

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

25 JAN 2012

MEMORANDUM FOR Commander, Jacksonville District (CESAJ-PD/E. Summa)

SUBJECT: St. Johns County, Florida, Hurricane and Storm Damage Reduction (HSDR) Feasibility Study and Environmental Assessment – Request for Approval of Revised Review Plan and Request for Type I IEPR Exclusion.

1. References:

a. Memorandum, CESAJ-PD, 28 February 2015, subject as above.

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

2. The enclosed Review Plan has been prepared in accordance with Engineer Circular (EC) 1165-2-214. The Review Plan has been coordinated with the National Planning Center of Expertise for Coastal Storm Risk Management (PCX-CSRM), which is the Review Management Organization for this study. For further information, please contact the PCX-CSRM at (347) 370-4571. This review plan does not include Type I Independent External Peer Review (IEPR). The Director of Civil Works approved the request for IEPR exclusion on 16 November 2015 (enclosure 2).

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 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 South Atlantic Division for our use. Before posting to the website, the names of Corps employees should be removed.

4. The point of contact for this action is

at (404) 562-

2 Encls as

Brigadier General, USA Commanding

## **Review Plan**

ST JOHNS COUNTY, FLORIDA HURRICANE AND STORM DAMAGE REDUCTION FEASIBILITY STUDY – South Ponte Vedra Beach, Vilano Beach, and Summer Haven Reaches

Jacksonville District

Project # 113174

MSC Approval Date: Jan 25, 2016

Last Revision Date: Feb 2015

February 2015

# **Review Plan:** ST JOHNS COUNTY, FLORIDA HURRICANE AND STORM DAMAGE REDUCTION FEASIBILITY STUDY

### **Table of Contents**

1.0 Purpose and Requirements	. 1
Purpose	
References	. 1
Requirements	. 1
2.0 Review Management Organization (RMO) Coordination	. 2
3.0 Study Information	. 2
Decision Document	
Study/Project Description	2



-	0	Independent External Peer Review (IEPR)	
5.	0	Agency Technical Review (ATR)	6
	c.	Required DQC Expertise	6
	b.	Products to Undergo DQC	6
	a.	Documentation of DQC	
4.	0	District Quality Countrol (DQC)	5
	In-K	ind Contributions	5
	Aut	horization and Development History	3
	Figu	re 1: St. Johns Co. Feasibility Study area	3
	•••••		З

a. Decision of IEPR	9
b. Products to Undergo Type I IEPR. Not-Applicable	11
c. Required Type I IEPR Panel Expertise. Not-Applicable	11
d. Documentation of Type I IEPR. Not-Applicable	11
7.0 Policy and Legal Compliance Review	11
8.0 Cost Engineering and atr Mandatory center of expertise (MCX) with Technical (TCX) Review and Certification	•
9.0 Model Certification and Approval	
Planning Models.	
Engineering Models	12
10.0 Review Schedules and Costs	12
11.0 ATR Schedule and Cost	14
12.0 Public Participation	
13.0 Review Plan Approval and Updates	14
ATTACHMENT 1: Statement of Technical Review for Decision Documents	15
ATTACHMENT 2: Review Plan Revisions	17

#### Review Plan for ST JOHNS COUNTY, FLORIDA HURRICANE AND STORM DAMAGE REDUCTION FEASIBILITY STUDY

#### **1.0 PURPOSE AND REQUIREMENTS**

#### Purpose

The approved review plan for the St. Johns County, Florida, Hurricane and Storm Damage Reduction (HSDR) Feasibility Study was revised to update the PDT, references, nomenclature, IEPR exclusion due to an increase in the total project cost threshold in WRRDA 2014, and consolidated schedule resulting from SMART Planning compliance. The revised Review Plan is modified to remove the requirement for Type I IEPR.

The original review plan was approved in February 2008 and was updated in May 2010 prior to this revision.

#### References

- (1) Water Resources Reform and Development Act of 2014, 10 June 2014
- (2) Engineering Circular (EC) 1165-2-214, Civil Works Review, 15 Dec 2012
- (3) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
- (4) Engineering Regulation (ER) 1110-1-12, Quality Management, 21 Jul 2006
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- (6) EC1165-2-209, "Civil Works Review Policy", dated 31 January 2010 EC
- (7) Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, Chapter II -(National Economic Development NED) Benefit Evaluation Procedures (March 10, 1983)

#### 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. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-214) and planning model certification/approval (per EC 1105-2-412).

#### 2.0 REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is the National Planning Center of Expertise for Coastal Storm Damage Reduction (PCX-CSDR). The PCX-CSDR shall coordinate with other National Planning Centers of Expertise (PCX) as needed.

The PCX-CSDR will coordinate with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (Cost Engineering MCX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

#### **3.0 STUDY INFORMATION**

#### **Decision Document**

The St. Johns County, Florida, Hurricane and Storm Damage Reduction Feasibility Study, to be prepared in accordance with ER 1105-2-100, will determine the viability of providing Federal CSDR measures to portions of the St. Johns County shoreline. The level of report approval is at U.S. Army Corps of Engineers (USACE) Headquarters (HQ). Upon approval, a Chief of Engineers report will be transmitted to the Assistant Secretary of the Army (Civil Works), OMB, and Congress for authorization. To ensure that any environmental effects of the recommended project will not cause adverse impacts to the quality of the human environment, natural or cultural resources of the area, a National Environmental Policy Act (NEPA) document will be completed. An Environmental Assessment (EA) has been determined to be the appropriate NEPA document.

#### Study/Project Description

The purpose of this study is to assess the needs for Coastal Storm Damage Reduction and incidental opportunities for environmental restoration and protection along the coast of St. Johns County, Florida. The most immediate and critical needs of the local communities are to address beach and dune erosion and include environmental protection opportunities. For this study, a total of approximately 9.7 miles of beach is being studied: 5 miles in the vicinity of South Ponte Vedra, 2.4 miles in the vicinity of Vilano Beach and 2.3 at Summer Haven (Figure 1). This study will define Federal interest and determine if a National Economic Development Plan can be formulated. This will be accomplished by participating in a locally supported, cost-shared feasibility study addressing issues along the coast of St. Johns County.



Figure 1: St. Johns Co. Feasibility Study area

#### **Authorization and Development History**

The authority for conducting this study is contained in House Resolution 2646 adopted June 21, 2000, which reads as follows:

"Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That in accordance with Section 110 of the Rivers and Harbors Act of 1962, the Secretary of the Army, acting through the Chief of Engineers, is requested to survey the shores of St. Johns County, Florida, with particular reference to the advisability of providing beach erosion control works in the area north of St. Augustine Inlet, the shoreline in the vicinity of Matanzas Inlet, and adjacent shorelines, as may be necessary in the interest of hurricane protection, storm damage reduction, beach erosion control, and other related purposes."

#### Factors Affecting the Scope and Level of Review

This section discusses the factors affecting the risk-informed decisions about the appropriate scope and level of review. This discussion is intended to be detailed enough to assess the level and focus of review, and support the PDT, PCX, and vertical team decisions regarding the appropriate level of review and types of expertise required on the various review teams. Bulleted issues are addressed as follows:

- <u>If the project has a cost estimate of more than</u> \$200 million<sup>1</sup>: Total initial project cost, from the 2004 reconnaissance study, was estimated at approximately \$10 million. Factoring in the projected cost of periodic renourishment would significantly increase the project total cost to the \$100 million range but not above \$200 million.
- <u>If parts of the study will likely be challenging</u>: The project will be using USACE standard methods; challenges, for this project, generally are typical of that for a coastal storm damage reduction project and are not expected to present complex challenges for interpretation.
- <u>A preliminary assessment of where the project risks are likely to occur and what the</u> magnitude of those risks might be (e.g., what are the uncertainties and how might they <u>affect the success of the project)</u>: The proposed project does not appear to include risks that are greater than normally would be expected for a coastal storm damage reduction project.
- <u>If the project will likely be justified by life safety or if the project likely involves significant</u> <u>threat to human life/safety assurance</u>: As typical of CSDR projects, the study would assume that adequate warning time is given to evacuate vulnerable populations thereby eliminating significant threat to human life/safety.
- If there is a request by the Governor of an affected state for a peer review by independent <u>experts</u>: To date, the Governor of Florida has not requested a peer review by independent experts.
- If the project/study is likely to involve significant public dispute as to the size, nature, or <u>effects of the project</u>: The project is not likely to involve public dispute.

<sup>&</sup>lt;sup>1</sup> As per WRRDA 14 (Section 1044), the threshold is now \$200M.

- <u>If the project/study is likely to involve significant public dispute as to the economic or</u> <u>environmental cost or benefit of the project:</u> The project is not likely to involve 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: Study methods to be employed are typical of other coastal storm damage reduction projects and would not appear to warrant external peer review on this basis. Well established analytical methods and models will be employed and are not considered precedent-setting. Study conclusions are expected to be typical of a coastal storm damage reduction project and are not expected to change prevailing practices.
- If the project design is anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule: The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule.

#### In-Kind Contributions

Products and analyses provided by non-federal sponsors as in-kind services are subject to District Quality Control (DQC), Agency Technical Review (ATR), and Independent External Peer Review (IEPR), if necessary. There are no in-kind products or analyses to be provided by the non-federal sponsor.

#### 4.0 DISTRICT QUALITY COUNTROL (DQC)

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 (PMP). The Jacksonville District will manage the DQC.

a. Documentation of DQC. A DQC certification sheet and documentation of the DQC reviews will be provided to the ATR ream to reflect that the district is satisfied with the quality of the document. The certification shall include a statement from each reviewer confirming that they have reviewed the document, provided comments, and comments were satisfactorily resolved. The certification shall be signed by each reviewer. The documentation of the DQC reviews will include a summary of significant comments and resolution.

#### b. Products to Undergo DQC.

- Draft feasibility study and Environmental Assessment (NEPA document) which will include the Tentatively Selected Plan (TSP).
- Final feasibility study and Environmental Assessment.
- c. Required DQC Expertise. Experienced Jacksonville District team members, representing all pertinent disciplines, will participate in DQC, including: plan formulation, economics, environmental compliance, engineering design, hydraulics and hydrology, real estate, and cost engineering. These team members will not have had direct involvement throughout the development of the feasibility study.

#### **5.0 AGENCY TECHNICAL REVIEW (ATR)**

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance document, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analysis 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 decisions 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 team will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate.

#### a. Products to Undergo ATR.

- **a.** Draft feasibility study and Environmental Assessment (NEPA document) which will include the Tentatively Selected Plan (TSP).
- **b.** Final feasibility study and Environmental Assessment.
- **b.** Required ATR Team Expertise. The ATR team will be made up of personnel determined by the PCX-CSDR. The expertise represented on the ATR team should reflect the significant expertise involved in the work effort and will generally mirror the expertise on the PDT. It is suggested that the review team include the disciplines listed in Table 1. Reviewers will be from outside of the Jacksonville District and the review lead will be from outside CESAD. The names, organizations, contact information, credentials, and years of experience of the ATR members will be included in Attachment 1 once the ATR team is established.

ATR Team Members/Disciplines	Expertise Required
ATR Lead/Plan Formulator	The ATR lead will be a senior professional with extensive experience in preparing Civil Works study documents and conducting ATR. The lead will also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead will also serve as the plan formulation reviewer. They will be a senior water resources planner with experience in CSDR projects and associated planning reports and documents.
Economics	The economics reviewer will be well qualified in the field of economics and have a thorough understanding of CSDR projects with periodic renourishment, BCR updates, and 902 limit analyses. Beach-fx model knowledge is required.
Cost Engineering	The cost engineering reviewer will be an expert in the field of cost engineering and have a thorough understanding of CSDR projects and dredging costs estimates. The cost engineer should be Walla Wall Cost DX approved cost reviewer as the cost estimate for this document is anticipated to need CSRA and Cost DX review and Certification.
Coastal Engineering	The coastal engineering reviewer will be an expert in the field of coastal engineering and have a thorough understanding of CSDR projects, beach nourishment, and offshore borrow areas. Beach-fx model knowledge is required.
Environmental Resources	The environmental reviewer will be an expert in the field of environmental resources and have a thorough understanding of NEPA, coastal ecosystems, and CSDR projects.
Real Estate	The real estate reviewer will be an expert in the field of real estate with specialized knowledge of coastal projects and associated requirements such as lands, easements, rights-of-way and relocation.

- 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 EC 1165-2-214, 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 draft report and final report. A sample Statement of Technical Review is included in Attachment 2. In addition to a Statement of Completion of Technical Review, District Leadership will provide Certification of Agency Technical Review in accordance with EC 1165-2-214. A sample Certification is included in Attachment 2.

In some situations, the Cost Engineering MCX may request a separate Cost ATR DrChecks be established. This allows for separate cost comments to be evaluated and closed upon resolution. Resolution of comments is typically considered to be complete upon providing final cost products. In some cases these products are not provided by the end of the primary study ATR. Establishing a separate Cost ATR DrChecks could prevent the delay in certification of the primary study ATR.

#### 6.0 INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR is the most independent level of review for project studies 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 reviews are managed outside the USACE, panel members will be selected by an Outside Eligible Organization using the National Academies of Science (NAS) policy for selecting reviewers. 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 IEPRs 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. A 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 IEPRs, or Safety Assurance Reviews (SARs), 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 of IEPR

As described by EC 1165-2-214, paragraph 11.d. (1), **Type I IEPR** is mandatory if any of the following are true:

- 11.d.(1)(a): *Significant threat to human life*: The project will be formulated for reduction of damages to coastal infrastructure, not for reduction of threat to human life. Most CSDR projects, such as this, assume that adequate warning time is provided for vulnerable populations to evacuate the project area. This condition is not met.
- 11.d.(1)(b): The estimated total cost of the project (including any potential mitigation costs) is not likely greater than \$200 million<sup>2</sup>, based on a reasonable estimate at the end of the reconnaissance phase. Total initial project cost, from the 2004 reconnaissance study, was estimated at approximately \$10 million. Factoring in the projected cost of periodic renourishment would significantly increase the project total cost to the \$100 million range. This does not exceed the cost threshold, and therefore this condition is not met.
- 11.d.(1)(c): *The Governor of an affected State requests a peer review by independent experts*: To date, the Governor of Florida has not requested a peer review by independent experts. This condition is not met.
- 11.d.(1)(d): The Director of Civil Works or the Chief of Engineers determines that the project study is controversial due to significant public dispute over either the size, nature, or effects of the project, or the economic or environmental costs or benefits of the project: The project is not likely to involve significant public dispute as to the size, nature, effects, or economic or environmental costs or benefits of the project. This condition is not met.

According to EC 1165-2-214, a project study may be excluded from Type I IEPR if none of the above conditions are met and the following is true:

- "It does not include an EIS, and the DCW or the Chief determines that the project is not controversial; and
- Has no more than negligible adverse impacts on scarce or unique tribal cultural, or historic resources;
- Has no substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures; and
- 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 (16 U.S.C. 1531 et seq.) or the critical habitat of such species designated under such Act"

These statements are all true for the project. The Jacksonville District concludes that the study would not significantly benefit from an independent external peer review. Therefore, Type I IEPR is not proposed for this project, and an IEPR exclusion request will be submitted.

Per EC 1165-2-214, Appendix E, paragraph 2, **Type II IEPR** is required if the project would pose a significant threat to human life (public safety). In addition, other factors to consider for conducting a Type II IEPR include:

<sup>&</sup>lt;sup>2</sup> As per WRRDA 14 (Section 1044), the threshold is now \$200M.

- E-2a: The project involves the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices: This condition is not met.
- E-2b: The project design requires redundancy, resiliency, and robustness. This condition is not met.
- E-2c: The project has unique construction sequencing or a reduced or overlapping design construction schedule. This condition is not met.

On a risk-informed basis, Type II IEPR is not currently contemplated. However, the decision as to whether or not to perform Type II IEPR will be revisited in a follow-on implementation phase review plan.

#### b. Products to Undergo Type I IEPR. Not-Applicable

c. Required Type I IEPR Panel Expertise. Not-Applicable

#### d. Documentation of Type I IEPR. Not-Applicable

#### 7.0 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 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, particularly policies on analytical methods and the presentation of findings in decision documents.

## 8.0 COST ENGINEERING AND ATR MANDATORY CENTER OF EXPERTISE (MCX) WITH TECHNICAL EXPERTISE (TCX) REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (MCX) with Technical Expertise (TCX), 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 change(s). The MCX will also provide the Cost Engineering Certification for the Total Project Cost Summary. The RMO is responsible for coordination with the Cost Engineering MCX.

#### 9.0 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 process the Hydrology, Hydraulics and Coastal Community of Practice (HH&C CoP) of USACE follows to validate engineering software for use in planning studies and to satisfy the requirements of the Corps' Scientific and Engineering Technology (SET) initiative is provided in Enterprise Standard (ES)-08101 Software Validation for the Hydrology, Hydraulics and Coastal Community of Practice. 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).

**Planning Models.** The following economic model is anticipated to be used in the development of the decision document: Beach-fx. This model will determine coastal storm damage reduction benefits.

#### Model Certification/Approval Schedule and Cost

The Corps' developed and certified model Beach-fx will be used for this study. In the unlikely event that other models are needed to complete the project, the approval schedule and associated costs may change.

**Engineering Models**. The following engineering models are anticipated to be used in the development of the decision document: SBEACH and GENESIS.

#### Model Certification/Approval Schedule and Cost

The engineering models, SBEACH and GENESIS, are on the SET approved list. In the unlikely event that other models are needed to complete the project, the approval schedule and associated costs may change.

#### 10.0 REVIEW SCHEDULES AND COSTS

Table 2 shows the complete project schedule with review functions highlighted.

#### ST. JOHNS COUNTY, FLORIDA HSDR STUDY SCHEDULE Date: 15 October 2014 Duration Start Date Task End Date FY (calendar days) Reconnaissance Phase Sunk Cost Feasibility Phase through FY13 FY14 ACTIONS Scoping funds received 0 Monday, May 05, 2014 Monday, May 05, 2014 14 3x3 Compliance - Create draft PMP, review plan, budget, schedule, risk register, draft 178 Friday, October 31, 2014 14/15 Tuesday, May 06, 2014 Receive FY15 Funding (assumes Accelarated Funds Agreement approved by 31 Dec 0 Thursday, January 01, 2015 Thursday, January 01, 2015 15 2014) 120 Friday, January 02, 2015 Monday, May 04, 2015 15 FCSA Amendment Identify Problems and Opportunities and available data (confirm) riday, January 02, 2015 Monday, January 12, 2015 10 15 Preliminary Formulation and Screening (NEPA scoping complete) 30 Tuesday, January 13, 2015 Thursday, February 12, 2015 15 Prepare read-ahead package (update risk reg, DMP, etc) & submit to vertical team 14 Friday, February 13, 2015 Friday, February 27, 2015 15 /ertical team review of AM materials Monday, March 02, 2015 Monday, March 09, 2015 15 Tuesday, March 10, 2015 Tuesday, March 10, 2015 0 15 Alternatives Milestone Inventory and Forecast (Data collection - engineering-complete, economics-complete, real estate structure inventory update required, cultural resources contract, geotech Wednesday, March 11, 2015 Friday, May 15, 2015 15 65 investigations & analyses) SBEACH profile setup & callibration (complete) 0 Monday, March 16, 2015 Monday, March 16, 2015 15 SBEACH storm simulations (confirm) 12 Tuesday, March 17, 2015 Monday, March 30, 2015 15 Tuesday, March 31, 2015 15 BEACHFX setup future without project condition 60 Monday, June 01, 2015 Preliminary design of Alternative Plans (incl ROM costs, enviro) 30 Friday, May 01, 2015 Monday, June 01, 2015 15 Intermediate Screening of Alternatives to final array 90 Tuesday, June 02, 2015 Monday, August 31, 2015 15 Evaluation of final array, value engineering, determine TSP 60 Tuesday, September 01, 2015 Monday, November 02, 2015 15/16 Complete draft report with NEPA, cost and schedule risk assessment 60 Tuesday, November 03, 2015 16 Monday, January 04, 2016 OQC of Draft Report (incl legal) Tuesday, January 05, 2016 21 Fuesday, January 26, 2016 16 Tuesday, January 19, 2016 Prepare read-ahead package (update risk reg, DMP, etc) & submit to vertical team 14 Tuesday, January 05, 2016 16 Vertical team review of TSP materials 14 Wednesday, January 20, 2016 Wednesday, February 03, 2016 16 Tentatively Selected Plan (TSP) Milestone 0 Thursday, February 04, 2016 Thursday, February 04, 2016 16 Release for concurrent public, technical, policy and legal review 10 Friday, February 05, 2016 Monday, February 15, 2016 16 Public Review of Draft Report 45 Tuesday, February 16, 2016 riday, April 01, 2016 16 Agency Technical Review (ATR) Conducted by PCX - Draft Report hursday, March 17, 2016 30 Tuesday, February 16, 2016 16 AD/HQ Policy and Legal Review Draft Report 45 Tuesday, February 16, 2016 riday, April 01, 2016 16 IEPR team review of Draft Report (if required) 45 Tuesday, February 16, 2016 Friday, April 01, 2016 16 Create policy guidance memorandum and commence finalizing report per reviews 21 Monday, April 04, 2016 Monday, April 25, 2016 16 repare read-ahead package (update risk reg, DMP, etc) & submit to vertic 14 Fuesday, April 26, 2016 Tuesday, May 10, 2016 16 ertical team review of ADM materials 14 Wednesday, May 11, 2016 Wednesday, May 25, 2016 16 Agency Decision Milestone (ADM) 0 Thursday, May 26, 2016 Thursday, May 26, 2016 16 Finalize details on TSP, cost certification, complete final report 60 riday, May 27, 2016 Tuesday, July 26, 2016 16 Wednesday, August 17, 2016 OOC of Final Report 21 Wednesday, July 27, 2016 16 Thursday, August 18, 2016 Agency Technical Review (ATR) - Final Report/NEPA 30 Monday, September 19, 2016 16 16/17 ubmit Final Report package to SAD 21 Fuesday, September 20, 2016 uesday. October 11. 2016 Water Quality Certification (start after TSP) 280 Friday, February 05, 2016 Friday, November 11, 2016 17 AD Review Final Report 30 Wednesday, October 12, 2016 riday, November 11, 2016 17 Provide responses to SAD comments and revised Final Report 7 Monday, November 21, 2016 17 Monday, November 14, 2016 Division Engineer Transmittal Letter Tuesday, November 29, 2016 17 7 Tuesday, November 22, 2016 ECW (HQ) Review Final Report 60 17 Wednesday, November 30, 2016 Aonday, January 30, 2017 rovide responses to CECW (HQ) comments and revised Final Report 17 14 Monday, January 16, 2017 Monday, January 30, 2017 District prep for CWRB 60 Friday, December 02, 2016 Tuesday, January 31, 2017 17 Civil Works Review Board (CWRB) Milestone Tuesday, January 31, 2017 17 0 Tuesday, January 31, 2017 S&A letters signed/Publish notice in Federal Register 15 Wednesday, February 01, 2017 17 Thursday, February 16, 2017 inal Report State and Agency (S&A) Review Period 30 Friday, February 17, 2017 Monday, March 20, 2017 17 Revise Final Report for S&A comments/Provide response letters 30 Fuesday, March 21, 201 17 hursday, April 20, 201 HQ routing of final report and chief's report package 15 Friday, April 21, 2017 Monday, May 08, 2017 17

#### Table 2: Project schedule with review functions highlighted.

0

14

60

60

Tuesday, May 09, 2017

Thursday, May 25, 2017

Tuesday, July 25, 2017

Wednesday, May 10, 2017

Tuesday, May 09, 2017

Aonday, July 24, 2017

Wednesday, May 24, 2017

Monday, September 25, 2017

17

17

17

17

**Chief of Engineer's Report Milestone** 

CECW Sends Final Report to ASA (CW)

SA (CW) Review of Report

MB Review of Report

#### 11.0 ATR SCHEDULE AND COST

ATR will take place after the draft and final LRR are complete and have undergone DQC. ATR schedules are shown in Table 2. The cost for ATR of the draft is currently estimated to be \$50,000.

The ATR review of the final is expected to be a shorter review since it will primarily be a verification ensuring that issues found in the initial draft are resolved. The cost for ATR of the final is currently estimated to be \$20,000.

#### **12.0 PUBLIC PARTICIPATION**

The NEPA scoping period took place between September 16 and November 14, 2008. The draft EA for the new proposed borrow area will be made available to the public in accordance with NEPA and the Coastal Zone Management program. Public review of the draft report and EA will begin on February 16, 2016 concurrently with SAD policy review, HQ review, legal review, and ATR.

#### **13.0 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, and RMO and HQUSACE members, as applicable) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document that may change as the study progresses. The Jacksonville District is responsible for keeping the Review Plan up to date. Minor changes made to the Review Plan after CESAD 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) will be re-approved by the CESAD Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commander's approval memorandum, will be posted on the Home District's webpage, and provided to the RMO and CESAD.

#### **ATTACHMENT 1: Statement of Technical Review for Decision Documents**

#### COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the St. Johns County, Florida, Hurricane and Storm Damage Reduction Project Feasibility Study. 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<sup>sm</sup>.

SIGNATURE		
<u>Name</u>	-	Date
ATR Team Leader		
Office Symbol/Company		
SIGNATURE		
<u>Name</u>	-	Date
Project Manager		
<u>Office Symbol</u>		
SIGNATURE		
Name	-	Date
Architect Engineer Project Manager <sup>1</sup>		
<u>Company, location</u>		
SIGNATURE		
<u>Name</u>	-	Date
Review Management Office Representative		
<u>Office Symbol</u>		

16

#### CERTIFICATION OF AGENCY TECHNICAL REVIEW

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

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

SIGNATURE

<u>Name</u>

Chief, Engineering Division

**Office Symbol** 

SIGNATURE

<u>Name</u>

Chief, Planning Division

Office Symbol

<sup>1</sup> Only needed if some portion of the ATR was contracted

Date

Date

#### **ATTACHMENT 2: Review Plan Revisions**

Revision Date	Description of Change	Page / Paragraph Number
May 2010	Revised to update project manager, references, nomenclature, IEPR cost estimate and consolidated schedule.	throughout
Feb 2015	Revised to update the PDT, references, nomenclature, IEPR exclusion due to an increase in the total project cost trigger in WRRDA 2014, and consolidated schedule resulting from SMART Planning compliance.	throughout