



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, SOUTH ATLANTIC DIVISION  
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ATLANTA GA 30303-8801

CESAD-CG

19 MAY 2016

MEMORANDUM FOR Commander, US Army Corps of Engineers, Mobile District  
(ATTN: Curtis Flakes) 109 Saint Joseph Street, Mobile, AL 36602

SUBJECT: Project Review Plan (RP) – Panama City Harbor Improvements to Bay  
Harbor Channel Limited Reevaluation Report (LRR) with Integrated Environmental  
Assessment, Panama City, Florida

1. Reference memorandum, CESAM-PD-FP, 1 Apr 2016, subject as above.
2. The South Atlantic Division reviewed the Review Plan for the Panama City Harbor Improvements to Bay Harbor Channel Limited Reevaluation Report (LRR) with Integrated Environmental Assessment, Panama City, Florida and approves the Review Plan.
3. The point of contact for this action is Mr. Terry Stratton at (404) 562-5228.

A handwritten signature in black ink, appearing to read "C. D. Turner", is located below the list of points.

C. DAVID TURNER  
Brigadier General, USA  
Commanding

# **REVIEW PLAN**

**Panama City Harbor Improvements to Bay Harbor Channel**

**Limited Reevaluation Report (LRR) with Integrated**

**Environmental Assessment, Panama City, Florida**

**P2: 395107**

**Mobile District**

**April 2016**

**MSC Approval Date: Pending**  
**Last Revision Date: 1 April 2016**



**US Army Corps  
of Engineers®**

## REVIEW PLAN

### Panama City Harbor Improvements to Bay Harbor Channel Limited Reevaluation Report (LRR) with Integrated Environmental Assessment, Panama City, Florida

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## 1. PURPOSE AND REQUIREMENTS

- **Purpose.** This Review Plan defines the scope and level of peer review for the Panama City Harbor Improvements to Bay Harbor Channel Limited Reevaluation Report (LRR) with Integrated Environmental Assessment, Panama City, Florida. This Review Plan is being developed concurrently to the LRR review.
  
- **References**
  - (1) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 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
  - (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
  - (5) Panama City Harbor, Florida Channel Deepening, Limited Reevaluation Report (LRR) Project Management Plan, December 2012
  - (6) Review of Civil Works Projects, Planning SMART Guide, 31 May 2012
  - (7) ECB 2007-6 “Model Certification Issues for Engineering Software in Planning Studies” dated 10 April 2007
  - (8) EM 1110-2-1613, Hydraulic Design of Deep Draft Navigation Projects, 31 May 2006
  - (9) Mobile District Quality Management Plan
  
- **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 models are subject to 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 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 Deep Draft Navigation Planning Center of Expertise (DDNPCX).

The RMO will coordinate with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (Cost MCX) to conduct ATR of cost estimates, construction schedules and contingencies.

### 3. STUDY INFORMATION

- **Decision Document.** The LRR will provide an evaluation of the economics and environmental effects based on current policies, criteria, and guidelines. An Environmental Assessment (EA) in accordance with NEPA will be integrated into the decision document. The LRR will serve as the decision document for entering into a Project Partnership Agreement (PPA). A PPA is a legally binding agreement between the Federal government and the non-Federal sponsor, the Panama City Port Authority (PCPA), for construction of a navigation project. It describes the project and describes the responsibilities of the Government and non-Federal sponsor in cost-sharing and execution of project work. The Panama City Harbor Improvements LRR outlines the cost-sharing for Construction, and Operation and Maintenance (O&M) during the 50 year period of analysis. After the LRR is approved at SAD, a PPA will be prepared for execution between the Corps and the non-Federal sponsor, the Panama City Port Authority (PCPA).
  
- **Study/Project Description.** The project scope covered in this LRR was authorized by the River and Harbor Act of 1948 (House Document 559, 80th Congress). Project improvements to Bay Harbor Channel were authorized by Section 201 of the Flood Control Act of 1965 (House Document 196, 92nd Congress, 2nd Session) and by resolutions of the House Public Works Committee on 14 June 1972, and the Senate Public Works Committee on 21 June 1972. Based on the current demand for deeper draft vessels to utilize the channel, the PCPA has requested the Mobile District perform the necessary studies required to increase the depth of the eastern leg of the inner harbor from 32 to 36 feet, already authorized. The Mobile District in conjunction with SAD has determined that an LRR is required to provide a reevaluation of the economics and environmental effects against current policies, criteria, and guidelines. This report will also ensure that the design will accommodate current ship sizes and that adequate disposal for new work and additional operations and maintenance (O&M) material is available. The LRR is a single purpose deep draft navigation decision document. No additional Congressional authorization will be needed in order to implement the LRR.
  
- **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 the project has a cost estimate of more than \$200 million*

No. The project cost is less than \$200 million; fully funded construction cost is approximately \$8,200,000.
  
  - *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.); and*

There are no technically, institutionally, or socially challenging aspects to this

study. This study is limited to a reevaluation of the economics and environmental aspects of a proposed improvement to an already authorized feature of the Panama City Harbor Navigation Project to ensure that it meets current policies, criteria, and guidelines. This study will also ensure that the design will accommodate current ship sizes and that adequate disposal is available. The LRR will then serve as the decision document in support of a PPA by outlining the construction and cost-sharing for project implementation.

- *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):*

Project risks include possible bottom velocities that may be generated by storm and extreme events. A meeting was held with EPA and the Mobile District to determine if the information already obtained is sufficient or if further hydraulic modeling will be necessary. The consensus was that simulating velocities that would be expected for a typical storm event and an extreme event would help determine and communicate what the level of risk is for the dredged material to move. Additional modeling will also help determine turbidity associated with placement activities. The modeling will be accomplished during PED and further coordination with EPA and the State will take place to review the outcomes.

- *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 construction scope addressed in this LRR will not be justified utilizing life safety and does not add significant threat to human life/safety assurance as standard dredging and disposal activities are planned. This project only considers the deepening of a portion of the already authorized navigation channel. All work currently performed during operations will remain the same with only a very small increase in the volume of maintenance dredging.

- *If there is a request by the Governor of an affected state for a peer review by independent experts:*

There is no request from the Governor of the state for a peer review by independent experts, nor is it expected that such a request will be made.

- *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 is no significant public dispute as to the size, nature or effects of the channel deepening.

- *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);*

There is no significant public dispute as to the economic or environmental cost or benefit of the project. The economics portion of the LRR verifies that there is significant commodity growth to justify Federal deepening of the Panama City Harbor Navigation Channel. Environmental considerations are taken into account through NEPA (EA) and with beneficial use options.

- *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); and*

The information in the LRR is not based on novel methods, does not use innovative materials or techniques, does not present complex challenges, is not precedent setting, and is not likely to change prevailing practices. The project is a typical channel improvement project involving traditional methods of dredging and traditional placement of dredged material. Standard engineering, economic and environmental analyses are planned. Novel methods will not be used and methods, models, and conclusions will not be precedent setting or likely to change policy decisions.

- *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 LRR does not require any additional redundancy, resilience, or robustness. The LRR does not have unique construction sequencing or construction schedule.

- *If the project is likely to have significant economic, environmental, and/or social effects to the Nation (with some discussion as to why or why not and, if so, in what ways);*

The LRR will not have significant environmental or social effects to the Nation, and no additional effects will result from the study. The deepening will provide beneficial economic effects to the Nation by allowing deeper draft ships to utilize the channel reducing shipping costs. At present, some ships are double rotating cargo in order to be able to utilize the channel.

- *If the project/study is likely to have significant interagency interest (with some discussion as to why or why not and, if so, in what ways);*

The LRR is not likely to have any significant interagency interest. The LRR is being coordinated with the appropriate agencies, and there is no objection anticipated from any agencies.

- *If the project/study will be highly controversial (with some discussion as to why or why not and, if so, in what ways);*

The LRR will not be controversial. This project only considers the deepening of a portion of an existing channel. All work currently performed during operations will

remain the same with only a very small increase in the volume of maintenance dredging.

- *If the project report is likely to contain influential scientific information or be a highly influential scientific assessment (with some discussion as to why or why not and, if so, in what ways):*

The project report does not contain influential scientific information and is not a highly influential scientific assessment.

- **In-Kind Contributions.** Products and analyses provided by the non-Federal sponsor as in-kind services are subject to DQC, ATR, and IEPR. The in-kind products include: No in-kind products will be provided by the Non-Federal sponsor.

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

- **Documentation of 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). All reviewers are listed in Attachment 1. All DQC comments and responses will be documented in Dr. Checks. The comment and response package, along with the DQC signature sheet, will be part of the report's transmittal package under the "Peer Review" section, and will be provided to the Agency Technical Review Team prior to the beginning of that review.
- **Products to Undergo DQC.** The LRR and integrated EA will undergo DQC at draft and final report stage.
- **Required DQC Expertise.** The SAM Panama City Harbor PDT consists of key disciplines relevant to LRR and EA material: Plan Formulation; Navigation Operations; Geotechnical; Hydraulics; Environmental; Cultural Resources; Legal; Cost; Real Estate; and Economics. DQC reviewers consist of non-PDT experts and experts in the supervisory chain of the aforementioned disciplines.

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

- **Products to Undergo ATR.** The LRR and integrated EA will undergo ATR at the draft and final report stage. The Cost Appendix and all associated materials will be provided to the cost reviewer. All ATR reviewers will be listed in Attachment 1.
- **Required ATR Team Expertise.** ATR is mandatory for all decision documents (including supporting data, analyses, and environmental compliance) and implementation documents. 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 US Army Corps of Engineers (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 a designated Risk Management Organization (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. The RMO for this effort in the Deep Draft Navigation Planning Center of Expertise, DDNPCX. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The District/MSD will not nominate candidates for the ATR team. To assure independence, the leader of the ATR team shall be from outside the home Major Subordinate Command (MSC). The ATR Team will generally reflect the major technical disciplines of the Panama City Harbor LRR PDT. As such, it is expected that the ATR team will consist of the following disciplines: Plan Formulation, Navigation Operations, Geotechnical, Hydraulics, Environmental, Cultural Resources, Cost, Real Estate, and Economics.

<b>ATR Team Members/Disciplines</b>	<b>Expertise Required</b>
ATR Lead	The ATR lead will be a senior professional with extensive experience in preparing Civil Works decision 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 be from a District outside the MSC.
Plan Formulation	The Plan Formulator will be a senior water resources planner with knowledge of the Corps civil works planning process, experience in navigation projects and associated planning reports and documents.
Economics	The economist will have knowledge of the Corps civil works planning process, and expertise in navigation economics appropriate for an LRR level to verify that the trends and commodities within the affected Ports indicate the need for maintenance of channels. The economist assigned is in the DDNPCX.
Environmental and Cultural Resources	This person must have recent experience in compliance with environmental laws (NEPA, Clean Water Act, Endangered Species Act, National Historic Preservation Act, etc) and be able to review the cultural resources portion of the report.
Geotechnical Engineering	The geotechnical engineer will have a minimum of five years expertise in geotechnical soils and construction to review upland disposal sites and materials assessment, and be a Professional Engineer (P.E.).
Hydraulic Engineering	This ATR member will have a minimum of five years expertise in the hydraulic design of deep draft navigation projects, and be a Professional Engineer (P.E.).

Cost Engineering	This ATR member must be able to review the cost estimates and have recent experience with cost estimating for navigation projects and disposal areas. Expertise in cost engineering and MII (MCACES Generation II) to review MCACES costs, and approved as an ATR reviewer by the Cost MCX.
Real Estate	The Real Estate reviewer is to have expertise in the real estate planning process for cost shared and full federal civil works projects, relocations, report preparation and acquisition of real estate interests including navigation projects. The reviewer must have a full working knowledge of EC 405-2-12, Real Estate Planning and Acquisition Responsibilities for Civil Works Projects and Public Law 91-646. The reviewer must be able to identify areas of the REP that are not in compliance with the guidance set forth in EC405-2-12 and will make recommendations for bringing the report into compliance. All estates suggested for use will be reviewed to assure they are sufficient to allow project construction, and the real estate cost estimate will be validated as being adequate to allow for real estate acquisition.
Navigation Construction/Operations	This ATR member will have a minimum of 10 years expertise in O&M requirements associated with the design of deep draft navigation projects.

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

- Type I 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.
- **Decision on IEPR.**

The risk informed decision for not performing a Type I IEPR or a Type II IEPR for the Panama City Harbor LRR was based upon the following:

- *If the decision document meets the mandatory triggers for Type I IEPR described in Paragraph 11.d.(1) and Appendix D of EC 1165-2-214; and if it doesn't, then also:*
  - The PDT determined that none of the contents of the LRR met the mandatory triggers for a Type I IEPR. Also considered were:
    - *The consequences of non-performance on project economics, the environmental and social well-being (public safety and social justice);*  
The LRR would neither increase risk of non-performance, nor potential consequences.
    - *Whether the product is likely to contain influential scientific information or be highly influential scientific assessment; and*  
The LRR and EA will not contain influential scientific information nor will they be highly influential scientific assessments.

*If and how the decision document meets any of the possible exclusions described in Paragraph 11.d. (3) and Appendix D of EC 1165-2-214.*

- The project does not include an Environmental Impact Statement, is not controversial, has no more than negligible adverse impact on scarce or unique tribal, cultural, or historic resources, and 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.
- There is ample experience within the USACE and industry to treat the activity as being routine since it is a typical channel deepening project using standard engineering design and construction methods and there is minimal life safety risk;

- Request by the head of a Federal or state agency. There has been no request for IEPR by any Federal or State Agency.
  
- *If the proposed project meets the criteria for conducting Type II IEPR described in Paragraph 2 of Appendix D of EC 1165-2-214, including:*
  - *If the Federal action is justified by life safety or failure of the project would pose a significant threat to human life;*  
This project is not justified by life safety, nor does it pose a significant threat to human life.
  - *If 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;*  
The proposed project design is not based on novel methods, does not use innovative materials or techniques, does not present complex challenges, and is not precedent setting, and is not likely to change prevailing practices.
  - *If the project design requires redundancy, resiliency, and/or robustness;*  
The proposed project design does not require any additional redundancy, resilience, or robustness.
  - *If the project has unique construction sequencing or a reduced or overlapping design construction schedule.*  
The construction sequencing for this project is not unique.

The LRR does not meet any of the mandatory triggers for Type I IEPR. Further, the PDT made a risk-informed determination that the LRR is so limited in scope and impact that it would not significantly benefit from an independent external peer review. Accordingly, the PDT requested exclusion from Type I IEPR. The request was endorsed by the DDNPCX on 10 December 2015 and approved by HQ on 8 March 2016. The design vessel currently safely navigates the channel, and proposed channel conditions will not alter safety and /or life safety conditions. Therefore, 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.

- **Products to Undergo Type I IEPR.** None.
- **Required Type I IEPR Panel Expertise.** Not applicable.
- **Documentation of Type I IEPR.** Not applicable.

## **7. POLICY AND LEGAL COMPLIANCE REVIEW**

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews 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. COST ENGINEERING AND ATR MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION**

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

## **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).

- **Planning Models.** No planning models were used.
- **Economic Models.** No economic models were used. Although HarborSym was not used for estimating project benefits, the spreadsheet was used as a tool for calculation purposes and

did undergo ATR.

- **Environmental Models.** No environmental models were used.
- **Engineering Models.** The approved Environmental Fluid Dynamics Code (EFDC) model was used to determine flushing times for the east arm of the St. Andrew bay.
- **Cost Estimating Models.**

<b>Model Name and Version</b>	<b>Brief Description of the Model and How It Will Be Applied in the Study</b>	<b>Corps' Scientific and Engineering Technology Listing</b>
Microcomputer Aided Cost Engineering System (MCACES), MII	Microcomputer Aided Cost Engineering System (MCACES) is the cost estimating software program tools used by cost engineering to develop and prepare Class 3 Civil Works cost estimates.	Civil Works Cost Engineering and Agency Technical Review MCX mandatory
Abbreviated Risk Analysis, Cost Schedule Risk Analysis	<p>Cost risk analyses identify the amount of contingency that must be added to a project cost estimate and define the high risk drivers. The analyses will include a narrative identifying the risks or uncertainties.</p> <p>During the alternatives evaluation, the PDT will assist the cost engineer in defining confidence/risk levels associated with the project features within the abbreviated risk analysis.</p>	Civil Works Cost Engineering and Agency Technical Review MCX mandatory
Total Project Cost Summary (TPCS)	The TPCS is the required cost estimate document that will be submitted for either division or HQUSACE approval. The Total Project Cost for each Civil Works project includes all Federal and authorized non-Federal costs represented by the Civil Works Work Breakdown Structure features and respective estimates and schedules, including the lands and damages, relocations, project construction costs, construction schedules, construction contingencies, planning and engineering costs, design contingencies, construction management costs, and management contingencies.	Civil Works Cost Engineering and Agency Technical Review MCX mandatory
Corps of Engineers Dredge Estimating Program (CEDEP)	CEDEP is the required software program that will be used for dredging estimates using floating plants. CEDEP contains a	Civil Works Cost Engineering and Agency Technical Review MCX mandatory

	narrative documenting reasons for decisions and selections made by the cost engineer. Software distribution is restricted because it's considered proprietary to the Government.	
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**10. REVIEW SCHEDULES AND COSTS**

- **ATR Schedule and Cost.** ATR of the draft document was performed in September 2015; ATR of the final document is planned for March 16 – April 5, 2016, at a cost of approximately \$20,000.
- **Type I IEPR Schedule and Cost.** Not applicable.
- **Model Certification/Approval Schedule and Cost.** All models to be used have been certified in accordance with EC 1105-2-412, Planning: Assuring Quality of Planning Models, and Enterprise Standard (ES)-08101, Software Validation for the Hydrology, Hydraulics, and Coastal Community of Practice.

**11. PUBLIC PARTICIPATION**

The public was invited to comment on the Draft LRR with integrated EA during the public review period in accordance with NEPA. The public comment period for the Draft LRR with integrated EA was scheduled from 14 January 2016 to 15 February 2016. The draft LRR underwent ATR and public review concurrently. As such, comments received from the public were not available prior to that review. However, the final report package submitted to the ATR team included public comments as part of the environmental appendix. These comments, along with ATR and MSC comments, were incorporated before finalizing the integrated EA.

**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, and RMO) as to the appropriate scope and level of review for the work product. Like the PMP, the Review Plan is a living document and may change as the study progresses. The Mobile 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) will 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, will be posted on the Home District’s webpage. The latest Review Plan will 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:

- Mobile District Project Manager (251) 690-2328
- South Atlantic Division Senior Plan Formulator (404) 562-5226
- Review Management Organization, DDNPCX (251) 694-3842

**ATTACHMENT 3: REVIEW PLAN REVISIONS**

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

ATTACHMENT 4: IEPR EXCLUSION MEMO



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
441 G STREET, NW  
WASHINGTON, DC 20314-1000

CECW-SAD

MAR 08 2016

MEMORANDUM FOR COMMANDER, SOUTH ATLANTIC DIVISION

SUBJECT: Panama City Harbor Limited Re-evaluation Report (LRR) and Environmental Assessment – Independent External Peer Review (IEPR) Exclusion Request

1. The Panama City Harbor study is investigating a project to dredge approximately 3.5 miles of channel from a depth of 32 feet to 36 feet. In accordance with Section 2034 of the Water Resources Development Act (WRDA) of 2007, as amended, HQUSACE has reviewed your request to exclude the study from Type I IEPR.
2. The potential project is not controversial and the study will not involve preparation of an Environmental Impact Statement. There has not been a request for IEPR from the governor of an affected state or the head of a federal or state agency. The estimated cost of the project is \$8.2 million. It does not appear that the project formulation will be based on novel methods, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices. Dredging is an activity for which there is ample experience within USACE and the industry to consider the activity as being routine with expected minimal life safety risk following project implementation. Based on applicable laws and policy, the request for exclusion is approved.
3. Questions or concerns should be directed to Ms. Stacey Brown, Deputy Chief, South Atlantic Division Regional Integration Team, at (202) 761-4106.



STEVEN L. STOCKTON, P.E.  
Director of Civil Works