

# **DECISION DOCUMENT (Feasibility Study) REVIEW PLAN**

**Little Chartier's Creek, Washington County, Pennsylvania**

**Section 14 Project**

**Pittsburgh District**

**MSC Approval Date:**

13-July-2015

**Last Revision Date:**

18-June-2015



**US Army Corps  
of Engineers** ®

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## 1. PURPOSE AND REQUIREMENTS

- a. **Purpose.** This Review Plan defines the scope and level of peer review for the Little Chartiers Creek Section 14, Washington County, Pennsylvania **feasibility study** decision document.

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, 107, 111, 204, 206, 208 and 1135 project decision documents, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined in EC 1165-2-214 Civil Works Review Policy. A Section 14, 107, 111, 204, 206, 208 or 1135 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.

### c. References

- (1) Engineering Circular (EC) 1165-2-214, Civil Works Review, 15 Dec 2012
- (2) Director of Civil Works' Policy Memorandum #1, 19 Jan 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 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 Great Lakes and Ohio River Division (LRD) for this study. LRD maintains authority and oversight, but delegates the coordination and management of decision document ATR to the District, the Pittsburgh District (LRP) for this study. LRP will post the MSC approved review plan on its public website. A copy of the approved review plan (and any updates) will be provided to the appropriate Planning Center of Expertise to keep the PCX apprised of requirements and review schedules.

## 3. STUDY INFORMATION

- a. Decision Document.** The Little Chartiers Creek Streambank Protection Section 14 decision document for the feasibility study will be prepared in accordance with ER 1105-2-100, Appendix F. The approval level of the decision document (if policy compliant) is LRD . An Environmental Assessment (EA) will be prepared along with the decision document, using the Programmatic EA titled, "Programmatic Environmental Assessment – Regional Emergency Streambank Protection Program with Special Conditions Pursuant to Section 14 of the 1946 Flood Control Act as Amended" dated August 2006.
- b. Study/Project Description.** This study is to determine the feasibility of protecting a portion of the north-bound lane shoulder of Linden Creek Road (SR1023) along Little Chartiers Creek from continued streambank erosion. Pennsylvania Department of Transportation is the study sponsor. The project is located along Little Chartiers Creek's left-descending bank along Linden Creek Road (SR1023), near the Walker Road intersection, immediately southeast of Canonsburg, PA. Erosion is

occurring over a distance of about 300 feet. At the site, the typical streambank is 9-ft in width, with a 4-ft drop from the top of bank to the surface of water, and a 7-ft drop to stream bed. A guide rail runs 1-2 ft from the edge of road along the project's length. A similar situation is said by the sponsor, PennDOT, to exist 1,200 ft downstream, along 100 ft of the left descending bank, although they did not consider that area as imminently threatened. Two alternatives are being considered initially, beyond *No Action*: **Alternative A** (*bank stabilization using gabions*) and **Alternative B** (*bank protection using Bendway weirs and bioremediation*).

With no action, future erosion of the streambank could lead to structural failure of the road. The effects would include loss of a heavily-used state road, with annual detour costs in the millions to avoid potential threats to human safety (e.g., drivers) and the environment (erosion could negatively affect water quality and the aquatic biome, including fish).

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

This study is considered routine without any significant factors requiring any special treatment such as Independent External Peer Review. The Governor of Pennsylvania has not requested any peer review by independent experts. The project is situated far enough away from any population so as to not constitute a threat to human safety. No novel construction methods are required by any alternatives and therefore should not present any challenges to a competent construction firm. Due to the small footprint and lack of public interest expressed to date, the project is not likely to involve significant public dispute concerning size, nature or effects. The simple nature of either alternative (i.e., gabions or Bendway weirs with bioremediation) should not require any specialized redundancy, resiliency, and/or robustness, unique construction sequencing, or complicated construction schedule. The only factor that could conceivably complicate any construction is if facility failure is occurring such that special measures would need to be taken to ensure that project implementation would not exacerbate facility failure. The likelihood of this occurring is deemed to be very small and not worthy of consideration in any protection alternative.

- 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. No in-kind products or analyses are anticipated to be provided by the sponsor, based on previous discussions.

**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.

Due to the uncomplicated nature of the report, all DQC will be performed by either the immediate supervisors of the Project Delivery Team (PDT), or one of their experienced senior professionals. DQC comments will be documented using DrChecks (ProjNet) software.

**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 Lead will be from outside the home MSC.

- a. **Products to Undergo ATR.** ATR will be performed throughout the study in accordance with the regional Quality Management System. The ATR shall be documented and discussed at the Alternative Formulation Briefing (AFB) milestone. Certification of the ATR will be provided prior to the District Commander signing the final report. Products to undergo ATR include the feasibility report and appendices.
- b. **Required ATR Team Expertise.** The ATR Review team for this study consists of personnel from outside of the Pittsburgh District in the disciplines of civil, H&H, geotechnical and cost engineering, plan formulation/environmental compliance and real estate. Some disciplines were combined into one reviewer due to the simplistic nature of the project alternatives and small footprint. No economics reviewer is required as project justification does not require any comparison of benefits with costs. No operations disciplines are necessary due to the stationary nature of the alternatives. Alternative costs are critical for Section 14 project evaluations; therefore the cost reviewer will be from the Walla-Walla District Center of Expertise.

| ATR Team Disciplines     | Expertise Required  |
|--------------------------|---|
| ATR Lead                 | 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. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc). The ATR Lead MUST be from outside the Pittsburgh District |
| Planning                 | The Planning reviewer should be a senior water resources planner with experience in Section 14 CAP studies  |
| H&H Engineering          | The H&H reviewer should be a senior H&H engineer, familiar with small stream flows and HEC-RAS.   |
| Civil Engineering        | The civil engineering reviewer should have experience in the design of bank stabilization features of civil works projects.   |
| Geotechnical Engineering | The geotechnical engineering reviewer should have experience in design of bank stabilization features of civil works projects.  |
| Cost Engineering         | Cost MCX Staff or a Cost MCX Pre-Certified Professional as assigned by the Walla Walla Cost Engineering Mandatory Center of Expertise with experience preparing Sec. 14 cost estimates.   |
| Environmental            | The Environmental Reviewer will be a senior environmental professional with NEPA experience.  |
| Real Estate              | The Real Estate reviewer shall have experience with Section 14 or similar studies.  |

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 EC 1165-2-214 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 3.

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

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

- For this Section 14 study, a Type I IEPR is not required as all criteria listed in paragraph 1.b are met.
  - For this Section 14 study, a Type II Safety Assurance Review is not expected to be required for design or construction activities for the plan identified as viable, as there are no known potential hazards associated with any viable project that pose a significant threat to human life.
- 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.

## **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 MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION**

All decision documents shall be coordinated with the Cost Engineering MCX, located in the Walla Walla District. For decision documents prepared under the model Programmatic Review Plan, Regional cost personnel that are pre-certified by the MCX, and assigned by the Cost Engineering MCX, will conduct the cost engineering ATR. The MCX will provide the Cost Engineering MCX certification. The Cost Engineering MCX will make the selection of the cost engineering ATR team member. The cost to complete the certification is estimated at \$3000.

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

In regard to model certification, no planning models will be used in the plan formulation or economic and environmental evaluation of alternatives for this study. HEC-RAS will, however, be used for H&H.

**10. REVIEW SCHEDULES AND COSTS**

- a. **ATR Schedule and Cost.** The ATR results up to this point will be evaluated and the report revised as appropriate. The revised report will then be reviewed by the new ATR team. The cost to complete the ATR is estimated at \$9000 (assuming \$1000/day/reviewer for initial comments and half this effort for back-checks) and will take about four weeks (2 weeks for initial review, 1 week for PDT evaluation of ATR comments, and 1 week for ATR back-checks).
- b. **Type I IEPR Schedule and Cost.** Not applicable.
- c. **Model Review Schedule and Cost.** Not applicable.

**11. PUBLIC PARTICIPATION**

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities, such as the Pennsylvania Department of Environmental Protection and FEMA, will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments. A Notice of Availability of the Environmental Assessment will be broadcast on the District website to inform the public.

**12. 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 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. 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 1165-2-214 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.

**13. REVIEW PLAN POINTS OF CONTACT**

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

██████████, Study Manager ██████████ – ██████████

**ATTACHMENT 1: TEAM ROSTERS**

**Project Delivery Team**

Planning/PDT Lead: [REDACTED]  
Planning/Environmental: [REDACTED]  
Planning/Economics: [REDACTED]  
H&H: [REDACTED]  
Civil Engineering: [REDACTED]  
Geotechnical: [REDACTED]  
Cost Engineering: [REDACTED]  
Real Estate: [REDACTED]

**District Quality Control Team**

Plan Formulation and Economics: [REDACTED]  
Environmental: [REDACTED]  
H&H: [REDACTED]  
Civil Engineering: [REDACTED]  
Geotechnical: [REDACTED]  
Cost Engineering: [REDACTED]  
Real Estate: [REDACTED]

**Agency Technical Review Team:**

Lead & Plan Formulation: [REDACTED] [REDACTED] [REDACTED]  
Environmental: [REDACTED], [REDACTED]  
H&H: [REDACTED]  
Civil Engineering & Geotechnical: [REDACTED]  
Cost Engineering: [REDACTED]  
Real Estate: [REDACTED]

**ATTACHMENT 2: DISTRICT QUALITY CONTROL CERTIFICATION**

**Little Chartiers Creek, Washington County, Pennsylvania  
Section 14 Project**

The Functional Team (i.e., PDT) and District Quality Control Team members listed below have reviewed this Section 14 project's Review Plan (RP) and consider it appropriate.

**Functional Team Members**

**Review Team Members**



**ATTACHMENT 3: 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 1165-2-214. 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 (or

Date

Delegate)

[Office Symbol](#)

**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 4: REVIEW PLAN REVISIONS**

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

**ATTACHMENT 5: 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                              |
| 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                                  |
| LRR         | Limited Reevaluation Report                     | SAR         | Safety Assurance Review  |
| MSC         | Major Subordinate Command                       | USACE       | U.S. Army Corps of Engineers                                   |