



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

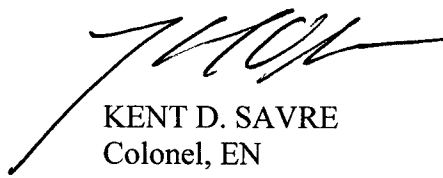
CENAD-PD-PP

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

SUBJECT: Review Plan Approval for Washington D.C. Local Flood Protection Project Limited Reevaluation Report (LRR)

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 Flood Risk Management Planning Center of Expertise of the South Pacific Division, which is the lead office to execute this plan. For further information, contact Mr. Eric Thaut at 415-503-6852. The Review Plan does not include independent external peer review, as it was deemed not applicable by Headquarters, US Army Corps of Engineers.
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


KENT D. SAVRE
Colonel, EN
Commanding

REVIEW PLAN

**Washington D.C. Local Flood Protection Project
Limited Reevaluation Report**

Baltimore District

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



**US Army Corps
of Engineers** ®

REVIEW PLAN

**Washington D.C. Local Flood Protection Project
Limited Reevaluation Report**

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1. PURPOSE AND REQUIREMENTS

Purpose. This Review Plan defines the scope and level of peer review for the Washington D.C. Local Flood Protection Project Limited Reevaluation Report (LRR).

a. 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) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- (5) Planning Division, Civil Project Development Branch, Quality Management Plan, 7 October 2009

b. 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 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 Flood Risk Management PCX.

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. STUDY INFORMATION

a. Decision Document. The Washington D.C. and Vicinity Local Flood Protection Project is located in downtown Washington and protects the monumental core and large portions of downtown. Due to changes in project design required to meet risk and uncertainty and reliability standards, the project cost estimate has exceeded the Section 902 cost limit. Therefore, a Limited Re-evaluation Report (LRR) is to be prepared for approval by the MSC and will be provided to HQUSACE and the ASA(CW) and submitted to Congress for consideration. The project must be re-authorized at a higher cost level before further construction can be done. NEPA documentation has already been completed for the necessary improvements under an Engineering Documentation Report (EDR), dated May 2010, that was completed by the Baltimore District. The actual NEPA document was an environmental assessment (EA) completed by the National Park Service (NPS). The USACE documented its

concurrence with the findings of the EA in an Adoption Memorandum, dated March 25, 2010, as well as in a signed FONSI, dated May 24, 2010, that was included with the EDR. All formulation activities were completed as part of the EDR, so no further formulation is being conducted for this effort.

- b. Study/Project Description.** The Potomac Park Levee system, part of the Washington, D.C. and Vicinity Local Flood Protection Project, was built in 1939. The project consists of an earthen berm extending from the Lincoln Memorial on 23rd Street to the grounds of the Washington Monument east of 17th Street. The berm runs parallel to the Reflecting Pool on the north side and ends at high ground at the Lincoln Memorial and north of the World War II Memorial (Figures 1, 2). The levee has temporary closure structures at 23rd Street and at 17th Street.

During major flooding the land owner, the NPS, is responsible for constructing the temporary closures. At 23rd Street, the closure consists of sandbags that are only about 2 feet high. The temporary closure across 17th Street consists of a combination of sandbags, Jersey barriers, and soil excavated from the Washington Monument grounds. It is approximately 8 feet high and 300 feet long and is supposed to block the flow of river water into downtown Washington D.C. This system has not been favored by the USACE, due to the large size of this type of emergency closure, coupled by unknown weather conditions and logistical requirements. Based on new policies since Hurricane Katrina, the USACE deemed the 17th Street closure unreliable and consequently gave the levee an unacceptable inspection rating. For this reason, the Federal Emergency Management Agency's (FEMA) most recently proposed 100-year floodplain map for this area reflects a 100-year flood event as if the currently designed 17th Street closure did not exist. This new mapping puts a portion of downtown Washington, D.C. and the monumental core within the 100-year flood insurance rate zone, which would require additional flood insurance and/or costly upgrades to comply with building standards for those facilities that now fall within the new 100-year floodplain. Additionally a number of projects currently in development would require revisions and could be delayed in order to comply with these building codes.

The recommended project modifications from the 1992 General Design Memorandum, the 1998 Post Authorization Change (PAC) Report and the 2010 EDR will improve the reliability of the existing flood protection project by eliminating temporary closures at 17th Street, 23rd Street and Constitution Avenue, N.W. and 2nd and P Streets, S.W.; by eliminating low spots in the Reflecting Pool levee; and by adding drainage control structures to prevent backflow. The 17th Street closure is in construction, while the other improvements will require an increase in the authorized cost to implement.

An EDR was completed in May 2010 that included NEPA documentation for all of the system upgrades that are required and designs for a post and panel closure at 17th Street that would satisfy recent guidance. Also included in that report was an updated economic analysis that showed a project BCR of 42.4 to 1. The latest cost estimate of \$16.1 million (fully-funded, October 2009) shows, however, that the authorized cost level is not sufficient under Section 902 of the Water Resources Development Act of 1986 to complete the project as designed. The calculated Section 902 limit at the October 2009 price level is \$9.6 million (the authorized cost is \$5.965 million from WRDA 1999). The 17th Street closure construction is being completed under the 902 limit, but further work can only commence after re-authorization at a higher level. All necessary hydrology and hydraulics modeling and risk and uncertainty analyses were conducted prior to construction of the 17th Street closure, so these tasks are not included in the LRR.

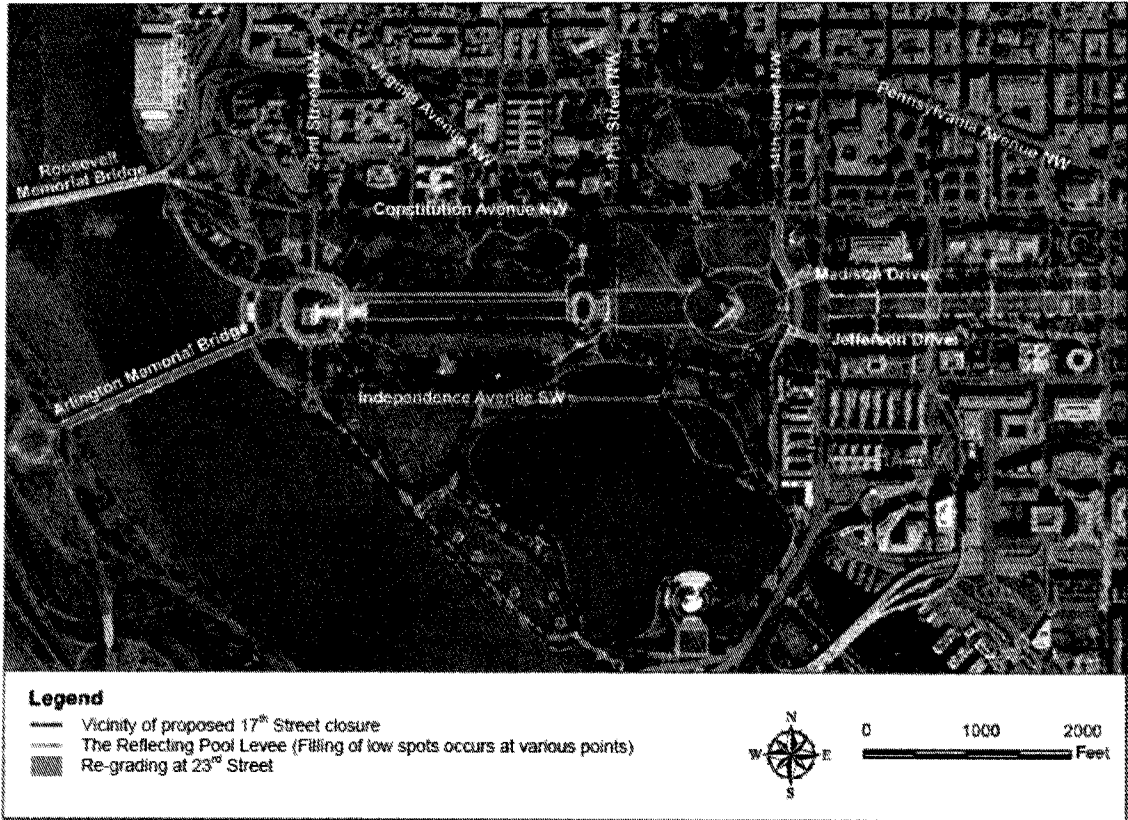
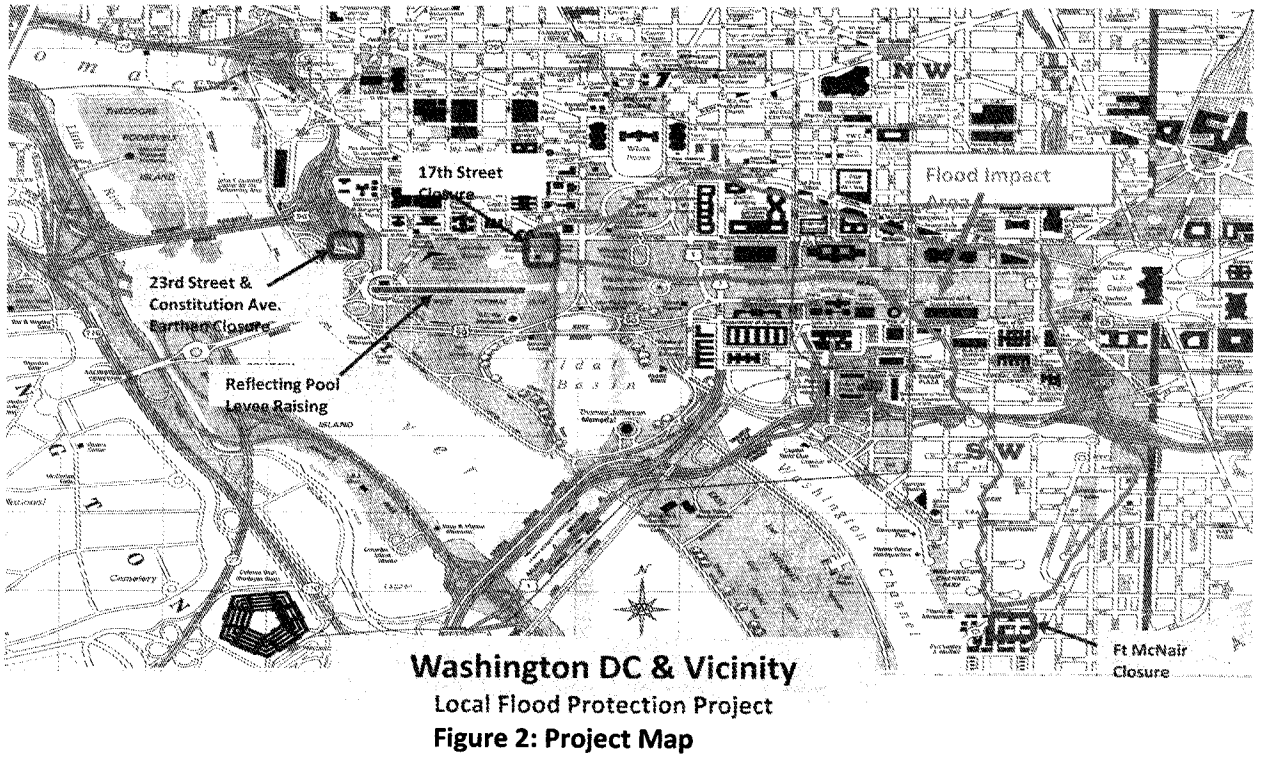


Figure 1: Location Map



c. **Factors Affecting the Scope and Level of Review.** The DC Levee project, as it is known, is a critically important project that protects nationally significant landmarks and buildings. The primary upgrade that was needed to the system, the 17th Street closure, is currently under construction. The LRR will document increases in project costs and will allow for completion of the project, which includes raising low spots along the length of the levee, an improved closure at 23rd Street and other improvements listed above.

- The EDR included NEPA documentation for the entire project, even though only the 17th Street closure could be constructed within the Section 902 limit. The NEPA document will be included by reference in the LRR. The EA included intensive coordination with interested groups and agencies, as would be expected for any project constructed in such an important and visible area.
- There is very little risk in the project due to the nature of the construction. The remaining portions of the project are not novel or complex and will require little new ground disturbance. The highest risk aspect is the location of the project and the need to keep the area accessible for events of national interest. These issues are accounted for in the EA as well as the cooperation agreements.
- There will be no further project formulation conducted for this analysis.
- There has been no interest expressed by local officials for a peer review by independent experts;
- The project has been well vetted in public insofar as the size, shape and ultimate appearance of the project. The project has a very robust BCR and there is no dispute as to the need for the project. This project will protect numerous national treasures including the National Archives.
- This project does not include any novel design or construction method or involve the use of innovative materials or techniques.
- This project has not been justified by life safety and will not involve a significant threat to human life or safety. The study area is largely a tourist destination as well as the location of several large Federal and private office buildings. Residential housing is located within the study area; however it is typically apartment dwellings on higher floors. The majority of the project is already built and provides protection to very high levels. Flash flooding that would not allow for safe evacuation is highly unlikely.

d. **In-Kind Contributions.** Products and analyses provided by sponsors as in-kind services are subject to DQC, ATR, and IEPR. There are no in-kind products and analyses expected to be provided by the sponsor.

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.** This document is very limited in scope and so the only products will be the draft and final LRR. Both of these documents will undergo DQC. Review of the draft document, of course, will include detailed review of the technical products of the study, most notably the cost estimate and the 902 calculation. It is likely that the review of the final will be a more abridged effort since significant change between the draft and final documents is unlikely.
- c. **Required DQC Team Expertise.** The DQC team should mirror the PDT. The DQC team will be assigned by senior management within the Baltimore District from each of the technical offices. Team members will be assigned who represent study management/report writing, Planning policy, economics, geotechnical, structural, civil and cost engineering. All should be well acquainted with issues surrounding structure flood risk management projects.

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.** Due to the Section 902 exceedence focus of this document, ATR is anticipated for the Draft and Final LRR. Once ATR is satisfied, the document will be submitted to the MSC for approval. The ATR will include any technical investigations that were completed as part of the LRR. If an In-Progress Review meeting is required, ATR of read ahead materials may be required. This is not considered likely, however. Further, review of the final document is anticipated to be truncated since it will likely be merely a back check.
- b. **Required ATR Team Expertise.** The expertise represented on the ATR team should reflect the significant expertise involved in the work effort and will generally mirror the expertise on the PDT. Given the scope and nature of this single purpose flood risk management study, reviews with expertise across more than one discipline will be engaged where possible to limit the size and cost of the ATR effort. The PDT in conjunction with the PCX will determine if a risk reviewer is ultimately needed since the LRR will not include any plan formulation activities.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works 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 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 Flood Risk Management projects.
Economics	The economic reviewer must have experience with Flood Risk Management projects and Section 902 limits. Although a full economic update was done previously for the EDR report, the reviewer must certify that any updates to current fiscal year levels are correct and appropriate.
Geotechnical Engineering	The geotech reviewer must be familiar with the analysis and design of earthen structures as well as floodwalls and other related structures.
Civil Engineering	The civil engineering reviewer must have experience with Flood Risk Management projects, including drainage structures, flood walls, earthen levees, etc.
Structural Engineering	The structural engineering reviewer must have experience in the particular design requirements of flood-related structures.
Cost Engineering	The cost engineer must have experience with the construction methods of Flood Risk Management Projects, especially given the intricacies of working in such a culturally-rich site with various disturbance restrictions.

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 1110-1-12 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.** The relevant guidance on IEPR is EC 1165-2-209. Within this guidance four factors are listed to determine whether IEPR is appropriate for the document under consideration. Table 1 summarizes these trigger and a discussion on each point is below:

Table 1. Mandatory Triggers	Yes	No
Significant threat to human life		X
Exceeds 45 million		X
Governors Request		X
Controversial by DCW		X

- (1) Significant threat to human life. The USACE has taken the position that most all flood risk management projects have, by definition, a life safety component. However, given the location of this project and the fairly limited number of residences in the area, especially at ground level, the risk to life safety is not significant. The project is already largely constructed, and so whereas it may not be certifiable to 100-year protection at this time, protection is offered to all but the largest storms. Any storm of sufficient magnitude would have a large lead time and the area could easily be evacuated.
- (2) The total project cost is estimated to be in excess of the Section 902 limit, significantly in excess, however, it is estimated to be far less than \$45 million, so IEPR is not triggered by cost, either total cost or remaining cost.
- (3) No governor or, in the case of Washington D.C., Mayor has requested IEPR.
- (4) No request has been received by the head of any interested agency, local or Federal, to conduct IEPR. Any cultural, environmental or mitigation concerns were addressed in the previous NEPA document, which has been finalized and signed.

Guidance also indicates other triggers that may influence the need for IEPR. These are listed in Table 2 and are discussed below.

Table2. Additional Triggers	Yes	No
EIS		X
Impacts tribal/cultural/historic		X
Impacts on F&W		X
ESA impacts		X

No NEPA will be conducted as part of this LRR. NEPA, in the form of an EA, was completed by the National Park Service and was included and adopted by USACE in the EDR. The EA included extensive coordination with all appropriate parties to ensure that impacts to cultural and historic resources were avoided or minimized. This was a critical component of the EA and EDR given the location of the project. No concerns remain or are considered in the LRR. Given the location of the project in a highly disturbed area, away from the Potomac River, there are no fish and wildlife or ESA concerns.

Finally, it must be noted here that the cost of IEPR is borne by the Federal Government (per WRDA 07) and at this time funding does not exist to conduct this analysis, even if it were triggered. In fact,

the project cannot be budgeted until such time as that authorization is changed to the higher cost. It is understood, however, that after the project is re-authorized and funded, a Type II IEPR, safety assurance review, will be required. Given the very limited scope of the LRR for documenting the Section 902 exceedence, and that Type II IEPR will be required, it is in the best interest of the government and sponsor to complete IEPR upon receiving reauthorization and appropriations.

This project does not trigger any of the requirements contained in Table 1 or 2. Due to the fact that construction of the project is largely complete, there is likely little to review. An IEPR exclusion request was submitted to HQUSACE for approval and HQUSACE has deemed that IEPR is not required for the subject project.

- b. Products to Undergo Type I IEPR.** Not-Applicable
- c. Required Type I IEPR Panel Expertise.** Not-Applicable
- d. Documentation of Type I IEPR.** Not-Applicable

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 DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

All decision 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 team (if required) and in the development of the review charge(s). The DX will also provide the Cost Engineering DX certification. 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 decision document: No models are being used. The purpose of the document is to update the design and provide an accurate cost estimate for re-authorization due to an exceedence of the Section 902 cost limit.
- b. **Engineering Models.** The following engineering models are anticipated to be used in the development of the decision document: No Engineering models will be used as part of the LRR effort.

10. REVIEW SCHEDULES AND COSTS

- a. **ATR Schedule and Cost.** ATR will be completed prior to submission of the draft LRR to the MSC. ATR costs for the LRR are not yet determined. These costs are cost-shared with the study’s sponsor. ATR will be completed on the following documentation:

<u>ATR</u>	<u>Status</u>	<u>Date</u>
LRR	To be scheduled	Sept 2012 (estimate)

- b. **Type I IEPR Schedule and Cost.** Not-Applicable
- c. **Model Certification/Approval Schedule and Cost.** Not-Applicable

11. PUBLIC PARTICIPATION

It is not envisioned that there will be any public participation during the development of the decision document. The public had ample opportunity to participate in the development of the NEPA document for this project. Since the project is in such a high-visibility and important location, public involvement was extensive.

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 decision 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:

- Daniel Bierly, Study Manager, Baltimore District
410-962-6139, Daniel.M.Bierly@usace.army.mil

- Joseph Vietri, Chief, Planning and Policy Division, North Atlantic Division
347-370-4570, Joseph.R.Vietri@usace.army.mil

- Jodi McDonald, Regional Director, Flood Risk Management Planning Center of Expertise
917-790-8720, Jodi.M.McDonald@usace.army.mil

ATTACHMENT 1: TEAM ROSTERS

PDT

Discipline	Name	Email	Phone Number
Project Manager	Robert Wright	Robert.e.wright@usace.army.mil	410-962-1737
Study Manager	Dan Bierly	Daniel.m.bierly@usace.army.mil	410-962-6139
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Cost Engr	Luan Ngo	Luan.t.ngo@usace.army.mil	410-962-3322
Structural Engr	Bill Chies Kent Morey	Bill.Chies@usace.army.mil Kent.R.Morey@usace.army.mil	410-962-4884 410-962-6714
Geotech Engr	David Tucker	David.L.Tucker@usace.army.mil	410-962-6823
Design Manager	Sean Dawson	Sean.Dawson@usace.army.mil	410-962-6156

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
Economics	Not Assigned	TBD	TBD	TBD	TBD
eotechnical Engineering	Not Assigned	TBD	TBD	TBD	TBD
Civil Engineering	Not Assigned	TBD	TBD	TBD	TBD
Structural Engineering	Not Assigned	TBD	TBD	TBD	TBD
Cost Engineering	Not Assigned	TBD	TBD	TBD	TBD

Vertical Team

Title	Name	Email	Phone Number
District Planning Coordinator	Dan Bierly	Daniel.m.bierly@usace.army.mil	410-962-6139
Program Manager, PCX FRM	Jodi McDonald	Jodi.M.Mcdonald@usace.army.mil	917-790-8720
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	347-370-4570

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 DrCheckssm.

SIGNATURE

Name
ATR Team Leader
Office Symbol/Company

Date

SIGNATURE

Name
Project Manager
Office Symbol

Date

SIGNATURE

Name
Architect Engineer Project Manager¹
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

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
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
DPR	Detailed Project Report	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/MSD	The District or MSD responsible for the preparation of the decision 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