



REPLY TO  
ATTENTION OF

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

10 AUG 2015

CESAD-CG

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

SUBJECT: Review Plan Approval for the St. Johns County, Florida, Coastal Storm Risk Management Project Validation Study

1. References:

a. Memorandum, CESAJ-PD, 22 April 2015, Subject: St Johns County Limited Reevaluation Report, St Johns County, Florida, Coast Storm Risk Management Project, Request for Review Plan Approval.

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

2. The enclosed Review Plan for the St. Johns County Validation Study 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 (CSRM-PCX), which is the lead office to execute this plan. For further information, please contact the CSRM-PCX at (347) 370-4571. The Review Plan does not include independent external peer review.

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

4. The point of contact for this action is Mr. Patrick O'Donnell at (404) 562-5226.

Encl  
as

  
C. DAVID TURNER  
Brigadier General, USA  
Commanding

# **REVIEW PLAN**

**St. Johns County, Florida  
Coastal Storm Risk Management (CSRM) Validation Study**

**Jacksonville District**

Project: 113172

**MSC Approval Date: *10 August 2015***  
**Last Revision Date: *none***



**US Army Corps  
of Engineers ®**

**REVIEW PLAN**

**St. Johns County, Florida  
Coastal Storm Risk Management (CSRM) Project  
Validation Study  
8 July 2015**

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## 1. PURPOSE AND REQUIREMENTS

**a. Purpose.** This Review Plan defines the scope and level of peer review for the St. Johns County, Florida Coastal Storm Risk Management (CSRМ) Project Validation Study and the associated Environmental Assessment (EA). The Validation Study has been identified as an other work product under EC 1165-2-214.

### **b. References.**

- (1) EC 1165-2-214 Civil Works Review, dated 15 Dec 2012
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
- (3) Engineer Regulation (ER) 1110-1-12, Quality Management, 21 Jul 2006
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007

**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. In addition to these levels of review, decision documents and similar study 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. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for Other Work Product documents can be the Major Subordinate Command (MSC), or can be either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the study document. The South Atlantic Division has discussed this study with the PCX and they have agreed that the RMO for the peer review effort described in this Review Plan is the Coastal Storm Risk Management National Planning Center of Expertise (PCX-CSRМ).

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

### **3. STUDY INFORMATION**

#### **a. Study Document.**

The study document is the St. Johns County, Florida Coastal Storm Risk Management (CSRSM) Project, Validation Study. The validation study purpose is to verify the economic justification of using the existing sand source along with a new supplemental sand source for the next renourishment scheduled for 2017. The document is to be approved at the MSC (Division) level, and Congressional Authorization is not required. An EA for the new borrow area is the NEPA document being prepared along with the study document to validate that the project remains environmentally acceptable. The EA will be approved at the Division level. If the EA supports the conclusion that there are likely no significant impacts, then the FONSI (Finding Of No Significant Impact) will be signed at the District level following Division approval.

#### **b. Study/Project Description & Authorization.**

The non-federal sponsor for the project is St. Johns County. The purpose of the proposed validation study is to evaluate additional potential sand sources to supplement the existing sand source for the next renourishment in 2017 to confirm the economic justification and environmental acceptability based upon the design of the project as documented in the 1998 GRR. The primary purpose of the project is to provide storm damage reduction benefits for coastal structures (upland development), armor, backfill, and benefits from the prevention of land loss. The 1998 GRR also indicated incidental recreation benefits.

The project was originally authorized by the Water Resources Development Act of 1986 (Public Law 99-662 dated 17 November 1986). A Post Authorization Change report (1998 GRR) was approved in 1998, updating the project costs and benefits. The non-federal project sponsor, St. Johns County, is responsible for lands, easements, rights-of-way, relocations, borrow and disposal areas required for the project. The sponsor operates and maintains the project in compliance with both the CESAJ Operation and Maintenance Manual and the Florida Department of Environmental Protection (FDEP) regulations. The local sponsor performs required hydrographic and environmental monitoring and compliance activities. The non-federal sponsor is responsible for providing and maintaining necessary access roads, parking areas, sanitation facilities and other public use facilities. The sponsor is also responsible for safeguarding the continuing public use of the project beach and controlling water pollution for the health of swimmers. The 1998 GRR represents the most recent approved decision document. Therefore, it is the basis for the economic update. All economic benefit data and information are derived from the 1998 GRR. Existing conditions and benefit assumptions from the 1998 GRR we verified in the July 2011 "Economic UpDates for the FY13 Presidents Budget, Level 1 Reaffirmation" Report.

St. Johns County is located in the northeastern portion of Florida, immediately south of Jacksonville. It is bordered on the north by Duval County, on the northwest by Clay County, on the west by Putnam County, and on the south by Flagler County. St. Johns County had an estimated population of 214,307 for the year 2015 based on a State of

Florida 2013 estimate. The authorized project area begins approximately 2.7 miles south of the St. Augustine Inlet and extends contiguously south. The project area includes the southern portion of Anastasia State Park and the northern portion of the City of St. Augustine Beach. The project consists of 2.5 miles of shoreline restoration, consisting of a 60-foot wide berm at 12 feet elevation above mean low water, and provides for initial construction and periodic renourishment. The project extends from Florida Department of Environmental Protection (FDEP) monument R137 to FDEP monument R150. The current source of sand for construction of the beach fill is an offshore borrow site located at the south ebb lobe shoal and the navigation channel complex (Figure 2) of St. Augustine Inlet, approximately 1.5 miles offshore. This existing offshore borrow site is located 4 miles north of the center of the fill area, in water depths ranging from about -7 to -30 feet mean low water.

Beginning with initial construction in 2000, the primary sand source for the project has been the south ebb lobe shoal and navigation channel complex of the St. Augustine Inlet (Figure 2). Using this sand source gained Regional Sediment Management (RSM) benefits by facilitating inlet bypassing while also helping maintain the main channel of the Federal St. Augustine Inlet navigation project. In 2012, the Jacksonville District updated the sediment budget for the inlet vicinity as part of a response to claims that dredging of the south ebb lobe shoal caused erosion of shorelines to the north. The updated budget determined that dredging did not cause erosion to northern shorelines, but that a smaller volume of sand should be dredged in future years in order to prevent depletion of the shoal. The next nourishment in 2017 is estimated to need 2.1 M cy of sand. The primary sand source (south ebb lobe shoal and navigation channel complex) can supply 900,000 cy and the remaining 1.2M cy of sand will need to come from a new supplemental sand source.

Since a smaller volume of sand is to be dredged from the south ebb lobe shoal and navigation channel complex, additional sand sources will need to supplement the volume necessary for the next renourishment in 2017. Potential sand sources identified include the Flood shoal, Vilano Point Shoal, Relic Ebb Shoal and a further offshore site named "S1" (Figure 2). The validation study will investigate the economic justification and environmental acceptability for using a new sand source to supplement the existing "south ebb shoal and navigation channel" sand source for the next renourishment in 2017. Engineering analyses will be completed as part of the validation study to determine from monitoring data if the volumes and timing of advanced nourishment are the same as presented in the last approved report. The analyses will include movement of sand between portions of the project, offshore or out of the project area, and the renourishment quantity and interval needed to maintain the project.



Figure 1: Regional Map

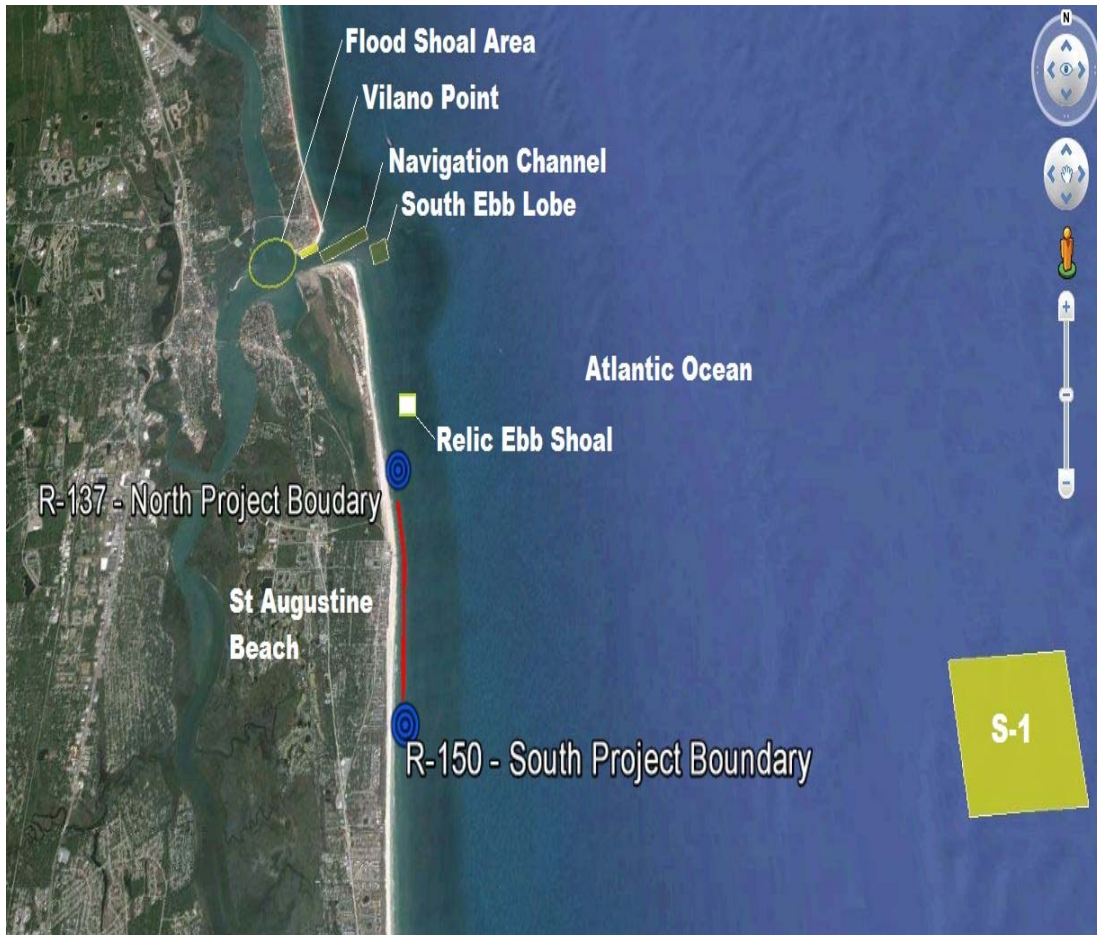


Figure 2: St. Johns County, Florida – Coastal Storm Risk Management Project Boundaries and Potential Borrow Source Sites

**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. Factors affecting the risk informed decisions on the appropriate scope and level of review include the following:

- *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.):*
- This project has been successfully constructed, and has undergone two renourishments (2005 & 2011), and has provided significant hurricane and storm damage reduction benefits to St. Johns County and the Nation. Construction of the project remains the same as the authorized project with the exception of the proposed use of a new borrow area – Flood Shoal, Vilano Point Shoal, Relic Ebb Shoal and S1 (all to be evaluated in the validation study) due to depletion of the traditional “South Ebb Shoal and Navigation Channel” borrow source just offshore of St. Johns County. The purpose of the validation study is to demonstrate that the project remains economically justified and environmentally acceptable using a new borrow source to supplement the existing South Ebb Shoal and Navigation Channel to use in the next renourishment in 2017. No social challenges are expected due to the proposed use of sand sources offshore. Additionally no design changes are proposed, although the nourishment amounts and cycles will be verified.
- *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 only proposed project change is the use of a supplemental new borrow area. Sand dredged from the borrow area would be required to be compatible with sand native to the project area in order to receive a state permit for renourishment. There is risk associated with costs associated with dredging and transportation of sand from proposed borrow areas due to potential distances from the project area. Fuel prices and other variables that fluctuate with transportation distance have the potential to affect costs. There are no changes to the construction template for the beach placement that would add risk to project performance.
- *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 project will not be justified by life safety. The project modification proposed in the validation study, to use a new supplemental borrow area would not add significant threat to human life/safety assurance. Uncertainty due to factors such as climate change variability is limited due to the limited remaining period of Federal participation in the project, which is another 35 years, ending in 2050.
- If there is a request by the Governor of an affected state for a peer review by independent experts;  
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 effects of the project (with some discussion as to why or why not and, if so, in what ways);
- There should be no public dispute to the transport of sand to St. Johns County beaches from the identified supplemental borrow areas within St. Johns County. Previous concerns had centered on the use of the South Ebb Lobe shoal, so adding an alternative offshore sand source should be a positive change to the public.
- 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);
- No significant public dispute to the economic or environmental costs or benefits is anticipated. The project provides significant national and regional economic development benefits which are well documented. The current project BCR of 1.7 to 1 was updated in the “Economic Updates for the FY13 Presidents Budget, Level 1 Reaffirmation” Report, July 2011. However, the project economic cost may increase due to the use of a new supplemental borrow area. Therefore it is possible, but not probable, that the additional cost could adversely affect the BCR.
- If the information in the study 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); and
- The information in the study document or project design will not 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.

The project will use the same design and construction techniques that have been used in the past on this project and similar projects throughout the region.

- [\*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 proposed project design does not require any additional redundancy, resilience, or robustness. Beach fill projects for Hurricane and Storm Damage Reduction (HSDR) purposes (also known as Coastal Storm Risk Management or CSRМ) such as this one are redundant in that periodic renourishments are included as part of the project plan when the beach requires sand to increase reliability. The project is resilient in that the beach naturally recovers to some extent after storms, and emergency nourishment may be implemented to restore projects should a natural disaster adversely impact the project. HSDR projects such as this one are robust by adding sand to the natural system and reducing damages in a way that allows the naturally dynamic beach to adjust to the ever-changing coastal environment. The construction sequencing for this project is unique only in that there may be certain time periods when construction cannot take place during environmental windows when turtles or birds use the beach for nesting.
- **In-Kind Contributions.** [\*Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR.\*](#)  
There are no anticipated in-kind contributions to be provided by the sponsor for the preparation of the subject validation study.

#### **4. DISTRICT QUALITY CONTROL (DQC)**

All study 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). Jacksonville District is the home district and it shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the Jacksonville District.

##### **a. Documentation of DQC.**

District Quality Control will be conducted at the district level where each of the DQC team members will review the documents for accuracy of content related to their field. DQC will be conducted on the draft and final documents prior to submittal to ATR. The DQC team will be composed of persons independent of the PDT compiling the validation study and shall consist of at a minimum of engineering, plan formulation, environmental, economics and legal disciplines. A certification sheet will be provided to the ATR team to reflect that the district is satisfied with the quality of the document. The certification shall include a statement from each reviewer

confirming they have reviewed the document, provided comments and comments were satisfactorily resolved, and shall be signed by each reviewer.

**b. Products to Undergo DQC.**

The draft and final versions of the subject validation study and associated EA will undergo DQC.

**5. AGENCY TECHNICAL REVIEW (ATR)**

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). For other work products, a case specific risk-informed decision, as described in paragraph 15 of EC 1165-2-214, shall be made as to whether ATR is appropriate. The risk-informed decision for this validation study is that ATR is appropriate. 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 Draft validation study and EA will undergo ATR. The Final validation study and EA will undergo an ATR consisting of backchecks to previous comments received to ensure appropriate revisions have been made to the report. The cost estimate associated with the validation study will undergo ATR through the Cost MCX/TCX.

**b. Required ATR Team Expertise.**

The ATR team will be made up of personnel determined by the PCX-CSR. 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. Based on the factors affecting the scope and level of review outlined in Section 3 it is suggested that the review team include the disciplines listed in the below table.

<b>ATR Team Members/Disciplines</b>	<b>Expertise Required</b>
Plan Formulator / ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and similar validation studies 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 the reviewer for a specific discipline.
Plan Formulator	The plan formulator should be a senior water resources planner with experience in CSR (HSDR) projects and associated planning reports and documents. Plan formulation ATR certification is preferred but not required.
Economics	The economics reviewer will be an expert in the field of economics and have a thorough understanding of CSR (HSDR) projects with periodic renourishment, BCR updates, and 902 limit analyses.
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 CSR (HSDR) projects.
Coastal Engineering	The coastal engineering reviewer will be an expert in the field of coastal engineering and have a thorough understanding of CSR (HSDR) projects, beach nourishment, and offshore borrow areas, have at least seven years of experience, and should be a Professional Engineer (P.E.).
Cost Engineering	The cost engineering reviewer will be an expert in the field of cost engineering and have a thorough understanding of CSR (HSDR) projects and dredging costs estimates. The cost engineer should be Walla Walla Cost MCX/TCX approved cost reviewer as the cost estimate for this document is anticipated to need CSRA and Cost MCX/TCX review and Certification.

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

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

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

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

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a 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.

## **6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)**

IEPR may be required for other work products such as validation studies under certain circumstances. Any work product that undergoes ATR may also be required to undergo Type I and/or Type II IEPR. 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. If required, Type I IEPR will cover the entire study document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For other work product study documents such as a validation study 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.**

The purpose of the proposed validation study is to evaluate potential sand sources for future nourishments throughout the remaining period of Federal participation and to confirm economic justification and environmental acceptability.

Per EC 1165-2-214, paragraph 11.d.(1), Type I IEPR is mandatory if any of the following criteria are met:

- 11.d.(1)(a): Significant threat to human life: The project will not be justified by life safety nor does it involve significant threat to human life / safety assurance. This criterion is not met.
- 11.d.(1)(b): The total cost of the project for the next renourishment in 2017 is \$16,677,835, which is less than the \$200 million project threshold (per Section 1044(a) of the Water Resources Reform Development Act of 2014): Therefore, this criterion is not met.
- 11.d.(1)(e): The Governor of an affected State requests a peer review by independent experts: To date, the Governor of the State of Florida has not requested a peer review by independent experts. This criterion 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 Director of Civil Works or the Chief of Engineers has not determined the study to be controversial. This criterion is not met.

The Jacksonville District concludes that the changes to the authorized project likely to be recommended by the St. Johns County – Florida Coastal Storm Risk Management (CSR) Project, validation study do not meet any of the four criteria Per EC 1165-2-214, paragraph 11.d.(1) listed above . Therefore it is recommended that a Type I IEPR not be required for this study. Based on the project as currently envisioned, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review of this project at this time. A risk-informed decision concerning the timing and the appropriate level of reviews for the project implementation phase will be prepared and submitted for approval in an updated Review Plan prior to initiation of the design/implementation phase of this project.

- 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
- e. Documentation of Type II IEPR.** Not Applicable

**7. POLICY AND LEGAL COMPLIANCE REVIEW**

The validation study 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 study documents.

**8. COST ENGINEERING and AGENCY TECHNICAL REVIEW MANDATORY CENTER of EXPERTISE with TECHNICAL EXPERTISE (MCX/TCX) REVIEW AND CERTIFICATION**

The validation study documents shall be coordinated with the Cost Engineering MCX/TCX, located in the Walla Walla District. The MCX/TCX will assist in determining

the expertise needed on the ATR team and in the development of the review charge(s). The MCX/TCX will also provide the Cost Engineering MCX/TCX certification. The RMO is responsible for coordination with the Cost Engineering MCX/TCX.

## **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.**

There are no planning models anticipated to be used for the development of the subject study document. There are no significant changes to the authorized plan. Currently Beach-fx is the only certified model for determining damages and benefits for HSDR projects. However, BeachFx will not be used for this validation study since there are no significant changes to the project design or function. The benefits used for the last authorizing document will be used along with a new cost estimate to determine the remaining benefit to remaining cost ratio over the remaining period of Federal participation in the authorized project. Based on existing information and past experiences in the study area, there are no known environmental resources that would require a habitat equivalency evaluation or other environmental model. It is not expected that mitigation will be included in the project.

### **b. Engineering Models.**

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. 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.

## 10. REVIEW SCHEDULES AND COSTS

### a. ATR Schedule and Cost.

ATR will take place after Jacksonville District has completed the Draft and Final validation study EA, and the documents have undergone DQC. ATR of the draft documents is scheduled to begin in March 2016, and ATR of the final documents is scheduled for September 2016. The ATR of the draft document, including cost certification, will cost approximately \$50,000 and take approximately 6 weeks (2 weeks for the ATR team to provide comments, 2 weeks for the PDT to coordinate and provide responses, and 2 weeks for back check and close-out of the ATR). The ATR of the final document will be a shorter review since it will be a backcheck to ensure that resolution of previous comments has been reflected in the document. The ATR of the final document will cost approximately \$30,000 and take approximately 2 weeks.

### Forecast Schedule.

<b>Task</b>	<b>Start Date</b>	<b>End Date</b>
<b>ATR Review – Draft validation study &amp;EA</b>	<b>March 16, 2016</b>	<b>April 19, 2016</b>
<b>ATR Review – Final validation study &amp; EA</b>	<b>September 23, 2016</b>	<b>October 21, 2016</b>

### b. Type I IEPR Schedule and Cost. Not-Applicable

### c. Model Certification/Approval Schedule and Cost.

Not-Applicable. No models are anticipated to need certification or approval for the development of this study document.

## **11. PUBLIC PARTICIPATION**

The NEPA scoping period is scheduled for October 2015 through February 2016. There are not anticipated to be any significant changes to the scope of the authorized project which has been successfully implemented since 2001 that would warrant public input. The EA for the new proposed borrow area will be made available to the public in accordance with NEPA and the Coastal Zone Management program. The public review and comment period for the Draft EA will occur following the ATR and SAD reviews.

## **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 study document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up-to-date. Significant changes to the Review Plan (such as changes to the scope and/or level of review) will be approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commander's 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:

Jacksonville District Project Manager:  
Jacksonville District Planning Technical Lead:  
Jacksonville District Review Coordinator:  
RMO, CSR-M-PCX POC:  
South Atlantic Division POC:

**ATTACHMENT 1: TEAM ROSTERS**

**JACKSONVILLE DISTRICT PDT MEMBERS**

Name	Organization
	Project Manager (PM-W)
	Planning, PTL (PD-PN)
	Engineering, ETL (EN-DW)
	Engineering Cost (EN-TC)
	Coastal Engineering (EN-WC)
	Engineering Geotech (EN-GG)
	Engineering Geotech (EN-GG)
	Planning Environmental (PD-EC)
	Planning Environmental (PD-EC)
	Planning Economist (PD-D)
	Real Estate Acquisition (RE-A)
	Office Council (OC)
	Program Analyst (PM-PC)
	Budget Analyst (PM-PB)
	Program Analyst (PM-PC)

**ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR STUDY 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<sup>sm</sup>.

SIGNATURE  
\_\_\_\_\_  
Name  
ATR Team Leader  
Office Symbol/Company \_\_\_\_\_ Date

SIGNATURE  
\_\_\_\_\_  
Name  
Project Manager  
Office Symbol \_\_\_\_\_ Date

SIGNATURE  
\_\_\_\_\_  
Name  
Architect Engineer Project Manager<sup>1</sup>  
Company, location \_\_\_\_\_ Date

SIGNATURE  
\_\_\_\_\_  
Name  
Review Management Office Representative  
Office Symbol \_\_\_\_\_ Date

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

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

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

SIGNATURE  
\_\_\_\_\_  
Name  
Chief, Engineering Division  
Office Symbol \_\_\_\_\_ Date

SIGNATURE  
\_\_\_\_\_  
Name  
Chief, Planning Division  
Office Symbol \_\_\_\_\_ Date

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

**ATTACHMENT 3: REVIEW PLAN REVISIONS**

<b>Revision Date</b>	<b>Description of Change</b>	<b>Page / Paragraph Number</b>