REVIEW PLAN

STA-1E Cells 5 and 7

Report to Assess Alleged Deficiency

Jacksonville District

Project Number: 114693

MSC Approval Date: 4/8/2013
Last Revision Date: None

US Army Corps
of Engineers ®

REVIEW PLAN

STA-1E Cells 5 and 7

Report to Assess Alleged Deficiency

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the STA-1E Cells 5 and 7 Report to Assess Alleged Deficiency. Stormwater Treatment Area 1 East (STA-1E) was completed in 2005. This Report to Assess Alleged Deficiency addresses whether there is a flaw in the Federal design or construction of a project that significantly interferes with the project's authorized purposes or full usefulness as intended by Congress at the time of original project development.

This Report to Assess Alleged Deficiency is an other work product under EC 1165-2-214 and was prepared in accordance with the requirements of ER 1165-2-119, Modifications to Completed Projects. Upon approval, this review plan will be included into the Project Management Plan as an appendix to the Quality Management Plan.

b. References

(1) Engineering 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) Engineering Regulation (ER) 1110-1-12, Quality Management, 21 Jul 2006 (Change 1: 20 SEP 06; Change 2: 31 MAR 11)
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) ER 1165-2-119, Modifications to Completed Projects, 20 Sep 1982

c. Requirements. This review plan was developed in accordance with EC 1165-2-214, 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.

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. It has been determined that the RMO for the peer review effort described in this Review Plan will be the Water Management and Reallocation Studies (WMRS) PCX.

3. STUDY/REPORT INFORMATION

Document. The purpose of the Report to Assess Alleged Deficiency is to determine whether there is flaw in the Federal design or construction of the project that significantly interferes with the project's authorized purposes or full usefulness as intended by Congress at the time of original project development. In addition, the Report will evaluate the effect of variable topography and water depth in cells 5 and 7 (see Figure 3) on project purposes

b. Project Description. Stormwater Treatment Area 1 East (STA-1E) was authorized in Section 315 of the Water Resources Development Act (WRDA) of 1996:

SEC. 315. CENTRAL AND SOUTHERN FLORIDA, CANAL 51.

The project for flood protection of West Palm Beach, Florida (C-51), authorized by section 203 of the Flood Control Act of 1962 (76 Stat. 1183), as modified by Section 315 of Water Resources Development Act (WRDA) 1996 to provide for the construction of an enlarged stormwater detention area, Storm Water Treatment Area 1 East, generally in accordance with the plan of improvements described in the February 15, 1994, report entitled "Everglades Protection Project, Palm Beach County, Conceptual Design", with such modifications as are approved by the Secretary. The additional work authorized by this section shall be accomplished at 100% Federal expense. Operation and maintenance of the stormwater detention area shall be consistent with regulations prescribed by the Secretary for the Central and Southern Florida project, and all costs of such operation and maintenance shall be provided by non-Federal interests.

The C-51 canal is a component of the Central and Southern Florida Project and is located in the central portion of Palm Beach County, Florida and extends from the edge of Water Conservation Area (WCA)-1 on the west almost to the Atlantic Ocean on the east **(Figure 1)**. The drainage area of the basin is approximately 164 square miles. STA-1E is located between WCA-1 and the C-51 canal, near the western end of the C-51 canal **(Figure 2)**.

Key References that will be used in the deficiency determination evaluation.

1) Kadlec, Robert H. and Knight, Robert L., 1996, Treatment Wetlands, CRC Press LLC, Boca Raton., Florida.

2) Burns & McDonnell, 1994, Everglades Construction Project, Palm Beach County, Florida Conceptual Design, SFWMD contract 920166-1-102, Palm Beach Gardens, Florida.

3) Walker, W. and Kadlec R, 2012. Dynamic Model for Stormwater Treatment Areas - Version 2c, prepared for the U.S. Department of Interior and the U.S. Army Corps of Engineers

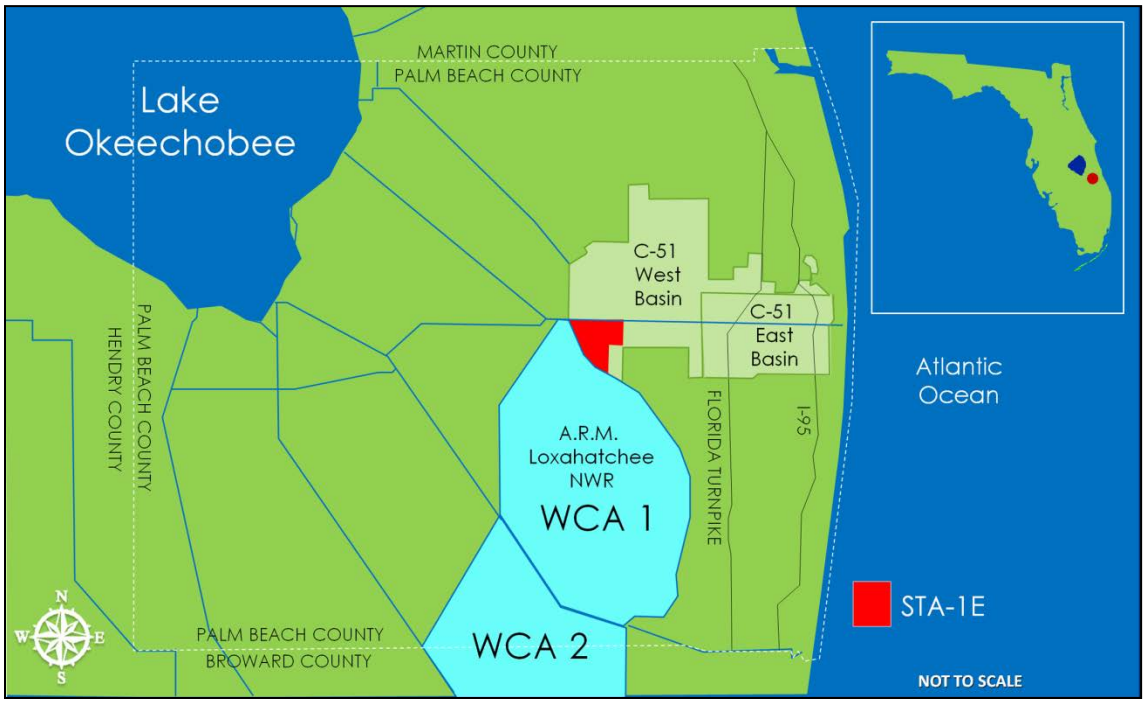

Figure 1: C-51 Basin and Project Area.

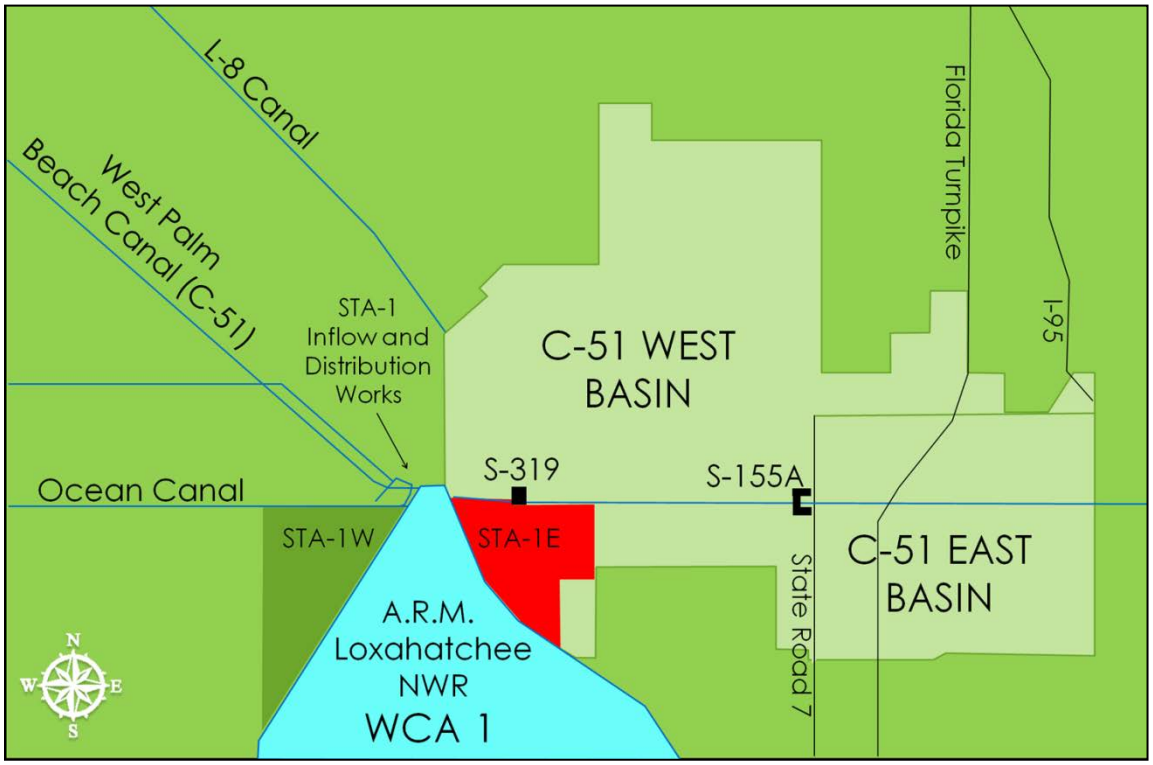

Figure 2: STA-1E location.

STA-1E encompasses approximately 6,000 acres (9.5 square miles) divided into 10 cells **(Figure 3)**. Two cells along the northern portion of the STA function as water distribution cells, and relay water to the rest of the STA. The remaining eight cells comprise the treatment area of STA-1E, with cell 4 divided into a north and south cell. The treatment cells are separated by earthen embankments, and water levels and flows are controlled in parallel flow paths via a series of gated culverts through the embankments. The distribution cells allow some operator flexibility in sending water to the treatment cells. The topography project site slopes from northeast to southwest. Elevations at the project site vary from approximately 19.0 feet National Geodetic Vertical Datum (NGVD) near the northeast corner to approximately 12.0 feet NGVD along the L-40 Levee adjacent to the southwest side of the project. The development of cells in a series was a result of the difference in elevation in the existing topography and alignment of the overall treatment area boundary.

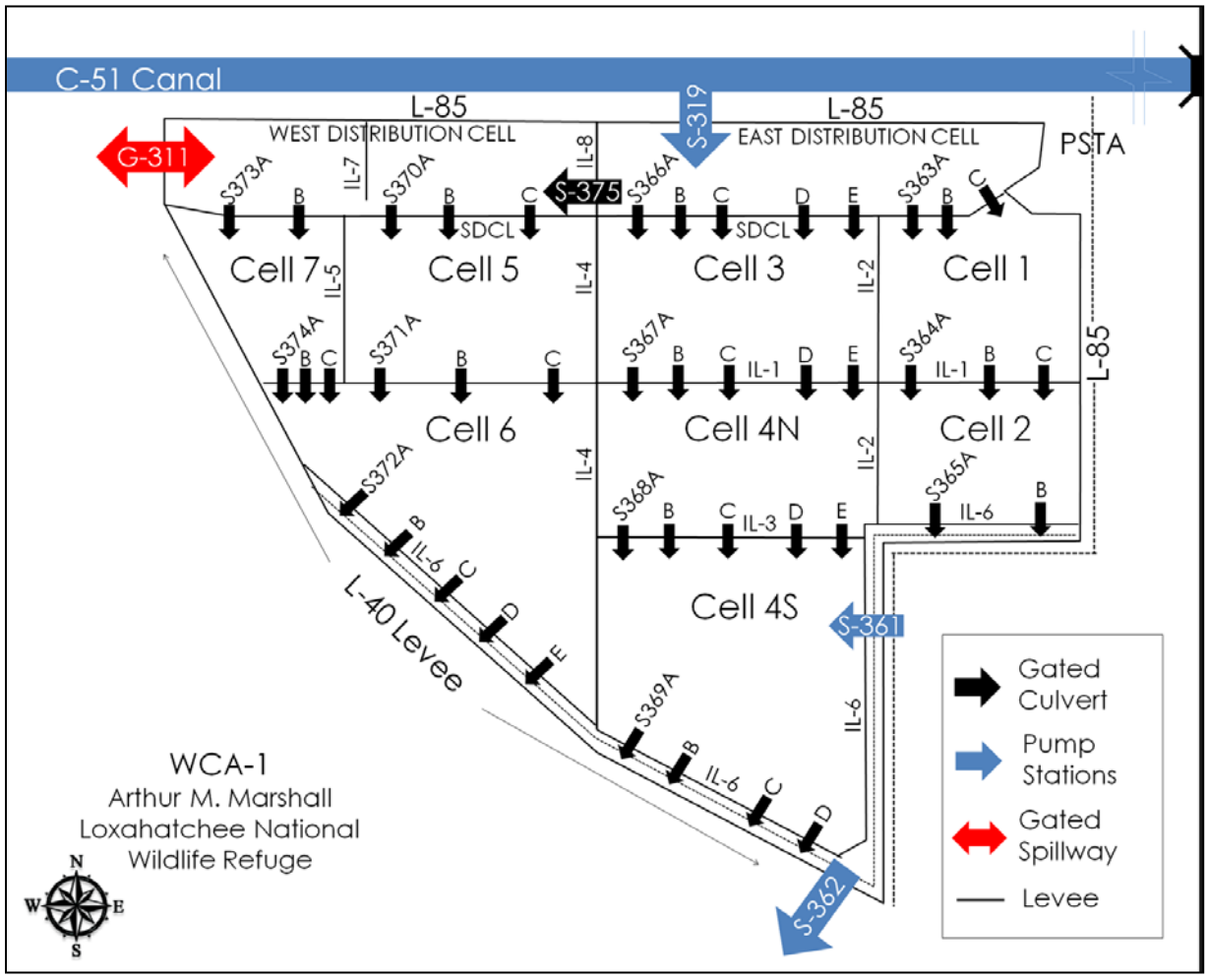

Figure 3: STA-1E cell locations.

The Report to Assess Alleged Deficiency addresses the Cell 5 and 7 components within the STA-1E project to determine if a deficiency exists that may cause the STA to not function as intended and may be limiting the ability of STA-1E to meet project purposes.

c. 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. Pertinent areas of importance, from EC 1165-2-214, are presented as bullets that are then addressed for this specific Deficiency Determination Report:

- *If parts of the study will likely be challenging (with some discussion as to why or why not and, if so, in what ways – consider technical, institutional, and social challenges, etc.);*
  The Report to Assess Alleged Deficiency addresses whether there is flaw in the Federal design or construction of a project that significantly interferes with the project's authorized purposes or full usefulness as intended by Congress at the time of original project development. If qualifying deficiencies are identified, a subsequent report could address alternatives (cost, design and performance) that could include re-grading, supplemental plantings, additional embankments and control structures, additional pump stations, and operational changes - measures that are commonplace for the USACE. The analysis of this subsequent report if it is required will be partially based on an earlier study that was completed by the USACE contractor ANAMAR in January 2011. The USACE analysis will not require the development of any new models, methods, or innovative design. There are no socio-economic concerns as the analysis will be limited to those corrective actions within an existing project. If deficiencies are identified and corrective action is needed, a Modification Report or equivalent will be developed.

- *A preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be (e.g., what are the uncertainties and how might they affect the success of the project):* The Report to Assess Alleged Deficiency present minimal risk. These risks are associated with an incorrect determination concerning the existence or non-existence of a deficiency. These risks will be minimized by the execution of the ATR recommended in the Review Plan.

- *If the project will likely be justified by life safety or if the project likely involves significant threat to human life/safety assurance (with some discussion as to why or why not and, if so, in what ways – consider at minimum the safety assurance factors described in EC 1165-2-214 including, but not necessarily limited to, the consequences of non-performance on project economics, the environmental and social well-being [public safety and social justice]; residual risk; uncertainty due to climate variability, etc.) – the discussion of life safety should include the assessment of the home District Chief of Engineering on whether there is a significant threat to human life associated with the project (per EC 1165-2-214 Frequently Ask Question 3.j.):* The Report to Assess Alleged Deficiency will present no threat to human life. Also see above bullet and discussion on Type II IEPR below.

- *If there is a request by the Governor of an affected state for a peer review by independent experts:* There has not been, nor is there expected to be, a request by the Governor of an affected state for a peer review by independent experts.

- *If the project/study is likely to involve significant public dispute as to the size, nature, or effects of the project (with some discussion as to why or why not and, if so, in what ways):* The Report to Assess Alleged Deficiency is not expected to involve significant 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 (with some discussion as to why or why not and, if so, in what ways): The Report to Assess Alleged Deficiency is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project.

- *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 (with some discussion as to why or why not and, if so, in what ways):* STA-1E was constructed from 2000 to 2005. Information contained in the Report to Assess Alleged Deficiency regarding the project was obtained from field visits and surveys performed by Corps of Engineers staff, South Florida Water Management District staff, and contractors. No novel methods, innovative materials or techniques were used to collect the information and determine if a deficiency exits. The information does not present complex challenges for interpretation.

- *If the project design is anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule (with some discussion as to why or why not and, if so, in what ways):* The Report to Assess Alleged Deficiency does not involve redundancy, resiliency, and/or robustness.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC and may be subject to ATR, and IEPR. The in-kind products and analyses to be provided by the non-Federal sponsor include: None.

4. DISTRICT QUALITY CONTROL (DQC)

All other work products (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 (PMP). The home district shall manage DQC. Documentation of DQC activities is required.

a. Documentation of DQC. District Quality Control will be accomplished by comprehensive review of the Report to Assess Alleged Deficiency by the PDT and independent reviewers. Comments will be provided by tracked changes to the report. Tracked changes/comments will be incorporated into the subsequent version. DQC comments will be compiled and maintained in the project files. This DQC will involve the PDT as well as the supervisory chain of command, independent review from District.

b. Products to Undergo DQC. The Report to Assess Alleged Deficiency will undergo DQC. If a deficiency is identified and project changes are recommended, the changes will be reviewed separately under a different Review Plan. The Report to Assess Alleged Deficiency will be reviewed by the PDT, and will also undergo a supervisory review.

c. Additional Review. In addition to the DQC, SAJ will contract with an AE firm to do an independent review of the conclusions in the report. The contractor will conduct an independent evaluation of the technical analysis, findings and recommendations.

5. AGENCY TECHNICAL REVIEW (ATR)

Based on the answers to the assessment of the factors in paragraph 3.c above, an ATR is recommended for this Deficiency Determination Report. The objective of ATR is to ensure consistency with established criteria, gui**d**ance, 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 SAD.

a. Products to Undergo ATR. The final draft Report to Assess Alleged Deficiency will undergo ATR.

b. Required ATR Team Expertise. ATR members will be sought from the following sources: regional technical specialists (RTS); appointed subject matter experts (SME) from other districts; senior level experts from other districts; Center of Expertise staff; experts from other USACE commands; contractors; academic or other technical experts; or a combination of the above. The ATR Team will be comprised of the following disciplines; knowledge, skills and abilities; and experience levels.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also 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).
Plant Ecologist	The reviewer should be a senior plant ecologist with demonstrated expertise in establishment of emergent aquatic vegetation. Experience with Stormwater Treatment Areas is required.
Hydraulic Engineering	The team member should be a registered professional engineer and have 10 or more years experience in hydraulic engineering. Experience needs to include the retention and evaluation of flow through water management structures. Team member able to assist in determining if alternatives considered are sufficient and appropriately evaluated in accordance with ER 1165-2-119, Modifications to Completed Projects. Must be able to evaluate application of dynamic model for stormwater treatment areas (DMSTA), including: user calibrations, input files (including , atmospheric deposition, hydraulic, seepage input values, P cycling parameters), and spreadsheet computational accuracy.
Civil Engineering	The team member should be a registered professional engineer and have 10 or more years experience in civil engineering and with experience in civil/site work projects to include levee systems, roads and highways, relocations, paving and drainage and engineering and design

	of water management project features such as levees and water control structures. Experience with south Florida soils and geology is preferred.
Geotechnical Engineer	The team member should be a registered professional engineer and have 10 or more years experience in geotechnical engineering. Experience needs to include geotechnical evaluation of water management structures. Experience needs to encompass static and dynamic slope stability evaluation; evaluation of the seepage through earthen embankments and under seepage through the foundation of the water management structures, including levee embankments, floodwalls, closure structures and other pertinent features; soil grouting products and methods; and settlement evaluations. The team member will be familiar with sampling and laboratory testing, embankment stability and seepage analyses, planning analysis, and experienced in levee & floodwall design, post-construction evaluation, and rehabilitation.

The ATR Team Leader will coordinate final staffing, schedule and cost with the district.

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 addressing incomplete or unclear information, comments 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 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 each applicable phase of product development, e.g., the draft report and final report if applicable. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for 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 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 biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) 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. In the 22 February 2013 guidance memo from Steve Stockton, Director of Civil Works, the decision was made that Type I IEPR is not required for this Deficiency Determination Report. The Report to Assess Alleged Deficiency will not pose a significant threat to human life. Therefore, a Type II IEPR is not required.

b. Products to Undergo Type I IEPR. None. It has been determined that the Deficiency Determination Report does not require/need Type I IEPR.

c. Required Type I IEPR Panel Expertise. Not applicable.

d. Documentation of Type I IEPR. Not applicable.

7. POLICY AND LEGAL COMPLIANCE REVIEW

The Report to Assess Alleged Deficiency will be reviewed throughout its development process for compliance with law and policy. Guidance for policy and legal compliance review is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that 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, particularly policies on analytical methods and the presentation of findings. The approval level for this report is at HQ USACE.

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

The Report to Assess Alleged Deficiency does not require DX review and certification.

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).

a. **Planning Models.** The following planning models are anticipated to be used in the development of the Deficiency Determination Report: None.

b. Engineering Models. No engineering models were used in the development of the Deficiency Determination report. Though not a model, DBHYDRO was used to help evaluate the water quality aspects of the analysis to develop the recommendation. DBHYDRO is the South Florida Water Management District's corporate environmental database which stores hydrologic, meteorologic, hydrogeologic, and water quality data. This database is the source of historical and up-to-date environmental data for the 16-county region covered by the District".

10. REVIEW SCHEDULES AND COSTS

a. **ATR Schedule and Cost.** ATR will be conducted on the final draft Deficiency Determination Report. ATR is scheduled to begin in March 2013.

b. **Estimated total ATR Tea**m cost is $26K, broken down as follows:

ATR Lead, $6K
Plant Ecologist, $4K
Civil Engineer, $4K
Geotechnical Engineering, $4K
Hydraulic Engineering, $8K

c. Type I & Type II IEPR Schedule and Cost. (Not applicable).

Model Certification/Approval Schedule and Cost. No planning models are being used in support of the analyses included in the Report to Assess Alleged Deficiency.

11. PUBLIC PARTICIPATION

The initial construction of the project was covered by an EIS and the project documents were coordinated with the public. The Report to Assess Alleged Deficiency assesses if the project is meeting the objectives for which it was authorized and designed. It evaluates the need for any modifications that may need to be made to existing facilities to enable the project to perform as planned and designed.

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 input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the documents addressed in the Review Plan. Like the PMP, the Review Plan is a living document and may change as the effort 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) shall 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 MSC Commander's approval memorandum, shall be posted on the Home District's webpage. The latest Review Plan shall 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:

- Jacksonville District Project Manager, 904-232-2084
- Jacksonville District Planning Technical Lead, 904-232-3747
- Jacksonville District Review Coordinator, 904-232-1102
- South Atlantic Division Point of Contact, 404-562-5206
- Water Management and Reallocation Planning Center of Expertise Point of Contact, 469-487-7033

ATTACHMENT 1: TEAM ROSTERS

Team rosters intentionally removed.

PDT

ATR Team (Preliminary)

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 1165-2-214. 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 DrChecks[sm].

SIGNATURE _____ Date _____
Name
ATR Team Leader
CESWT-PE-P

SIGNATURE _____ Date _____
Name
Project Manager
Office Symbol

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

SIGNATURE _____ Date _____
Name
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 _____ Date _____
Name
Chief, Engineering Division
CESAJ-EN

SIGNATURE _____ Date _____
Name
Chief, Planning Division
CESAJ-PPD

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

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	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
ASA(CW)	Assistant Secretary of the Army for Civil Works	PCX	Planning Center of Expertise
ATR	Agency Technical Review	PDT	Project Delivery Team
A.R.M	Arthur R. Marshall	PMP	Project Management Plan
C-51	Canal 51 (West Palm Beach Canal)	QMP	Quality Management Plan
C&SF	Central & Southern Florida Project	RP	Review Plan
DMSTA	Dynamic Model Stormwater Treatment Areas	RTS	Regional Technical Specialist
DQC	District Quality Control/Quality Assurance	RMC	Risk Management Center
DOI	Department of Interior	RMO	Review Management Organization
DX	Directory of Expertise	S-319	Structure 319
EA	Environmental Assessment	S-155A	Structure 155A
EC	Engineer Circular	SET	Scientific and Engineering Technology
EIS	Environmental Impact Statement	SMA	Subject Matter Expert
ER	Engineering Regulation	SAR	Safety Assurance Review
Home District/MSC	The District or MSC responsible for the preparation of the decision document	STA-1E	Stormwater Treatment Area – One East
HQUSACE	Headquarters, U.S. Army Corps of Engineers	SAR	Safety Assurance Review
IEPR	Independent External Peer Review	USACE	U.S. Army Corps of Engineers
L-40	Levee 40	WRDA	Water Resources Development Act
MSC	Major Subordinate Command	WCA	Water Conservation Area
NEPA	National Environmental Policy Act	WMRS	Water Management & Reallocation Studies
NGVD	National Geodetic Vertical Datum		