

REVIEW PLAN
for
ISLAND CREEK LOCAL PROTECTION PROJECT
ISLAND CREEK, LOGAN, WV
Design and Construction Activities
Huntington District
February 2011



US Army Corps
of Engineers ®

REVIEW PLAN

ISLAND CREEK LOCAL PROTECTION PROJECT Design and Construction Activities

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1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This Review Plan defines the scope and level of peer review for the design and construction activities of the Island Creek Local Protection Project.

b. References

- (1) Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2010
- (2) Engineer Regulation (ER) 1110-1-12, Quality Management, 31 July 2006
- (3) Island Creek Local Protection Project, Project Management Plan

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). It provides the procedures for ensuring the quality and credibility of U.S. Army Corps of Engineers (USACE) decision, implementation, and operations and maintenance documents and work products. The EC outlines three levels of review: District Quality Control, Agency Technical Review, and Independent External Peer Review.

- (1) District Quality Control (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). Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team (PDT) reviews, etc. It is managed in the home district. Quality checks may be performed by staff responsible for the work, such as supervisors, work leaders, team leaders, designated individuals from the senior staff, or other qualified personnel. However, they should not be performed by the same people who performed the original work, including managing/reviewing the work in the case of contracted efforts. Additionally, the PDT is responsible for a complete reading of any reports and accompanying appendices prepared by or for the PDT to assure the overall coherence and integrity of the report, technical appendices, and the recommendations before approval by the District Commander. The Major Subordinate Command (MSC)/District Quality Management Plans address the conduct and documentation of this fundamental level of review. DQC is not addressed further in this review plan.
- (2) Agency Technical Review (ATR). ATR is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of the project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assure that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel, preferably recognized subject matter experts with the appropriate technical expertise such as regional technical specialists (RTS), and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC.
- (3) Independent External Peer Review (IEPR). IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is

warranted. For clarity, IEPR is divided into two types, Type I is generally for decision documents and Type II is generally for implementation documents.

A Type II IEPR (SAR) shall be conducted on design and construction activities for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life. This applies to new projects and to the major repair, rehabilitation, replacement, or modification of existing facilities. External panels will review the design and construction activities prior to initiation of physical construction and periodically thereafter until construction activities are completed. The review shall be on a regular schedule sufficient to inform the Chief of Engineers on the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring that good science, sound engineering, and public health, safety, and welfare are the most important factors that determine a project's fate.

2. PROJECT INFORMATION

- a. **Project.** The project is a flood risk management project to reduce flooding along Island Creek, Logan, WV. The project was authorized for construction by the Water Resources Development Act of 1986, Section 401 (P.L. 99-662). The General Reevaluation Report (GRR) and Environmental Assessment were initiated in 1993; however, the project was then put on hold due to lack of non-Federal sponsorship until 1998 when local interest was renewed and additional funding was appropriated. The plan provides between 10-year and 20-year frequency flood protection and has a positive benefit-to-cost ratio. A Value Engineering Study was completed in April 2002.

General Site Location and Description. The Island Creek Project is located in Logan, West Virginia and extends from the confluence of the Guyandotte River and Island Creek to a point approximately 400 feet upstream of the confluence of Island Creek and Copperas Mine Fork, a total project distance of approximately 4,500 linear feet.

- b. **Factors Affecting the Scope and Level of Review.** The project is considered to have a low level of complexity regarding design or construction methods. While the project is a flood risk management project the federal action was not based on loss of life, only property damage.
- c. **Recommended Plan.** Major construction features of the recommended plan include increasing the width of the existing channel to a trapezoidal channel at existing grade 80 feet wide with side slopes banked 22 degrees from the horizontal. The side slopes will be protected from erosion. In conjunction with the channel modification a post and panel retaining wall (approximately 900' in length) will be constructed, a replacement bridge will be constructed, several building structures and a bridge will be demolished and removed and a sand bar at the upstream end of the creek will be excavated and disposed of offsite. In addition, riffle structures will be installed within the widened waterway, vegetation will be established in disturbed areas and access to the creek from selected embankments will be established.
- d. **In-Kind Contributions.** The Logan County Commission and the WVDHSEM agreed to serve as the non-Federal sponsors and the WVCA agreed to provide non-Federal financial support for the channel modification. The non-Federal sponsor is responsible for providing all lands, easements, rights-of-way, relocations, and disposal sites (LERRDs) for the project and required to pay at least 5% of the total project cost in cash. There are no in kind services anticipated as part of the cost share.

3. RMO COORDINATION

The review management organization will be the Risk Management Center (RMC).

4. DISTRICT QUALITY CONTROL (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). Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, and Project Delivery Team (PDT) reviews throughout the life of the project. DQC efforts will include the necessary expertise to address compliance with published Corps policy.

5. AGENCY TECHNICAL REVIEW (ATR)

- a. **General.** ATR will be managed and performed outside of the Huntington District. EC 1165-2-209 requires the RMC to serve as the RMO for this project. There shall be appropriate coordination and processing through CoPs; relevant PCXs, and other relevant offices to ensure that a review team with appropriate independence and expertise is assembled and a cohesive and comprehensive review is accomplished. The ATR shall ensure that the product is consistent 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 the results in a reasonably clear manner for the public and decision makers. Members of the ATR team will be from outside the Huntington District. The ATR lead will be from outside the Great Lakes & Ohio River Division.
- b. **Products for Review.** The original Plans & Specifications underwent an Independent Technical Review (ITR) in 2004 by the A-E, Bergmann & Associates and a QA Review by the District. The project was “put on the shelf” due to lack of funding until January 2008. After the project was revived, a new feature (AEP bridge) was added. The ATR team has reviewed the Plans & Specifications for the new scope (AEP bridge).
- c. **Required ATR Team Expertise.** ATR teams will comprise senior USACE personnel (Regional Technical Specialists (RTS), etc.), and may be supplemented by outside experts as appropriate. The disciplines represented on the ATR team will reflect the significant disciplines involved in the planning, engineering, design, and construction effort. These disciplines include geotechnical and structural. To assure independence, the leader of the ATR team is Mark S. Peterson, from CESWG. A list of the ATR members and disciplines is provided in ATTACHMENT 1. The chief criterion for being a member of the ATR team is knowledge of the technical discipline and relevant experience.
- d. **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, ASA (CW)/USACE 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 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 coordination, and lastly the agreed upon resolution. The ATR team will prepare a Review Report which includes a summary of each unresolved issue; each unresolved issue will be raised to the vertical team for resolution. Review Reports will be considered an integral part of the ATR documentation.

ATR may be certified when all ATR concerns are either resolved or referred to HQUSACE for resolution and the ATR documentation is complete. Certification of ATR should be completed, based on work reviewed to date, for the draft and final report. See ATTACHMENT 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

- a. **General.** Type I and Type II IEPRs are conducted in accordance with the guidance promulgated in EC 1165-2-209. Type I IEPRs are conducted on project studies. It is of critical importance for those decision documents and supporting work products where there are public safety concerns, significant controversy, a high level of complexity, or significant economic, environmental and social effects to the nation. However, it is not limited to only those cases and most studies should undergo Type I IEPR. In accordance with EC 1165-2-209 a Type II IEPR (SAR) shall be conducted on design and construction activities for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life. This applies to new projects and to the major repair, rehabilitation, replacement, or modification of existing facilities.
- b. **Decision on Type II IEPR.** In accordance with EC 1165-2-209 a Type II IEPR (SAR) is not required for this project. While the project is a flood risk management project the federal action was not based on loss of life, only property damage. There are no structural features such as floodwalls, I-walls or levees. Project features include increasing the width of the existing channel , a 900 feet post and panel retaining, a replacement bridge, structure demolition, and removal of a sand bar. These features are not high risk construction features. These features do not use innovative materials or techniques, unique construction sequencing, or a reduced or overlapping design construction schedule. This is a low complexity project that does not pose a significant threat to human life. Even if the project failed (bank failure, retaining wall failure, etc.) the risk of loss of life is very small. In the event of a failure the channel would be restricted, but likely still better than existing conditions.

7. REVIEW SCHEDULES AND COSTS

- a. **DQC Schedule and Cost.** The cost for DQC is included in the costs for PDT activities and is not broken out separately. DQC will occur seamless during throughout the DDR and the P&S. Quality checks and reviews occur during the development process and are carried out as a routine management practice. PDT Review of the DDR is complete.
- b. **ATR Schedule and Cost.** The cost for ATR of the Plans and Specifications (AEP bridge) was \$10,000. ATR of the P&S is complete.

8. PUBLIC PARTICIPATION

Public meetings, workshops, public announcements, literature and close cooperation with local government and citizens have been and will continue to be important to the implementation of the project. The following summarizes public involvement since the reevaluation study update began in October 1999:

January 13, 2000 Project Briefing for Logan County Commission (LCC)
February 7, 2000 Project Briefing for LCC (Open to Public)
February 9, 2000 Public Meeting Logan County Collect Project Impact Data
May 31, 2001 Project Briefing West Virginia Soil Conservation Agency (WVSCA) and LCC
December 11, 2002 Project Briefing WVSCA and LCC
January 23, 2003 Project Briefing LCC (Open to Public)
June 29, 2004 Assistant Secretary of Army Project Tour and Public Meeting
October 25, 2005 Project Briefing and LCC (Open to Public)
December 7, 2006 Project Briefing and LCC (Open to Public)
September 10, 2007 Project Briefing and LCC (Open to Public)

The Huntington District has coordinated the Local Protection Project and Environmental Assessment for the Island Creek Basin with the U.S. Fish and Wildlife Services and the West Virginia Department of Natural Resources. The following agencies have received project plans and NEPA documents for review and comment:

U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
West Virginia Department of Natural Resources
West Virginia Department of Transportation
West Virginia State Historic Preservation Office

Additional public meetings will be conducted, as necessary during the construction phase. Information will also be conveyed to the public through the use of press releases and media interviews as necessary and through the use of posting information to the Huntington District's web site. The project manager will also schedule office hours at the project site after construction is initiated. There was no formal public review for the DDR, plans and specifications and construction phases. However, the cost share partner, Logan County Commission and the WVCA, has reviewed the DDR and plans and specifications as part of the PDT. Upon MSC approval of this Review Plan, the Review Plan will be posted on the Huntington District Internet for Public Review (http://www.lrh.usace.army.mil/approved_review_plans_rps).

9. MSC APPROVAL

The Great Lakes and Ohio River Division is responsible for approving the review plan. Approval is provided by the MSC Commander. The commander's approval should reflect vertical team input (involving district, MSC, and HQUSACE members) as to the appropriate scope and level of review for the project. Like the PMP, the review plan is a living document and may change as the study progresses. Changes to the review plan should be approved by following the process used for initially approving the plan. In all cases the MSCs will review the decision on the level of review and any changes made in updates to the project.

10. REVIEW PLAN POINTS OF CONTACT

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

- [REDACTED], Huntington District Project Manager 304-399-5170
- [REDACTED], Huntington District Lead Engineer 304-399-5654
- [REDACTED], Huntington District Chief, Quality Management 304-399-5087

ATTACHMENT 1: TEAM ROSTERS

TABLE 1: Product Delivery Team		
Functional Area	Name	Office
Project Manager	[REDACTED]	CELRH
Lead Engineer	[REDACTED]	CELRH
Formulation	[REDACTED]	CELRH
Real Estate	[REDACTED]	CELRH
Contracting	[REDACTED]	CELRH
Operations	[REDACTED]	CELRH
Public Affairs	[REDACTED]	CELRH
Economics	[REDACTED]	CELRH
Cost Engineering	[REDACTED]	CELRH
Hydrology and Hydraulics	[REDACTED]	CELRH
Structural	[REDACTED]	CELRH
Mechanical Engineer	[REDACTED]	CELRH
Archeology	[REDACTED]	CELRH
Geotechnical	[REDACTED]	CELRH
Construction	[REDACTED]	CELRH
Environmental	[REDACTED]	CELRH
HTRW	[REDACTED]	CELRH
A/E	[REDACTED]	Bergmann & Associates
Sponsor	[REDACTED]	Logan County

TABLE 2: Agency Technical Review Team		
NAME	DISCIPLINE	OFFICE
[REDACTED]	Structural /Team Leader	CESWG
[REDACTED]	Geotechnical	CENWO

Vertical Team

The Vertical Team consists of members of the HQUSACE and Great Lakes & Ohio River Division Offices. The Vertical Team plays a key role in facilitating execution of the project in accordance with the PMP. The Vertical Team is responsible for providing the PDT with Issue Resolution support and guidance as required. The Vertical Team will remain engaged seamlessly throughout the project via monthly telecons as required and will attend In Progress Reviews and other key decision briefings as required. The District Liaison [REDACTED], CELRD-PDS-H, is the District PM’s primary Point of Contact on the Vertical Team.

ATTACHMENT 2: ATR CERTIFICATION

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