

#### DEPARTMENT OF THE ARMY

NORTH ATLANTIC DIVISION, US ARMY CORPS OF ENGINEERS FORT HAMILTON MILITARY COMMUNITY BROOKLYN, NEW YORK 11252-6700

DEC 1 4 2012

**CENAD-PD-PP** 

MEMORANDUM FOR Commander, Norfolk District, ATTN: CENAO-WR-P

SUBJECT: Review Plan Approval for the Chowan County, North Carolina Potential Aquatic Ecosystem Restoration Feasibility Study

- 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 Ecosystem Planning Center of Expertise of the Mississippi Valley Division, which is the lead office to execute this plan. For further information, contact Ms. Jodi Creswell at 309-794-5448. The Review Plan currently does not include independent external peer review and will be revised after a risk-informed decision analysis has been made.
- 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

# **DRAFT REVIEW PLAN**

Potential Aquatic Ecosystem Restoration Project, Chowan County, NC
Feasibility Report
Norfolk District

MSC Approval Date: <u>Pending</u> Last Revision Date: <u>N/A</u>



# **REVIEW PLAN**

# Potential Aquatic Ecosystem Restoration Project, Chowan County, NC Feasibility Report

# **TABLE OF CONTENTS**

1.	PURPOSE AND REQUIREMENTS	1
2.	REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION	1
3.	STUDY INFORMATION	
4.	DISTRICT QUALITY CONTROL (DQC)	3
5.	AGENCY TECHNICAL REVIEW (ATR)	3
6.	INDEPENDENT EXTERNAL PEER REVIEW (IEPR)	6
7.	POLICY AND LEGAL COMPLIANCE REVIEW	6
8.	COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION	7
9.	MODEL CERTIFICATION AND APPROVAL	7
10.	REVIEW SCHEDULES AND COSTS	7
11.	PUBLIC PARTICIPATION	
12.	REVIEW PLAN APPROVAL AND UPDATES	8
13.	REVIEW PLAN POINTS OF CONTACT	8
ATT	ACHMENT 1: TEAM ROSTERS	9
ATT	ACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS	10
ATT	ACHMENT 3: REVIEW PLAN REVISIONS	11
ATT	ACHMENT 4: ACRONYMS AND ABBREVIATIONS	12

### 1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the potential Ecosystem Restoration Feasibility Study on the Chowan River that may result from the Chowan River Basin, North Carolina and Virginia Watershed Reconnaissance Study.

#### b. References

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, Change 1, 31 Jan 2012
- (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
- 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). 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 Ecosystem Restoration 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. This review plan has been prepared for the potential Ecosystem Restoration Feasibility Study that may result from the Chowan River Basin, North Carolina and Virginia Watershed Reconnaissance Study. This Feasibility Study would investigate ecosystem restoration needs and opportunities present on the Chowan River in the vicinity of Chowan County, North Carolina. The Feasibility Report would recommend opportunities for action in the study area. The Feasibility Study will be approved by the home MSC and HQUSACE. Following MSC and HQUSACE approval, this project will require congressional authorization before construction of the project. At this time, it is assumed that an EA would satisfy NEPA requirements for this study and that an EIS will not be needed.

b. Study/Project Description. During the Chowan River Basin Watershed Study, a multitude of various problems and opportunities were identified in the study area that could be addressed by any combination of navigation, flood risk management, and ecosystem restoration projects. One of the problems identified during the Reconnaissance study was abundance of an invasive aquatic plant species called hydrilla in the Chowan River. Hydrilla exists and is considered a problem throughout the Chowan River, but the residents and local government of Chowan County in North Carolina are particularly concerned about the impact of the plant on the portion of the river that flows directly adjacent to their county. Hydrilla is an invasive freshwater plant species that has become persistent in waterways throughout the southeast. Hydrilla is the most abundant along the shoreline and in shallow areas of rivers and lakes. In addition to the damage it causes to freshwater ecosystems, hydrilla causes damage to boat motors and impacts other recreational uses of rivers and lakes. It has become such an issue in Chowan County that some residents and businesses have had no choice other than to take matters into their own hands and have spent thousands of dollars every year on herbicide applications in an attempt to eradicate and reduce the spread of the plant in the Chowan River. The goal of an ecosystem restoration project in the Chowan River would be to remove as much hydrilla as possible and replant native aquatic plant species in order to restore the Chowan River's ecosystem and reduce the potential for hydrilla to grow there in the future. As this study has not yet been initiated, there is not a recommended plan or estimated cost for an ecosystem restoration project. At this time, the Norfolk District PDT is working with Chowan County to identify any other entities (state of North Carolina and neighboring counties) that may also wish to be costsharing sponsors on this project.

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

- Hydrilla is extremely pervasive and has already spread throughout most of the Chowan River. The challenge of this study will not be in finding ways to eliminate it from the study area, but in preventing it from returning to the study area once it has been removed. Permanent eradication of hydrilla in the study area would be virtually impossible if hydrilla still exists throughout the rest of the river. However, because hydrilla has become such a widespread issue, there is a large quantity of research on the subject and there are many people experimenting with ways to eradicate it.
- The biggest potential risk for this project would be the return of hydrilla to the study area. As with any project, ecosystem restoration or not, there must be a comprehensive monitoring and adaptive management plan that allows for the project to continue to be successful despite changing conditions following initial construction. Due to the nature and pervasiveness of hydrilla in the Chowan River, this project in particular would need a very thorough and robust monitoring and adaptive management plan in order to prevent hydrilla from returning.
- This project would not be justified by life safety. The purpose of the project is the restoration of the Chowan River and non-performance of this project would not impact human life and/or safety in any way.
- It is not expected that the governor of North Carolina would request IEPR for this project.
- This project is not likely to involve significant public dispute as to the size, nature, or effects. Hydrilla has become such an issue in the study area that the project would be widely supported by residents, non-governmental organizations, and local governments.
- This project is not likely to involve significant public dispute as to the economic cost or environmental benefits. Hydrilla has become such an issue in the study area that the project would be widely supported by residents, non-governmental organizations, and local governments. Additionally, local governments, environmental groups, and residents in the

- study area have all spent a significant amount of money in order to reduce the amount of hydrilla in the river and would support a project that would eliminate or lessen this cost burden.
- 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. Hydrilla has been a regional problem for years and it is well understood how the plant spreads and can be removed. Additionally, the Norfolk District has experience with aquatic ecosystem restoration projects and has completed similar studies.
- The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule.
- d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The non-Federal sponsor intends to provide in-kind services as a portion of their cost share if possible, but the extent of these services provided will not be known until the study has begun and a Feasibility Cost Sharing Agreement has been executed.

# 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.** The DQC Report will include the comments received during internal review and their responses, technical review meeting notes and a Technical and Legal Review Certification.
- **b. Products to Undergo DQC.** The Feasibility Report, appendices, and Environmental Assessment will undergo DQC.

## 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.** The Feasibility Report, appendices, and Environmental Assessment will undergo ATR before submission for the Alternatives Formulation Briefing. These same documents will undergo ATR again for the final draft submittal and final submittal to HQUSACE.

**b.** Required ATR Team Expertise. It is estimated that eight (seven if the ATR lead is also a reviewer) reviewers are needed for the ATR. Please refer to the following table for the types of expertise needed for the ATR.

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).
Plan Formulation	The Planning reviewer should be a senior water resources planner
	with experience in planning for aquatic ecosystem restoration
	projects and in preparing decision documents for ecosystem
	restoration projects.
Economics	The economics reviewer should be a senior professional with
	experience in the analysis methods used for ecosystem
	restoration projects.
Environmental Resources	The environmental resources reviewer should be a senior
	professional with experience in aquatic ecosystem restoration
	projects that involve invasive plant species, preparing decision
	documents for ecosystem restoration projects, and the
	production of Environmental Assessments.
Cultural Resources	The cultural resources reviewer should be a senior cultural
	resources professional with experience in ecosystem restoration
	projects in the cultural resource coordination necessary for this
	type of study.
Hydraulic Engineering	The hydraulic engineering reviewer should be a senior
	professional and have a thorough understanding of river
	hydrology, enclosed channel systems, and engineering for aquatic
	ecosystem restoration projects.
Cost Engineering	The cost engineering reviewer should be a senior cost engineer
	certified by the Cost Engineering Directory of Expertise (DX),
	located in the Walla Walla District.
Real Estate	The real estate reviewer should be a senior real estate
	professional with experience in preparing Real Estate Plans
	involving property acquisition and potential temporary
	construction easements.

- 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 be 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 decision on IEPR will be deferred until the study has been initiated and is better defined. This recommendation will be made depending on whether the study that will impact human life or safety or meet any of the other mandatory triggers for IEPR.
- 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. At this time, it is unknown what planning models are anticipated to be used in the development of the decision document. The use of models will be addressed once the study has been initiated.
- **b. Engineering Models.** At this time, it is unknown what engineering models are anticipated to be used in the development of the decision document.

#### 10. REVIEW SCHEDULES AND COSTS

- **a. ATR Schedule and Cost.** Once a study has been initiated, the estimated schedule for ATR including any milestone reviews (e.g., IPRs, FSM, AFB, Draft Report, Final Reports) and any interim technical product reviews or additional MSC required reviews will be provided.
- b. Type I IEPR Schedule and Cost. Not Applicable
- **c. Model Certification/Approval Schedule and Cost.** Model certification will be addressed should this study require the use of any model that requires approval.

#### 11. PUBLIC PARTICIPATION

Public meetings will be held when needed to communicate with the non-Federal sponsor and when public coordination is required for compliance with Corps and Environmental policies.

## 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:

- Rachel Haug, Planning Technical Team Lead, Chowan River Basin Watershed Study: 757-201-7589
- Roselle Henn, Environmental Team Leader: 347-370-4562
- Sue Ferguson, ECO-PCX: 615-736-7192

# **ATTACHMENT 1: TEAM ROSTERS**

Team rosters will be added once available.

NOTE: Attachment 1 should include rosters and contact information for the PDT, ATR team, vertical team (including RMO, MSC, and RIT), OEO point(s) of contact (if applicable). The credentials and years of experience for the ATR team should also be included when available. DELETE THIS TEXT BOX BEFORE FINALIZING THE REVIEW PLAN.

## ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS

#### COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the <a href="type of product">type of product</a> for <a href="type of product">project name and location</a>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks\*\*

The ATR have been resolved and the comments have been closed in DrChecks\*\*

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\*\*

SIGNATURE	
<u>Name</u>	Date
ATR Team Leader	
Office Symbol/Company	
SIGNATURE	
Name	Date
Project Manager	
Office Symbol	
SIGNATURE	
Name	Date
Architect Engineer Project Manager <sup>1</sup>	
Company, location	
SIGNATURE	
Name Die Maria 1000 Die 1000 D	Date
Review Management Office Representative	
Office Symbol	
CERTIFICATION OF AGENCY TECH	INICAL REVIEW
Significant concerns and the explanation of the resolution are as follows:	ws. Describe the major technical concerns and
their resolution.	Beserve the major recurred concerns and
As noted above, all concerns resulting from the ATR of the project ha	ve been fully resolved.
SIGNATURE	
Name	Date
Chief, Engineering Division	
Office Symbol	
SIGNATURE	
Name	Date
Chief, Planning Division	Date
Office Symbol	
And the state of t	
<sup>1</sup> Only needed if some portion of the ATR was contracted	

# **ATTACHMENT 3: REVIEW PLAN REVISIONS**

Revision Date	Description of Change	Page / Paragraph Number

NOTE: Revisions to the Review Plan since it was last approved by the MSC Commander should be documented in Attachment 3. Significant changes (such as a change in the level or scope of review) require re-approval by the MSC Commander following the process used for initially approving the plan. DELETE THIS TEXT BOX BEFORE FINALIZING THE REVIEW PLAN.

# **ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS**

NOTE: This attachment is optional. If included, it should define the acronyms used in the Review Plan. Acronyms used in this template or that might typically be used in a review plan (to be modified as necessary for specific review plans) are provided in the table below. DELETE THIS TEXT BOX BEFORE FINALIZING THE REVIEW PLAN.

<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	ОМВ	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/MSC	The District or MSC 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