goals

Report Preparation: Environmental Evaluation Draft Appendix Write-Up, Finalize Write-Up

4. DISTRICT QUALITY CONTROL (DQC)

All work products and reports, evaluations, and assessments shall undergo necessary and appropriate District Quality Control/Quality Assurance (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 (PMP). 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 MSC.

a. Documentation of DQC. Internal District control of product quality will be accomplished by quality checks and reviews, independent reviewers, supervisory reviews, and PDT reviews of interim and final products. The District quality management plan addresses the conduct and documentation of this fundamental level of review. DQC documentation through Memorandums for Record and / or email traffic will be maintained in the project file.

b. Products to Undergo DQC. The draft and final Comprehensive Watershed Plan will undergo DQC.

5. AGENCY TECHNICAL REVIEW (ATR)

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 published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC.

a. Products to Undergo ATR. The study started out as a feasibility study, the Southwest Florida Feasibility Study. However, rather than completing development of a Tentatively Selected Plan (TSP) for which there is not an identified non-Federal sponsor, the study transitioned to a comprehensive watershed plan, with no TSP identified for implementation. As a crosswalk, and in order to not lose valuable plan formulation work and information, the plan that had been preliminarily identified as a TSP instead is identified as the USACE Mission Appropriate Plan (UMAP) in an appendix to the SWFCWP. An ATR was performed on the Feasibility Scoping Meeting (FSM) Briefing Package and the preliminary draft report prior to submittal to South Atlantic Division in preparation for the Alternative Formulation Briefing (AFB). Subsequently, the SWFCWP underwent ATR at the draft report stage, completed in June 2011. The main report and all technical appendices were reviewed, including appendices for plan formulation, economic analysis, and engineering design. In addition, the final SWFCWP will undergo ATR.

b. Required ATR Team Expertise. The ATR Team composition should be similar to that of the project team, keeping in mind the scope of the watershed management plan, as presented in Section 3.a, above. The ATR team members should be subject matter experts or regional technical specialists for their fields. The ATR team will be nominated and identified by the ECO-PCX and will be comprised of individuals from all of the technical disciplines that were significant in the preparation of the report. To the extent possible, the PCX is requested to utilize the team that previously reviewed the report in its feasibility report form. Technical disciplines determined to be appropriate for this review are identified below:

Legal review is separate from, but concurrent with ATR of draft and final reports.

The expertise for the ATR Team is described as follows:

- ATR Team Leader (ATR Leader may also serve as a co-duty to one of the other review disciplines.)
- Plan Formulation—Experience with formulation of large scale ecosystem restoration projects.
- Economics—Experience with IWR-PLAN and cost effectiveness and incremental cost analysis.
- Environmental Restoration Specialist—Experience with coastal and estuary ecosystems, and wetland habitats.
- Real Estate—Experience with acquisition of large, diverse properties in support of ecosystem restoration projects.
- Civil Design—Experience with above-ground reservoirs, seepage management features, and canal delivery systems.
- Geotechnical Engineering –Experience in dam safety assurance associated with above-ground reservoirs
- Hydrology/Hydrologic Modeling (to include groundwater)
- Hydrology/Hydraulics—Experience with coastal and estuary ecosystems and wetland habitats.
- Water Management Operations—Experience with above-ground reservoir and canal water retention and delivery systems to support downstream flow targets.
- Cost Engineering—Experience with costs for ecosystem restoration projects

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 be 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 to address incomplete or unclear information, the PDT may seek clarification of comments 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 verbatim 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 the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for **Other Work Products** 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 1165-2-209, 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 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 analyses, 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 biological opinions of the project study.

- 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. The SWFCWP does not recommend implementation authority for any specific management measures, there is no likelihood that there will be an Authorization to implement the UMAP, and it does not commit the government to any risks. Therefore as stated above, the SWFCWP is an "other work product." In addition to the items discussed in Paragraph 3.b above, the following factors were also considered in making the risk-informed decision concerning the need for an IEPR.

(1) The SWFCWP;

(i) has minimal public safety concerns;
(ii) has no significant controversy and therefore is considered not controversial;
(iii) does not have a high level of complexity;
(iv) has no significant economic, environmental and social effects to the nation.
(v) has no significant threat to human life.
(vi) has not requested a peer review by independent experts from the governor.
(vii) has no determination from a Federal or state agency that the project is likely to have a significant adverse impact on environmental, cultural, or other resources under their jurisdiction.
(viii) does not include an EIS and;
(A) is not controversial,
(B) has no more than negligible adverse impact on scarce or unique tribal, cultural, or historic resources,
(C) has no substantial adverse impact on fish and wildlife species and their habitat prior to the implementation of mitigation measures,
(D) has, before implementation of mitigation measures, no more than a negligible adverse impact on a species listed as endangered or threatened species under the Endangered Species act of 1973.

(2) Therefore, neither Type I nor Type II IEPR is recommended at this time. None of the factors addressed above reveal a level of risk that would be improved with IEPR at this stage. It is likely that if additional authorization and appropriation is received for detailed study, IEPR may be required at that time. This phased approach is consistent with EC 1105-2-411, paragraph 9.g, to conserve resources and preclude duplication of effort.

7. POLICY AND LEGAL COMPLIANCE REVIEW

The SWFCWP will be reviewed for compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate

in determinations that the recommendations in the reports and the 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.

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

The Cost DX will provide an ATR Team member. However, since costs are not at feasibility level, cost certification will not be required.

9. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates the use of 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, for the purposes of the EC, 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 still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

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 (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever 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 (if required).

SAJ coordinated with the appropriate entities and HQ USACE to determine the acceptability of numerous models used in the SWFCWP study process, in compliance with the Planning Models Improvement Program (EC 1105-2-412). Planning models used to evaluate plans for SWFCP include:

- Landscape Connectivity Model
- Landscape Connectivity Spreadsheet
- IWR-Plan (has been previously approved for use by the Corps)
- Estuarine Spreadsheet
- Landscape / Sensitive Lands (L / SL) (Modelable) Spreadsheet
- L/SL (Non-Modelable) Spreadsheet
- Surface Water Hydrology Spreadsheet
- Water Quality Spreadsheet

Each of these models are intended as one-time use models for the SWFCP, and are not proposed for broader application within the Corps. Therefore, CESAJ-PD will request "Approval for Use" rather than certification. If the "Approval for Use is not granted, this Review Plan will be revised to reflect that determination.

Documentation for the Landscape Connectivity Model and each spreadsheet will be provided in the request for model approval. Engineering hydraulic models (e.g. MikeShe, STELLA, Water Management Model (WMM)) provided outputs that were utilized in the planning spreadsheets to derive Habitat Units. STELLA and the WMM have been approved by the SET Initiative for use for the SWFCWP. Documentation for these hydraulic models will be provided in the context of requesting "Approval for Use" of the planning spreadsheets.

IWR-Plan was utilized for the Cost Effectiveness / Incremental Cost Analysis (CE / ICA) for determination of the UMAP. Since IWR-Plan was developed by the Institute of Water Resources, a Corps lab, and is the standard for use in the CE/ICA, it has been previously approved for use by the Corps.

The planning models will be submitted to the PCX for approval for use prior to approval of the final report.

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. ATR of the draft comprehensive watershed management plan cost was approximately $30K. ATR of the draft was completed in June, 2011. ATR of the final is estimated to cost approximately $15K, schedule to be determined.

b. Model Certification/Approval Schedule and Cost. Model review is estimated to cost approximately $150K, schedule to be determined.

11. PUBLIC PARTICIPATION

The SWFCWP does not recommend implementation authority of any specific management measures. Coordination for agency and public comment schedule is to be determined. Public workshops may be held. Since IEPR is not required, potential peer reviewers are not needed and will not be nominated by the public or scientific or professional societies. At this time, it is envisioned that the final SWFCWP and associated review reports will be available on the Comprehensive Everglades Restoration Plan website and on CD if requested.

12. REVIEW PLAN APPROVAL AND UPDATES

The South Atlantic Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving District, MSC, RMO, and

HQUSACE members) as to the appropriate scope and level of review for the SWFCWP. Like the PMP, the Review Plan is a living document and may change as the SWFCWP progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the Review Plan since the last MSC Commander approval will be documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should 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 Home 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 and/or comments on this review plan can be directed to the following points of contact:

- The Jacksonville District Project Manager at 904-232-3648.
- The South Atlantic Division point of contact at 404-562-5206
- The ECO-PCX point of contact at 309-794-5448

Figure1. SWFCWP Study Area

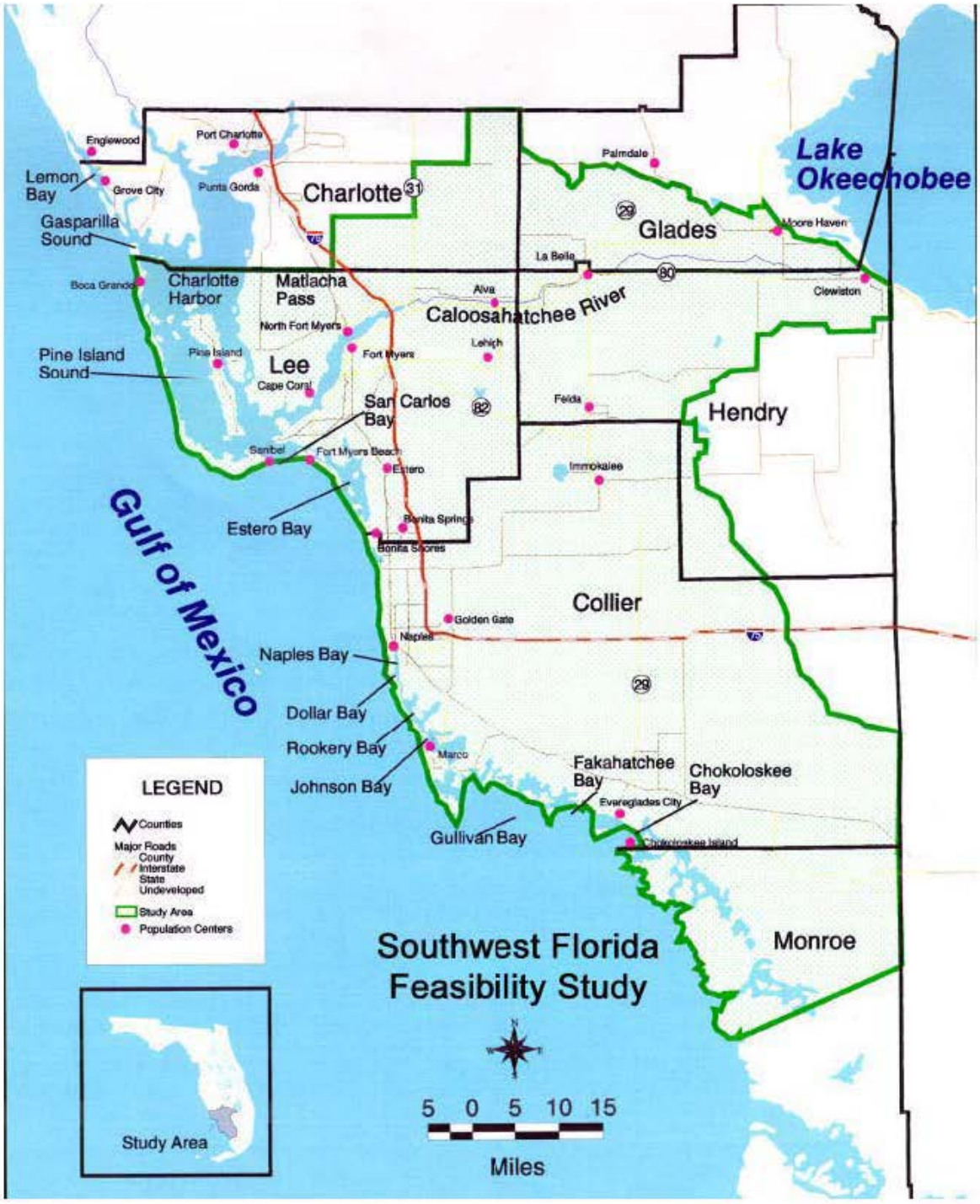

Table 1: Management Measures

LANDSCAPE AND SENSITIVE LANDS MANAGEMENT MEASURES	**Surface Water Hydrology Management Measures**	**Water Quality Management Measures**
Structural	**Structural Management Measures**	**Structural Management Measures**
Install culverts under roads	Above-Ground Reservoirs (1)	Stormwater Treatment Area (STA)
Construct water control structures, including weirs, pump stations used to manage water flows	In-Ground Reservoirs (1)	Water Quality Treatment Area (WQTA)
Stabilize shoreline with fabric / rip-rap	Modified Water Retention/Detention Areas	Restored Wetlands (RWET)
Non-structural	Step-Down Weirs in Canals and Ditches	Reservoirs (1)
Stabilize shoreline with vegetation	Offshore Storage and Recovery	Centralized Wastewater Treatment (CSEW)
Backfill / plug ditches and canals	Management Measures Associated with Flow-way Protection	Constructed Wetlands/Filter Marshes (CWET)
Backfill mosquito control ditches	Recyclable Water Containment Areas (RWCA)	Managed Aquatic Plant Systems
Remove roads	Harvestable water containment areas (HWCA)	Recyclable Water Containment Area (RWCA)
Remove fill material	Tailwater Recovery	Harvestable Water Containment Area (HWCA)
Remove above natural grade spoil	On Site Detention	Urban Stormwater Components and Retrofitting (UBMPs)
Smooth rutting in vehicle trails	**Non-Structural Management Measures**	Agricultural Water Containment Areas (AGWCA)
Remove solid waste debris	Aquifer Storage and Recovery (ASR)	Tailwater Recovery
Remove invasive vegetation	Aquifer Storage	Surface Water Storage
Plant native vegetation	Retain 2000 Existing Wetlands in 2050	Low Impact Development
Seed oysters in appropriate habitat	Dry Season Canal Backpumping	Limitation of Impervious Surface Area Through Codification
Restore wetlands		Urban non-structural components
Create wetlands		Golf course non-structural

		components
Acquire / lease land		

ATTACHMENT 1: TEAM ROSTERS

PDT Roster

ATR Team Roster

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION 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 1165-2-209. 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 DrChecks[sm].

SIGNATURE _____ _____
Name Date
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ _____
Name Date
Project Manager
Office Symbol

SIGNATURE _____ _____
Name Date
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ _____
Name Date
Review Management Office Representative
Office Symbol

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 Date
Chief, Engineering Division
Office Symbol

SIGNATURE _____ _____
Name Date
Chief, Planning Division
Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing		
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
DQC	District Quality Control/Quality Assurance		
DX	Directory of Expertise		
EC	Engineer Circular	PCX	Planning Center of Expertise
		PDT	Project Delivery Team
		PMP	Project Management Plan
		QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMC	Risk Management Center
IEPR	Independent External Peer Review	RMO	Review Management Organization
		SAR	Safety Assurance Review
MSC	Major Subordinate Command	USACE	U.S. Army Corps of Engineers