

**REVIEW PLAN**  
For  
**FLOOD RISK MANAGEMENT**  
**FOR**  
**DICKENSON COUNTY PUBLIC SCHOOLS**  
LEVISA FORK BASIN  
DICKENSON COUNTY, VIRGINIA  
SECTION 202 NONSTRUCTURAL PROJECT  
*Huntington District*  
*October 2010*



US Army Corps  
of Engineers ®

**REVIEW PLAN**  
***FLOOD RISK MANAGEMENT***  
***FOR***  
***DICKENSON COUNTY PUBLIC SCHOOLS***  
***DESIGN DOCUMENT REPORT***

**TABLE OF CONTENTS**

1. PURPOSE AND REQUIREMENTS	1
2. PROJECT INFORMATION	2
3. RMO COORDINATION	3
4. DISTRICT QUALITY CONTROL (DQC)	3
5. AGENCY TECHNICAL REVIEW (ATR)	3
6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)	4
7. REVIEW SCHEDULES AND COSTS	5
8. PUBLIC PARTICIPATION	5
9. MSC APPROVAL	5
10. REVIEW PLAN POINTS OF CONTACT	6

ATTACHMENT 1: TEAM ROSTERS

ATTACHMENT 2: ATR CERTIFICATION

## 1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This Review Plan defines the scope and level of peer review for the Flood Risk Management for Dickenson County Public Schools Design Document Report.

### 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) Dickenson County Nonstructural Flood Damage Reduction Project, Project Management Plan
- (4) Engineer Federal Acquisition Regulation Supplement (EFARS), Appendix Q Section 73-000 et. seq., 1 October 1984

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 Dickenson County Nonstructural Project area includes the parts of Dickenson County, Virginia that are subject to flood damage from a reoccurrence of the April 1977 flood within the Levisa Fork Basin, which includes the Russell Fork, the McClure River, the Pound River, the Cranes Nest River and their tributaries, and the incorporated areas of Haysi and Clintwood. All structures eligible for this voluntary program are at or below the April 1977 flood elevation.

The Dickenson County Public Schools (DCPS) owns four public schools within the Dickenson County Nonstructural Project area that are eligible for flood risk management measures. The schools eligible for flood risk management measures are Ervinton High School, Haysi High School, Clinchco Elementary School, and Sandlick Elementary School.

The Relocations DDR compares costs to implement flood risk management measures to acquisition by relocation where applicable. For each school that cannot be protected in place, acquisition by relocation is presented. The purpose of the DDR is to establish the Government's contribution toward the flood risk management of existing project schools and to obtain authority to negotiate a relocations contract with the DCPS.

- b. **General Site Location and Description.** Dickenson County is located in the southwestern portion of Virginia. It is bordered by Wise County, Virginia to the southwest; Russell County, Virginia to the south; Buchanan County, Virginia to the east; and Pike County, Kentucky to the north. The total land area in Dickenson County is approximately 332 square miles. The population of Dickenson County was 16,395 in 2000. The county seat of Dickenson County is the Town of Clintwood.

Dickenson County is primarily in the Russell Fork drainage basin. The Russell Fork flows into the Levisa Fork at Millard, Kentucky, downstream from the U.S. Army Corps of Engineers' reservoir at Fishtrap Lake. The Levisa Fork flows into the Big Sandy River, which begins at the confluence of the Levisa Fork and Tug Fork at Louisa, Kentucky. The Sandy Ridge runs along the southern borders of Dickenson County. A very small portion of Dickenson County is south of the ridge top and is in the Tennessee River drainage basin.

The project covers all areas of Dickenson County within the floodplain of a flood of the severity of 1977 event. This includes the floodplains of the Russell Fork, the McClure River, Russell Prater Creek, Fryingpan Creek, Lick Creek, McClure Creek, Mill Creek, Open Fork, Spring Fork, Indian Creek, and Cane Creek. There are 73 miles of streams in the floodplains of these streams. The main communities studied are Haysi and Clinchco. Haysi is incorporated, while Clinchco is not. Clintwood is the county seat and its largest community, but the Town of Clintwood did not experience flooding of the first floors of its structures in the 1977 flood event, therefore, no extensive studies were conducted there.

- c. **Factors Affecting the Scope and Level of Review.** The Relocations DDR compares costs to implement flood risk management measures to acquisition by relocation for the Dickenson County Public Schools (DCPS) eligible for the Dickenson County Nonstructural Project. For each school that cannot be protected in place, acquisition by relocation is the only option. The purpose of the DDR is to establish the Government's contribution toward the flood risk management of existing project schools and to obtain authority to negotiate a relocations contract with the DCPS. It is anticipated that a relocations contract will be negotiated between the DCPS and the Government and language in the contract will indicate that the DCPS will be responsible for everything required to construct replacement schools, including, but not limited to, land acquisition, engineering, design, construction, and the demolition of the existing schools. The Government will oversee work to insure it is in conformance with an anticipated relocation contract between DCPS and the Government.
- d. **Recommended Plan.** The Government plan for flood risk management of the Dickenson County Schools includes the relocation of Ervinton High School, the relocation of Sandlick Elementary School, the relocation of Haysi High School Educational Buildings and Athletic Field House, and the construction of a ringwall at Clinchco Elementary School. However, it is anticipated that Clinchco Elementary School will be consolidated with another school and, therefore, design and construction of the ringwall is unlikely.
- e. **In-Kind Contributions.** The Non Federal Cost Share Sponsor for this project is the Dickenson County Board of Supervisors.

### 3. RMO COORDINATION

The review management organization will be the Great Lakes & Ohio River Division (MSC).

### 4. DISTRICT QUALITY CONTRL (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 MSC 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 ATR team will be reviewing the Relocations Design Documentation Report.
- 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 civil, cost engineering and relocations. To assure independence, the leader of the ATR team is Jimmy Matthews from CESAJ. 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.** 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.** A Type II IEPR (SAR) is not required for this project. The Corps of Engineers will not be designing or constructing any flood damage reduction features. The DCPS will be responsible for all work required for the construction of relocated schools in accordance with an anticipated relocation contract between the DCPS and the Government. The DCPS will be responsible for land acquisition, preparation of plans and specifications, site development and construction, and demolition of the existing schools. The Government shall be responsible to insure that the DCPS fulfills their obligations included in the anticipated relocation contract and satisfies the requirements of the Dickenson County Nonstructural Project.

**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. 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 including resolution of all comments.
- b. **ATR Schedule and Cost.** The estimated cost for ATR is \$30,000. ATR will occur during key stages in the DDR. The ATR team is invited to take part in weekly team meetings and monthly vertical team meetings. ATR of the DDR is complete including resolution of all comments.

ATR Milestones	
50% DDR Review	Complete
100% DDR Review	Complete

**8. PUBLIC PARTICIPATION**

The Government has not held any public meetings during the preparation this Relocations DDR. The DCPS has held public meetings, with Government representatives in attendance, to discuss the Dickenson County Nonstructural Project and the effects on their schools.

**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-[REDACTED]
- [REDACTED], Huntington District Lead Engineer 304-399-[REDACTED]
- [REDACTED], Huntington District Chief, Quality Management 304-399-[REDACTED]



**ATTACHMENT 1: TEAM ROSTERS**

<b>TABLE 1: Product Delivery Team</b>		
<b>Functional Area</b>	<b>Name</b>	<b>Office</b>
Project Manager	[REDACTED]	CELRH
Lead Engineer / Civil Design	[REDACTED]	CELRH
Real Estate	[REDACTED]	CELRH
Office of Counsel	[REDACTED]	CELRH
Cost Engineering	[REDACTED]	CELRH
Hydrology and Hydraulics	[REDACTED]	CELRH
Structural	[REDACTED]	CELRH
Geotechnical	[REDACTED]	CELRH
Archeology	[REDACTED]	CELRH
Environmental	[REDACTED]	CELRH
HTRW	[REDACTED]	CELRH
Planning	[REDACTED]	CELRH
Planning	[REDACTED]	CELRH
Planning	[REDACTED]	CELRH

<b>TABLE 2: Agency Technical Review Team</b>		
<b>NAME</b>	<b>DISCIPLINE</b>	<b>OFFICE</b>
[REDACTED]	Team Leader	CESAJ
[REDACTED]	Civil/Site/Relocations	CELRN
[REDACTED]	Cost Engineering	CELRN

## **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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