



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
NORTH ATLANTIC DIVISION, US ARMY CORPS OF ENGINEERS  
FORT HAMILTON MILITARY COMMUNITY  
BROOKLYN, NEW YORK 11252-6700

DEC 14 2012

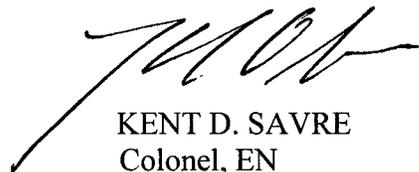
CENAD-PD-PP

MEMORANDUM FOR Commander, Baltimore District, ATTN: CENAB-PL-P

SUBJECT: Review Plan Approval for Baltimore Harbor and Channels, MD and VA, Dredged Material Management Plan Update

1. The attached Review Plan for the subject study has been prepared in accordance with EC 1165-2-209, Civil Works Review Policy.
2. The Review Plan has been coordinated with the Deep Draft Navigation Planning Center of Expertise of the South Atlantic Division, which is the lead office to execute this plan. For further information, contact Mr. Bernard Moseby at 251-694-3884. The review plan includes independent external peer review.
3. I hereby approve this Review Plan, which is subject to change as study 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.

Encl  
as

  
KENT D. SAVRE  
Colonel, EN  
Commanding

# **REVIEW PLAN**

**Baltimore Harbor and Channels, MD and VA  
Dredged Material Management Plan Update**

**Baltimore District**

**MSC Approval Date: Pending  
Last Revision Date: November 2012**



**US Army Corps  
of Engineers ®**

**REVIEW PLAN**

**Baltimore Harbor and Channels, MD and VA  
Dredged Material Management Plan Update**

**TABLE OF CONTENTS**

1. PURPOSE AND REQUIREMENTS ..... 1

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION ..... 1

3. STUDY INFORMATION ..... 1

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

5. AGENCY TECHNICAL REVIEW (ATR) ..... 4

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

7. POLICY AND LEGAL COMPLIANCE REVIEW ..... 10

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION ..... 10

9. MODEL CERTIFICATION AND APPROVAL ..... 10

10. REVIEW SCHEDULES AND COSTS ..... 11

11. PUBLIC PARTICIPATION ..... 11

12. REVIEW PLAN APPROVAL AND UPDATES ..... 12

13. REVIEW PLAN POINTS OF CONTACT ..... 12

14. APPROVALS ..... 13

ATTACHMENT 1: TEAM ROSTERS ..... 14

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS ..... 15

ATTACHMENT 3: REVIEW PLAN REVISIONS ..... 16

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS ..... 17

## 1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This Review Plan defines the scope and level of peer review for the Baltimore Harbor and Channels, MD and VA, Dredged Material Management Plan Update.

### b. References

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- (4) Memorandum, Director of Civil Works, Subject: Peer Review Process, dated 30 May 2007
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- (6) Baltimore Harbor Dredged Material Management Plan Update PMP, under development
- (7) Planning Division, Civil Project Development Branch, Quality Management Plan, 7 October 2009

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

## 2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the document. The RMO for the peer review effort described in this Review Plan is the Deep Draft Navigation PCX.

No feasibility level cost estimates (M-CACES) are included in this management plan. The RMO will coordinate the development of the rough order of magnitude cost estimates with the Cost Engineering Directory of Expertise (DX). The Cost Engineering DX will determine the appropriate level of review.

## 3. STUDY INFORMATION

a. **Dredged Material Management Plan.** The document that is to be prepared is an update to the Dredged Material Management Plan (DMMP) for the Baltimore Harbor and Channels, MD and VA, Project. USACE DMMP studies are conducted under guidance provided in Engineer Regulation (ER) 1105-2-100, *Planning Guidance Notebook*, which directs the development of DMMPs for Federal navigation projects. It is USACE policy to manage dredged material associated with the construction or maintenance dredging of navigation projects in a manner that is the least costly, is consistent with sound engineering practice, and meets Federal environmental standards. The ER 1105-2-100 also provides the requirements, as well as principles and guidelines, for conducting planning studies

within USACE Civil Works program and ensuring environmental compliance through the planning process. Section 3-2 of ER 1105-2-100 provides specific guidance on the maintenance of navigation projects and the preparation of DMMPs. A least-cost alternative that is compliant with environmental laws forms the "base plan," against which other plan alternatives can be compared. Through the DMMP planning process, USACE has considered a range of management strategies (including approaches to reduce the need for dredging and to beneficially use dredged materials) and has incorporated these strategies into its alternatives development and evaluation process.

The DMMP will not make any specific recommendations for construction, but it will include screening of placement alternatives, will analyze the likely timing of capacity needs and may recommend further study of specific alternatives. Therefore, Congressional authorization will not be required. Similarly, it is not anticipated that any National Environmental Policy Act (NEPA) documentation will be required. The original Baltimore Harbor DMMP from 2005 did include an EIS, however, so if it is determined during the course of the study that any updates to the document are required and appropriate for this effort, that will be added to the scope of work and this Review Plan will be modified accordingly. In accordance with ER 1105-2-100, Appendix E, Paragraph E-15.h.(3).(f), the Management Plan will be approved by the North Atlantic Division Commander. Specifically, per ER 1105-2-100, three conditions must apply in order for approval to be at the Division level. (1) The DMMP will account for annual maintenance (that is, routine recurring expenses) and foreseeable new construction, no non-recurring major maintenances are foreseen or will be accounted for specifically. The Baltimore Harbor and Channels project does not include bridges, jetties, or other structures that may require major maintenance during the planning horizon. (2) The recommendations of the DMMP will not require an adjustment to the District funding request or targets. (3) This DMMP will not require nor request any new or additional Congressional authorization.

- b. Study/Project Description.** The study being undertaken during this effort is an update to the 2005 DMMP for the Baltimore Harbor and Channels, MD and VA, Project. DMMPs are mandated by guidance when it has been determined that less than 20-years of placement capacity is available for a Federal navigation project. The 2005 effort was spurred by the imminent closure of two large placement sites and the loss of an anticipated overboard site in Chesapeake Bay.

The Baltimore Harbor and Channels project includes a series of 50-foot deep channels from the Atlantic Ocean through Chesapeake Bay and into the Port of Baltimore on the Patapsco River, 35-foot channels from the mouth of the Patapsco, up Chesapeake Bay to the Chesapeake and Delaware Canal, and assorted branch channels and anchorages. Together the Port includes three separate authorized projects, which together generate, on average, 3.2 million cubic yards of material each year as part of normal maintenance. Of this, approximately 500,000 cy comes from within the harbor proper and must be considered to be contaminated, which presents restrictions on its placement. A plan for the placement of this material was devised in the previous DMMP document, however, over the years since that time, certain conditions have changed such that a reanalysis is appropriate.

In June 2011, a memorandum from the Assistant Secretary of the Army for Civil Works, Ms. Jo-Ellen Darcy, was received in reference to the Mid-Chesapeake Bay Island Ecosystem Restoration Project Chief's Report that was under review by the Office of Management and Budget (OMB). That report had been completed in response to the recommendations of the 2005 DMMP. Concerns raised in the memorandum called into question the need and justification for the Mid-Bay project and

recommended an update to the 2005 DMMP. The question of justification involved the high cost of the project and the timing of when the project would need to be available to accept dredged material. A DMMP Preliminary Assessment (PA) was produced in response to Ms. Darcy's memo and provides justification for a full update to the 2005 DMMP for the Maryland Bay and C&D Canal Approach Channels. However, the harbor channels and the channels in Virginia waters will be considered as well.

A DMMP study must consider any and all dredged material placement options starting with an analysis of the current options, their remaining life and any possible efficiencies or expansions. The 2005 DMMP included a substantial number of placement options and analyzed each for capacity, cost and feasibility. These options are all to be reanalyzed for the update effort along with any new concepts that have been developed since that time. The need for placement will be reanalyzed, the base plans will be reconsidered, and a plan will be developed to accommodate a minimum of 20 years of placement need. Out of this the timing of placement need will be considered as well. Timing is especially critical given the potential for new work projects, such as state and private dredging of deeper berths and access channels as well as the potential widening of the 50-foot Federal channels.

- c. **Factors Affecting the Scope and Level of Review.** This DMMP is an update to a previous document that included an EIS and underwent significant public review. This document will revisit the conclusions of the 2005 work and update existing conditions including agency coordination through standing dredged material management committees (which include USFWS, NMFS, etc – see PMP), but it is not anticipated that a new environmental document will be prepared at this time. If new significant issues arise related to dredging or placement, then some NEPA requirements may be updated as part of this effort. It is very unlikely that the DMMP update will be novel, controversial or precedent-setting in any way. The DMMP will provide information for use in considering long-term placement challenges and solutions for the Port of Baltimore; however, the study will not directly lead to project construction. Future placement needs, capacities and timing will be projected, and various alternatives will be screened or reaffirmed. There are no human life/safety issues that will be addressed in the study due to the study scope and issues addressed.

Project challenges will arise from the limitations inherent in dredged material placement, such as cost, availability of land, environmental restrictions and public and political concerns. No new scientific information is expected to be generated; rather, existing information and expert analysis will be used to conduct planning appropriate to this type of document.

While this DMMP will not result in USACE construction or project authorization, it will include alternative screening and timing analyses, so ATR and Type I IEPR will be conducted. As outlined in Section 5, a risk-based assessment was conducted for the study and ATR and Type I IEPR are appropriate. The technical data that the plan will be based on will be derived and reviewed by experts on dredged material placement and Chesapeake Bay ecology. Conclusions will be based on technical analyses and best professional judgment of these experts. Implementation of these recommendations will be documented as required in subsequent studies, as appropriate, and will be subjected to appropriate reviews for those studies

- d. **In-Kind Contributions.** This effort is funded entirely with Federal funds through the O&M Program. However, there will be significant input to the DMMP from the Maryland Port Administration and the subcommittees of the State of Maryland Dredged Material Management Program, which includes other Federal, state and local government experts in the field as well as academia and citizens. Each

of these groups will provide critical input to the recommendation of this study including ideas for new placement options, technical design input, environmental concerns and benefits, and acceptability of project. These products and analyses are subject to DQC and ATR, as appropriate.

#### **4. DISTRICT QUALITY CONTROL (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 home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC.

- a. Documentation of DQC.** DQC is documented in a quality control review report (QCRR), which summarizes the reviewed product, review process, and major issues and their resolution. This QCRR, signed by the project delivery team (PDT) and the DQC team, will be provided to the ATR team at each review. The DQC process is outlined in the "Planning Division, Civil Project Development Branch, Quality Management Plan" from Baltimore District dated 7 October, 2009.
- b. Products to Undergo DQC.** Although not a decision document, the draft and final DMMP will undergo DQC, as well as all technical products, appendices, read-ahead materials (if required), and products developed in coordination with outside sources. DQC will be conducted in accordance with the Baltimore District Planning Division Quality Management Plan of 2009.

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

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). 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.** Since this is a management plan conducted under full Federal funding and will not lead directly to project implementation, it is not anticipated that there will need to be interim meetings with higher authority. Therefore, there will not likely be a need to review read-ahead documents. ATR will be conducted on the draft and final DMMP document, including all relevant appendices. It is possible that interim products will be provided for ATR, such as technical analyses and conclusions reached by the project team or by coordination with subject matter experts outside USACE.
- b. Required ATR Team Expertise.** Due to the nature of the analyses, it is appropriate that the ATR team include an economist with deep draft navigation expertise, an environmental specialist familiar with the beneficial or negative impacts of dredged material placement, a plan formulation expert, a cost engineer, and a civil engineer familiar with the requirements of dredged material placement site construction and operation. It may be necessary to have more than one

environmental representative due to the wide variation of placement alternatives, from mine placement, to agricultural application to salt marsh creation. The DDN-PCX, in cooperation with the PDT and vertical team will determine the final make-up of the ATR team. The following table lists the types of disciplines that likely should be included on the ATR team along with descriptions of the expertise required. It is requested that expertises be combined if and where possible for efficiency.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works reports and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The Planning reviewer should be a senior water resources planner with experience in dredged material management and preferably with experience in estuarial ecology.
Economics	The economist should be familiar with deep draft navigation and the O&M budgetary process. This is critical since the level of economic justification required in a DMMP is for continued maintenance, not initial construction.
Environmental Resources	The environmental ATR member (or members) must have expertise in issues related to dredged material placement, estuarial ecology, soil chemistry and terrestrial ecology. It is not anticipated that the DMMP will include any NEPA documentation, but the reviewers must be familiar with the concepts and principals behind NEPA.
Civil Engineering	The Civil Engineering ATR member will be responsible for reviewing the assumptions that have been made for all the potential alternatives. The issues involve constructability, quantities of materials, and other issues related to the transport and placement of dredged material.
Cost Engineering	Although no formal M-CACES cost estimates are to be conducted, there will be planning-level, or rough order of magnitude, estimates done for each of the proposed alternatives. The Cost Engineering ATR member must, therefore, be well versed as to the methods of dredged material transport and placement.
Construction/Operations	An ATR member representing the Operations and Maintenance perspective should be included on the team.

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

- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;

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

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

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

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

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

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

IEPR may be required for 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 1165-2-209, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the

USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- **Type I IEPR.** Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic 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 1165-2-209.
  - **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.** This study does not meet any mandatory trigger for Type I IEPR: there is no threat to human life, there will be no construction and the total study cost is less than \$1 million - well under the \$45 million ceiling, the study is not controversial and project recommendations are intended to support continued maintenance of an existing Federal project. Any future project implementation that may be considered in this document will require a separate feasibility study and appropriate NEPA documentation and authorization. EC 1165-2-209 states that "Meeting the specific conditions identified for possible exclusions is not, in or of itself, sufficient grounds for recommending an exclusion. A deliberate, risk-informed recommendation whether to undertake IEPR shall be made and documented by the project delivery team (PDT)." The PDT has performed a risk assessment for this study and a summary is presented below. While the study does not meet mandatory triggers for IEPR, it has been determined that because the study may affect dredged material placement options that are in excess of \$45 million for implementation, and because this study is within the navigation business line, Type I IEPR will be conducted. Type II IEPR will not be conducted as there will be no design or construction activities that can be reviewed and there are no significant threats to human life, as outlined in the risk assessment below.
- (1) There is no detailed design with this study, only very cursory project construction assumptions, and the study does not directly lead to construction.
  - (2) The DMMP will reconsider alternatives that were previously determined and potentially generate new ones. However, the alternatives are general in nature (except for the ones that have already been studied under separate efforts) and would require further study to be fully evaluated or recommended.
  - (3) Recommendations from this plan will be related to the long-term management of dredged material. Recommendations may include further consideration of certain strategies, or

project types in separate studies. Other recommendations will include those pertaining to the designation of base plans, timing of capacity needs or other policy-related issues.

- (4) There will be no formal cost estimates completed.
- (5) The DMMP does not require NEPA documentation. If subsequent studies are undertaken in which any alternative plan is pursued for construction, NEPA documentation will be undertaken during those study processes.
- (6) The DMMP does not impact a structure or feature of a structure whose performance involves potential life safety risks.
- (7) If this effort is not completed, the Federal Government will not have appropriate and adequate information pertaining to the long range need for, potentially, very expensive dredged material placement projects. Further, the full range of placement options will not have been properly vetted through the appropriate experts and interested agency representatives. This may lead to inefficient project maintenance, the unnecessary waste of Federal and State tax dollars, and potentially economic impacts to the Port of Baltimore and the United States.
- (8) The DMMP itself will cost less than \$1 million. Projects that are undertaken to place dredged material, whether it's a beneficial use or just disposal, are very expensive. A proper DMMP can only work to lower costs in the long run. That said, this effort will not directly support the expenditure of any construction or O&M funds. It will merely advise and provide recommendations for further, detailed study through which significant investments will be considered.
- (9) This DMMP does not directly lead to project implementation and therefore does not support a budget request.
- (10) This DMMP will not change the operation of the Baltimore Harbor and Channels Project. It will remain at its current depths and dimensions no matter the outcome of this effort. The DMMP is simply a management plan for the ongoing maintenance of the project. The DMMP allows for these decisions to be made holistically for the purpose of efficiency.
- (11) This effort does not involve ground disturbances.
- (12) The effort does not affect any special features.
- (13) The DMMP does not involve activities that trigger regulatory permitting.
- (14) The DMMP will not lead directly to construction and so does not involve activities that could potentially generate hazardous wastes and/or disposal of hazardous materials.
- (15) The DMMP does not reference the use of or reliance on manufacturers' engineers and specifications.
- (16) The DMMP will not lead directly to construction and so does not involve utility systems and therefore does not rely on local authorities for inspection/certification.
- (17) There is no controversy surrounding Federal actions associated with this work product. The DMMP relies on the best available scientific information, opinion, and consensus to determine plans for the efficient placement of dredged material.

- b. Products to Undergo Type I IEPR.** IEPR will be conducted early in the study, beginning with a review of alternative placement assumptions and planning-level cost estimates for alternative placement sites. IEPR will also be conducted on the draft DMMP, which incorporates a screening of alternative placement sites, based on cost and environmental acceptability, to determine the plan for placement of dredged material. The draft DMMP will also incorporate environmental criteria and will include an economic assessment of Port of Baltimore commerce. IEPR comments on alternative placement sites and planning-level cost estimates will be incorporated into the draft DMMP.

- c. **Required Type I IEPR Panel Expertise.** Due to the nature of the analyses, it is appropriate that the IEPR panel include an economist with deep draft navigation expertise, an environmental specialist familiar with the beneficial or negative impacts of dredged material placement, a cost engineer, and a civil engineer familiar with the requirements of dredged material placement site construction and operation. It may be necessary to have more than one environmental representative due to the wide variation of placement alternatives, from mine placement, to agricultural application to salt marsh creation. The following table lists the types of disciplines that likely should be included on the IEPR panel along with descriptions of the expertise required. It is requested that expertises be combined if and where possible for efficiency.

IEPR Panel Members/Disciplines	Expertise Required
Economics	The Economics Panel Member should be familiar with deep draft navigation and the O&M budgetary process. This is critical since the level of economic justification required in a DMMP is for continued maintenance, not initial construction.
Environmental Resources	The Environmental Panel Member (or members) must have expertise in issues related to dredged material placement, estuarial ecology, soil chemistry and terrestrial ecology. It is not anticipated that the DMMP will include any NEPA documentation, but the reviewers must be familiar with the concepts and principals behind NEPA.
Civil Engineering	The Civil Engineering Panel Member will be responsible for reviewing the assumptions that have been made for all the potential alternatives. The issues involve constructability, quantities of materials, and other issues related to the transport and placement of dredged material.
Cost Engineering	Although no formal M-CACES cost estimates are to be conducted, there will be planning-level, or rough order of magnitude, estimates done for each of the proposed alternatives. The Cost Engineering Panel Member must, therefore, be well versed as to the methods of dredged material transport and placement.
Construction/Operations	A Panel Member representing the Operations and Maintenance perspective should be included on the panel.

- d. **Documentation of Type I IEPR.** The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-209, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- 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; 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.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

The IEPR panel will review the alternative placement assumptions and planning-level cost estimates for alternative placement sites in a manner consistent with the requirements set forth above for the draft DMMP. A small panel will be selected by an OEO per EC 1165-2-209, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the engineering assumptions and cost estimates prepared. The OEO will prepare an interim Review Report that will accompany the publication of the final decision document and shall include the information outlined above for the final Review Report.

The interim Review Report will be submitted by the OEO no later than 60 days following the conclusion of their review period. USACE shall consider all recommendations contained in the interim Review Report and prepare a written response for all recommendations adopted or not adopted.

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

All 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 DMMPs.

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

All documents shall be coordinated with the Cost Engineering DX, located in the Walla Walla District. The DX will assist in determining the expertise needed on the ATR team and Type I IEPR panel and in the development of the review charge(s). The RMO is responsible for coordination with the Cost Engineering DX.

## **9. MODEL CERTIFICATION AND APPROVAL**

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the

opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

- a. **Planning Models.** The following planning models are anticipated to be used in the development of the DMMP: The PDT does not anticipate the use of any planning models. Tables will be developed to display comparative data including stakeholder input and engineering considerations. Expected impacts, benefits, costs and pertinent engineering criteria of various alternatives as part of a screening process will be collated in Excel spreadsheets.
- b. **Engineering Models.** The following engineering models are anticipated to be used in the development of the DMMP: No engineering models are expected to be used.

## 10. REVIEW SCHEDULES AND COSTS

- a. **ATR Schedule and Cost.** The cost and schedule of the ATR will be negotiated with the DDN-PCX. The documents will be transmitted and the ATR team will work virtually. Comments will be made in Dr. Checks unless another format is determined to be more suitable, especially for non-technical comments. Comments will be provided to the Baltimore District study manager. It is estimated that there will be two full reviews and potentially other reviews of technical information by subsets of the ATR team as appropriate during the study process.
- b. **Type I IEPR Schedule and Cost.** The cost and schedule of Type I IEPR will be negotiated with the OEO. The documents will be transmitted electronically and the IEPR panel will work virtually. It is estimated that there will be two IEPR reviews, one initial review of alternative placement assumptions and planning-level cost estimates for alternative placement sites and one final review of the draft DMMP.
- c. **Model Certification/Approval Schedule and Cost.** Excel spreadsheets used in assessing alternatives for the DMMP are expected to be simple and straightforward. Approval for use of Excel spreadsheets is requested. Review for approval of study specific spreadsheets should be conducted as part of the ATR review of the technical products.

## 11. PUBLIC PARTICIPATION

Public participation for this effort will be conducted through coordination with standing committees of the State of Maryland Dredged Material Management Program, which includes a Citizens Action Committee, as well as other sub-committees on which members of the public and interested groups sit. Since there is no NEPA document being produced, nor any direct recommendation for Federal project

implementation, formal public hearings are not planned. The draft document will be made available for review on the District website.

## **12. REVIEW PLAN APPROVAL AND UPDATES**

The North 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 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. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

## **13. REVIEW PLAN POINTS OF CONTACT**

Public questions and/or comments on this review plan can be directed to the following points of contact:

- Andrew Roach, Study Manager, Baltimore District  
410-962-8156, [Andrew.A.Roach@usace.army.mil](mailto:Andrew.A.Roach@usace.army.mil)
- Joseph Vietri, Chief, Planning and Policy Division, North Atlantic Division  
718-765-7070, [Joseph.R.Vietri@usace.army.mil](mailto:Joseph.R.Vietri@usace.army.mil)
- Bernard Moseby, Program Manager, PCX Deep Draft Navigation  
251-694-3884, [Bernard.E.Moseby@usace.army.mil](mailto:Bernard.E.Moseby@usace.army.mil)

**14. APPROVALS**

The PDT will carry out the review plan as described. The study manager will submit the plan to the PDT District Planning Chief for approval. Coordination with the PCX will occur through the District Planning Chief. Signatures by the individuals below indicate approval of the plan as proposed.

---

Andrew Roach Date  
Study Manager  
Project Delivery Team

---

Daniel Bierly Date  
Acting Chief, Civil Project Development Branch  
Baltimore District

---

Amy Guise Date  
Chief, Planning Division  
Baltimore District

---

Joseph Vietri Date  
Chief, Planning and Policy Division  
North Atlantic Division

**ATTACHMENT 1: TEAM ROSTERS**

**PDT**

Discipline	Name	Email	Phone Number
Project Manager	Kevin Brennan	Kevin.M.Brennan@usace.army.mil	410-962-6113
Study Manager	Andrew Roach	Andrew.A.Roach@usace.army.mil	410-962-8156
Biologist	Mark Mendelsohn	Mark.Mendelsohn@usace.army.mil	410-962-9499
Economics	TBD	TBD	TBD

**ATR**

Discipline	Name	Email	Phone Number	Credentials	Years of Exp.
ATR Lead	Not Assigned	TBD	TBD	TBD	TBD
Planning	Not Assigned	TBD	TBD	TBD	TBD
Environmental Resources	Not Assigned	TBD	TBD	TBD	TBD
Economics	Not Assigned	TBD	TBD	TBD	TBD
Civil Engineer	Not Assigned	TBD	TBD	TBD	TBD
Cost Engineer	Not Assigned	TBD	TBD	TBD	TBD
Constr/Ops	Not Assigned	TBD	TBD	TBD	TBD

**IEPR**

OEO point of contact to be determined.

**Vertical Team**

Title	Name	Email	Phone Number
District Planning Coordinator	Dan Bierly	Daniel.M.Bierly@usace.army.mil	410-962-6139
Program Manager, PCX Deep Draft Navigation	Bernard Moseby	Bernard.E.Moseby@usace.army.mil	251-694-3884
RIT Lead	Cathy Shuman	Catherine.M.Shuman@usace.army.mil	202-761-1379
NAD Division Planning Chief	Joe Vietri	Joseph.R.Vietri@usace.army.mil	718-765-7070

**ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS**

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The Agency Technical Review (ATR) has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project’s Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer’s needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks<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>

#### ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<b>Term</b>	<b>Definition</b>	<b>Term</b>	<b>Definition</b>
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DDN	Deep Draft Navigation	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
Home District/MS	The District or MSC responsible for the preparation of the document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act