



DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER  
CORPS OF ENGINEERS  
550 MAIN STREET  
CINCINNATI, OH 45202

CELRD-PD

NOV 09 2015

MEMORANDUM FOR Commander, US Army Corps of Engineers, Louisville District, (CELRD-P/Nate Moulder), PO Box 59, Louisville, KY 40201-0059

SUBJECT: Approval Memorandum for Portland Wharf Park, Louisville River Walk, Jefferson County, Kentucky, Section 14 Project, Design and Implementation Review Plan

1. References:

- a. Memorandum, CELRL-PMP-F, Subject: same, undated (signed by COL Beck).
  - b. Design and Implementation Review Plan, Portland Wharf and Louisville River Walk, Jefferson County, KY, Section 14 Project, originally submitted SEP 2015.
  - c. EC 1165-2-214, Civil Works Review, 15 DEC 2012.
2. The USACE LRD Review Management Organization (RMO) has completed their policy and quality assurance review of this Review Plan (RP). I concur with the recommendations of the RMO and approve the enclosed RP.
3. The District is requested to post the RP to its website. Prior to posting, the names of all individuals identified in the RP should be removed.
4. POC for this action within LRD is Mr Phil Tilly, 513-684-3025, [philip.r.tilly@usace.army.mil](mailto:philip.r.tilly@usace.army.mil).

Encl

  
RICHARD G. KAISER  
Brigadier General, USA  
Commanding



**DEPARTMENT OF THE ARMY**  
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE  
CORPS OF ENGINEERS  
P.O. BOX 59  
LOUISVILLE, KENTUCKY 40201-0059

REPLY TO  
ATTENTION OF:

CELRL-PMP-F

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Great Lakes and Ohio River Division, 550 West Main Street (Attn: Mr. Philip Tilly/Room 10524) Cincinnati, OH 45202-3222

SUBJECT: Ohio River, Portland Wharf Park, Louisville River Walk, Jefferson County, Kentucky, Section 14 Project, Design and Implementation Review Plan

1. Please find the enclosed Review Plan for the Ohio River, Portland Wharf Park, Louisville River Walk, Jefferson County, Kentucky, for your review and approval. This Review Plan has been completed in accordance with EC 1165-2-214 "Civil Works Review," dated 15 December 2012, and reflects the projects current status.
2. This Review Plan is an update to the Ohio River, Portland Wharf Park, Louisville River Walk, Jefferson County, Kentucky, Section 14 Review Plan for the Feasibility Study phase approved on 7 January 2015.
3. My recommendation is that the subject Review Plan be approved. Upon your review and approval, the Review Plan will be posted on the Louisville District website in accordance with EC 1165-2-214.
4. If you have any questions or need additional information, please contact Nathan Moulder, CELRL-PMP-F, at (502) 315-6776.

Encl

  
CHRISTOPHER G. BECK  
COL, EN  
Commanding

**DESIGN AND IMPLEMENTATION  
REVIEW PLAN  
USING THE PROGRAMMATIC REVIEW PLAN MODEL  
for  
Continuing Authorities Program  
Section 14, 107, 111, 204, 206, 208 and 1135 Projects**

***Ohio River, Portland Wharf Park and Louisville River Walk, Jefferson County, KY  
Section 14 Project***

***Louisville District***

**MSC Approval Date: 9 NOV 2016**

**Last Revision Date: 29 OCT 2016**



**US Army Corps  
of Engineers ®**

**DESIGN AND IMPLEMENTATION REVIEW PLAN  
USING THE PROGRAMMATIC REVIEW PLAN MODEL**

**Ohio River, Portland Wharf Park, Louisville River Walk, Jefferson County, Kentucky  
Section 14 Project**

**TABLE OF CONTENTS**

<b>1. PURPOSE AND REQUIREMENTS</b> .....	<b>1</b>
<b>2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION</b> .....	<b>4</b>
<b>3. STUDY INFORMATION</b> .....	<b>5</b>
<b>4. DISTRICT QUALITY CONTROL (DQC)</b> .....	<b>7</b>
<b>5. AGENCY TECHNICAL REVIEW (ATR)</b> .....	<b>8</b>
<b>6. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL AND SUSTAINABILITY REVIEW.</b> .....	<b>9</b>
<b>7. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)</b> .....	<b>10</b>
<b>8. POLICY AND LEGAL COMPLIANCE REVIEW</b> .....	<b>11</b>
<b>9. COST ENGINEERING Directory of Expertise (DX) REVIEW AND CERTIFICATION</b> .....	<b>11</b>
<b>10. MODEL CERTIFICATION AND APPROVAL</b> .....	<b>11</b>
<b>11. REVIEW SCHEDULES AND COSTS</b> .....	<b>12</b>
<b>12. PUBLIC PARTICIPATION</b> .....	<b>12</b>
<b>13. REVIEW PLAN APPROVAL AND UPDATES</b> .....	<b>12</b>
<b>14. REVIEW PLAN POINTS OF CONTACT</b> .....	<b>13</b>
<b>ATTACHMENT 1: TEAM ROSTERS</b> .....	<b>14</b>
<b>ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS</b> .....	<b>15</b>
<b>ATTACHMENT 3: REVIEW PLAN REVISIONS</b> .....	<b>16</b>
<b>ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS</b> .....	<b>17</b>

## 1. PURPOSE AND REQUIREMENTS

- a. **Purpose.** This Review Plan defines the scope and level of peer review in accordance with EC 1165-2-214, for the Ohio River, Portland Wharf Park and Louisville River Walk, Jefferson County, Kentucky, Section 14 project design and implementation.

Section 14 of the Flood Control Act of 1946, as amended, authorizes the US Army Corps of Engineers (USACE) to study, design and construct emergency streambank and shoreline works to protect public services including (but not limited to) streets, bridges, schools, water and sewer lines, National Register sites, and churches from damage or loss by natural erosion. It is a Continuing Authorities Program (CAP) which focuses on water resource related projects of relatively smaller scope, cost and complexity. Traditional USACE civil works projects are of wider scope and complexity and are specifically authorized by Congress. The Continuing Authorities Program is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization.

Additional Information on this program can be found in Engineering Regulation 1105-2-100, Planning Guidance Notebook, Appendix F.

- b. **Applicability.** This review plan is based on the model Programmatic Review Plan for Section 14, project decision documents, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined in ER 1165-2-214 Civil Works Review Policy. A Section 14, project does not require IEPR if ALL of the following specific criteria are met:

- The project does not involve a significant threat to human life/safety assurance;
- The total project cost is less than \$45 million;
- There is no request by the Governor of an affected state for a peer review by independent experts;
- The project does not require an Environmental Impact Statement (EIS),
- The project/study is not likely to involve significant public dispute as to the size, nature, or effects of the project;
- The project/study is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project;
- The information in the decision document or anticipated project design is not 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;
- The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule; and
- There are no other circumstances where the Chief of Engineers or Director of Civil Works determines Type I IEPR is warranted.

If any of the above criteria are not met, the model Programmatic Review Plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the appropriate Planning Center of Expertise (PCX) and approved by the home Major Subordinate Command (MSC) in accordance with EC 1165-2-214.

Applicability of the model Programmatic Review Plan for a specific project is determined by the

home MSC. If the MSC determines that the model plan is applicable for a specific study, the MSC Commander may approve the plan (including exclusion from IEPR) without additional coordination with a PCX or Headquarters, USACE. The initial decision as to the applicability of the model plan should be made no later than the Federal Interest Determination (FID) milestone (as defined in Appendix F of ER 1105-2-100, F-10.e.1) during the feasibility phase of the project. A review plan for the project will subsequently be developed and approved prior to execution of the Feasibility Cost Sharing Agreement (FCSA) for the study. In addition, per EC 1165-2-214, the home district and MSC should assess at the Alternatives Formulation Briefing (AFB) whether the initial decision on Type I IEPR is still valid based on new information. If the decision on Type I IEPR has changed, the District and MSC should begin coordination with the appropriate PCX immediately.

This review plan is being used to cover implementation products. This review plan is an update of the decision document review plan which was approved by the MSC on 7 January 2015. This updated review plan will be submitted to the MSC for review and approval.

### c. References

- (1) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 15 Dec 2012
- (2) Director of Civil Works' Policy Memorandum #1, Jan 19, 2011
- (3) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2010
- (4) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 Jan 2007
- (6) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007

- d. Requirements.** This programmatic 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 ensuring that planning models and analysis are compliant with Corps policy, theoretically sound, computationally accurate, transparent, described to address any limitations of the model or its use, and documented in study reports (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 Section 14 decision documents is the home MSC. The MSC will coordinate and approve the review plan. The home District will select and manage ATR team members. The home District will post the approved review plan on its public website. A copy of the approved review plan (and any updates) will be provided to the FRM-PCX to keep the PCX apprised of requirements and review schedules.

The MSC coordinated and approved the original decision document review plan on 7 January 2015. Once this revised review plan for the design and implementation phase is reviewed and approved by

the MSC, it will be posted on the Louisville District public website.

### 3. STUDY INFORMATION

- a. **Decision Document.** The Ohio River, Portland Wharf Park and Louisville River Walk, Jefferson County, Louisville, Kentucky Section 14 decision document was prepared in accordance with ER 1105-2-100, Appendix F. The approval level of the decision document was the home MSC. An Environmental Assessment (EA) was prepared along with the decision document and approved by the MSC on 13 April 2015.
- b. **Project Description.** The project area is located between River Mile 607.4 and 610.6 on the banks of the Ohio River in Louisville, Kentucky, approximately two miles west of downtown. The fifty five acre site is owned by the Louisville/Jefferson County Metro Government Parks Department (Metro Parks), and is bordered on the north by the Ohio River, on the south by a flood levee and Interstate 64, on the east by the Kentucky and Indiana Railroad Bridge and the McAlpine Locks and Dam, and on the west by Shawnee Golf Course. The Portland site spans the riverfront area between 32<sup>nd</sup> Street and 36<sup>th</sup> Street in the existing Portland neighborhood. Existing on-site access to the park are for both vehicular and pedestrian traffic, by way of the River Walk trail entrance at the corner of 31<sup>st</sup> Street and Northwestern Parkway.



The project will address streambank erosion along the Ohio River within the Portland Wharf Park boundary heading westward along the paved river walk trail. Two erosion locations were found within River Mile 607.4 and 607.6. An additional area of concern is located between River Miles 610.1 and 610.6. The portions of the park to be protected include the historic location of the Portland Wharf, the riverboat landing for the City of Portland founded in 1811. The Wharf is part of an archaeological site known as "Portland Proper" and designated by the state of Kentucky as

site 15JF418. Portland Proper is listed on the National Register of Historic Places and it limits encompass the entirety of the Portland Wharf Park.

The Detailed Project Report/Environmental Assessment (DPR/EA) presented the findings of the feasibility study. The feasibility study documented the plan formulation process and potential environmental effects associated with the implementation of restoration alternatives for the proposed site. The DPR/EA summarized baseline existing conditions in the study area. It also developed and discussed potential solutions as a guide to potential Federal and non-Federal involvement in the project and serves as a resource to assist in the decision-making of local government and others. The report also identified, evaluated, and recommends a solution (the Preferred Action Alternative) that best meets the planning objectives. There are no existing or anticipated policy waiver requests (pursued per paragraph F-10.f. (4) of ER 1105-2-100, Appendix F).

#### **Recommended Plan at Portland Wharf**

Based on the alternatives considered, full bank build out using riprap with live stakings comprised of native species at the top of bank has proven to be the least cost alternative and least impactful to cultural and environmental resources for stabilizing this section of river bank. Additionally, this alternative provides resilience to future meteorological extremes associated with climate change and directly support Executive Order 11365.

Project Detail: Loose and unstable soils will be removed and vegetation would be cleared to prepare the slope for placement of approximately 870 linear feet of granular backfill/bedding material and riprap. Riprap would be placed to near the top of the bank and the toe would be built out to ensure stability of the 2:1 slope. Live staking would be installed between the top of the riprap and the top of the bank. The live stakes would be installed in earth material graded to a 3H:1V slope.

#### **Recommended Plan at Louisville Riverwalk**

The recommended method of protection would be to remove the failed material and vegetation. All trees with roots exposed and any unstable trees along the bank will be cleared and grubbed. During the Design and Implementation phase, specific tree species of a certain diameter and spacing will be identified for preservation.

Project Detail: loose and unstable soils will be removed and vegetation would be cleared to prepare the slope for placement of approximately 840 linear feet of granular backfill/bedding material and riprap. Riprap would be placed to near the top of the bank and the toe would be built out to ensure stability of the 2:1 slope. Live staking would be installed between the top of the riprap and the top of the bank. The live stakes would be installed in earth material graded to a 3H:1V slope. Replace approximately 1120 linear feet of asphalt pavement in the project area.

The total project cost for both erosion sites is estimated to be \$2,500,000.

#### **c. Factors Affecting the Scope and Level of Review.**

**Challenges:** The primary objective of this project will be to implement a fix to the erosion problem that minimizes its affect to the archaeological site. The greatest challenge to the project will be developing a design that meets this objective, but is sensitive to budgetary and scheduling restraints.

**Project Risks:** River conditions could impact survey work during design, as well as the implementation schedule.

**Life Safety:** The project will neither be justified by life safety or will involve significant threat to human life/safety assurance. There is no reason to believe that any measures involved in the project are associated with a significant threat to human life. This project does not include any impoundments, floodwalls, or levees. From a life safety perspective, there is minimum risk. Placement of stone is not challenging, from a design perspective. The threat to human life is not significant.

**Governor Request for Peer Review:** The Governor has not requested peer review by independent experts.

**Public Dispute:** The project/study is not anticipated to be controversial nor result in significant public dispute as to the size, nature, or effects of the project or to the economic or environmental costs or benefits of the project. No significant comments resulted from the public review of the EA, which would warrant a change in project scope.

**Project Design/Construction:** The anticipated project design will take advantage of prevailing practices and methodologies. It is not expected to be based on novel methods or involve the use of innovative techniques, or present complex challenges for interpretation. It also not anticipated that the project will require unique construction sequencing or redundancy.

- d. **In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC and ATR, similar to any products developed by USACE. The in-kind services anticipated as part of the cost share are limited to participation in Project Delivery Team (PDT) meetings.

#### 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.

**Documentation of DQC:** DQC will be documented by signature sheets with senior-level checkers, Subject Matter Experts, and Supervisors, and will be provided to the ATR team at review.

**Products to Undergo DQC:** DQC will be performed on any Detailed Design Reports (DDRs) and Plans & Specifications.

**Required DQC Expertise:** Team Leaders and Branch Chiefs assign team members to projects and are ultimately responsible for work performed by members of their team and for DQC reviews. Review of this work, whether through informal discussions or formal reviews, shall serve as a quality assurance check to ensure the work is technically complete and accurate before a product leaves a section or team. These individuals, will be responsible for QC checks and overall product QA.

#### 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.** ATR was performed throughout the study phase in accordance with the District and MSC Quality Management Plans. Certification of ATR of the decision document and cost estimate was provided on 29 January 2015, prior to the District Commander signing the final decision document.

The ATR for Design and Implementation will be limited to:

- (1) Detailed Design Report
- (2) Plans and Specifications

- b. **Required ATR Team Expertise.** The expertise/disciplines represented on the ATR team should generally reflect the significant disciplines involved in the design effort. The PDT has determined that the expertise needed for review shall include civil Engineering and geotechnical engineering. The roster of the ATR and the expertise required for the design and implementation phase is outlined in the table below. Note that the ATR for the feasibility phase of this study included a representative from the Planning Community of Practice, there were no significant comments and all review comments were resolved.

ATR Team Members/Disciplines	Expertise Required
ATR Lead / Civil Engineering	The ATR lead should be a senior professional preferably with experience in preparing Section 14 decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR Lead will also serve as the civil engineering reviewer. The ATR Lead MUST be from outside LRD. Must be CERCAP certified.
Geotechnical Engineering	The engineer should be a senior level engineer with extensive experience in the design of stream bank stabilization projects. Must be CERCAP certified.

- 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, 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 1110-2-12 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 prior to the District Commander signing the final report. A sample Statement of Technical Review is included in Attachment 2.

## **6. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY (BCOES) REVIEW**

The PE/A will be responsible for coordinating BCOES review activities. The PDT will be responsible for addressing BCOES comments and making revisions to the technical products as applicable.

## **7. 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 1165-2-214.

For Section 14, 107, 111, 204, 206, 208 and 1135 decision documents prepared under the model Programmatic Review Plan, Type I IEPR is not required.

- **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.

For Section 14, 107, 111, 204, 206, 208 and 1135 decision documents prepared under the model Programmatic Review Plan, Type II IEPR is not required in the design and implementation phase, as there are no measures involved in the project associated with a significant threat to human life. Additional discussion on life safety is located in Section 3.c.

**a. Decision on IEPR.** Based on the information and analysis provided in the preceding paragraphs of this review plan, the project covered under this plan is excluded from IEPR because it does not meet the mandatory IEPR triggers and does not warrant IEPR based on a risk-informed analysis. If any of the criteria outlined in paragraph 1(b) are not met, this model Programmatic Review Plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the appropriate PCX and approved by the home MSC in accordance with EC 1165-2-214.

**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.

## **8. 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.

## **9. COST ENGINEERING MANADATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION**

The decision document was coordinated with the Cost Engineering MCX, located in the Walla Walla District. The Cost Engineering MCX assisted in determining the expertise needed on the ATR team and in the development of the review charge(s). The MCX also provided the Cost Engineering MCX certification on 29 January 2015. The RMO was responsible for coordination with the Cost Engineering MCX.

## **10. MODEL CERTIFICATION AND APPROVAL**

The approval of planning models under EC 1105-2-412 is not required for CAP projects. MSC Commanders are responsible for assuring 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. Therefore, the use of a certified/approved planning model is highly recommended should be used whenever appropriate. Planning models 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 selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC and ATR.

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 and ATR.

- a. Planning Models.** No planning models were used in the development of the decision document; none are anticipated to be used during the design and implementation phase.
- b. Engineering Models.** No engineering models are anticipated to be used during design and implementation:

## 11. REVIEW SCHEDULES AND COSTS

### a. ATR Schedule and Cost.

Item to Undergo ATR	Schedule	Estimated Cost (by PDT)
Detailed Design Report AND Plans & Specifications	15 days for review of 75% DPR, 15 days for response to ATR comments and ATR certification. Start Date: February 2016.	\$10,000

### b. Type I IEPR Schedule and Cost. Not applicable.

**c. Model Review Schedule and Cost.** For decision documents prepared under the model Programmatic Review Plan, use of existing certified or approved planning models is encouraged. Where uncertified or unapproved model are used, review of the model for use will be accomplished through the ATR process. The ATR team should apply the principles of EC 1105-2-412 during the ATR to ensure the model is theoretically and computationally sound, consistent with USACE policies, and adequately documented. If specific uncertified models are identified for repetitive use within a specific district or region, the appropriate PCX, MSC(s), and home District(s) will identify a unified approach to seek certification of these models.

## 12. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the design and implementation phase covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. This Review Plan will be posted on the District's internet site and comments from the public will be accepted.

## 13. REVIEW PLAN APPROVAL AND UPDATES

The home MSC Commander is responsible for approving this review plan and ensuring that use of the Model Programmatic Review Plan is appropriate for the specific project covered by the plan. 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 will be 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. Significant changes may result in the MSC Commander determining that use of the Model Programmatic Review Plan is no longer appropriate. In these cases, a project specific review plan will be prepared and approved in accordance with EC 1165-2-209 and Director of Civil Works' Policy Memorandum #1. The latest version of the review plan, along with the Commanders' approval memorandum, will be posted on the home district's webpage.

## 14. REVIEW PLAN POINTS OF CONTACT

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

  
Project Manager, Louisville District  
502-315-6776

**ATTACHMENT 1: TEAM ROSTERS.**

<b>Project Delivery Team*</b>				
<b>Name</b>	<b>Role</b>	<b>Office Symbol</b>	<b>Telephone</b>	<b>Email</b>
[REDACTED]	Project Manager	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Environmental Resources	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Cultural Resources	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Geotech	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Project Engineer/ Civil	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Cost	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Real Estate	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Legal Counsel	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Public Affairs	USACE-Louisville	[REDACTED]	[REDACTED]
[REDACTED]	Levee Safety	USACE-Louisville	[REDACTED]	[REDACTED]

\*Team member name subject to change based on availability.

<b>Agency Technical Review Team</b>				
<b>Name</b>	<b>Role</b>	<b>Office</b>	<b>Telephone</b>	<b>Email</b>
[REDACTED]	ATR Lead / Civil	NAP	[REDACTED]	[REDACTED]
[REDACTED]	Geotechnical Engineer	NAP	[REDACTED]	[REDACTED]

**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 (home district)  
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 (home district)  
Office Symbol \_\_\_\_\_ Date

*SIGNATURE*  
\_\_\_\_\_  
Name  
Chief, Planning Division (home district)  
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><u>Term</u></b>	<b><u>Definition</u></b>	<b><u>Term</u></b>	<b><u>Definition</u></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
CAP	Continuing Authorities Program	O&M	Operation and maintenance
CSDR	Coastal Storm Damage Reduction	OMB	Office and Management and Budget
DPR	Detailed Project Report	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DQC	District Quality Control/Quality Assurance	OEO	Outside Eligible Organization
DX	Directory of Expertise	OSE	Other Social Effects
EA	Environmental Assessment	PCX	Planning Center of Expertise
EC	Engineer Circular	PDT	Project Delivery Team
EIS	Environmental Impact Statement	PAC	Post Authorization Change
EO	Executive Order	PMP	Project Management Plan
ER	Ecosystem Restoration	PL	Public Law
FDR	Flood Damage Reduction	QMP	Quality Management Plan
FEMA	Federal Emergency Management Agency	QA	Quality Assurance
FRM	Flood Risk Management	QC	Quality Control
FSM	Feasibility Scoping Meeting	RED	Regional Economic Development
GRR	General Reevaluation Report	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