DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, U.S. ARMY CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

CEPOD-PDC

30 October 2012

MEMORANDUM FOR COMMANDER ALASKA ENGINEER DISTRICT (CEPOA-PM-C-PL/LORRAINE CORDOVA), P.O. BOX 6898, JBER, AK 99506-0898

SUBJECT: Review Plan Approval for the Alaska Regional Ports Alaska Deep-Draft Arctic Ports Feasibility Report

1. References:

a. Engineering Circular 1165-2-209, Civil Works Review Policy, 31 January 2010, and Change 1, 31 January 2012.

b. Review Plan for the Alaska Regional Ports Alaska Deep-Draft Arctic Ports Feasibility Report, Alaska District, U.S. Army Corps of Engineers, 30 October 2012.

2. IAW reference 1.a., the enclosed Review Plan (reference 1.b.) was coordinated with the Deep Draft Navigation Planning Center of Expertise (DDN-PCX) in the Mobile District of the South Atlantic Division, which is the lead office to execute this Review Plan. For further information, contact the DDN-PCX at 251-694-3804. The Review Plan includes Type I Independent External Peer Review.

3. I approve this Review Plan. It is subject to change as circumstances require, consistent with project development under the Project Management Business Process. Subsequent significant revisions to this Review Plan or its execution will require new written approval from this office.

4. The point of contact for this memorandum is Mr. Russell Iwamura, Senior Economist, Civil Works Integration Division, at 808-835-4625 or email Russell.K.Iwamura@usace.army.mil.

Encl

GREGORY J. GUNTER
Colonel, EN
Acting Commander

REVIEW PLAN

Alaska Regional Ports
Alaska Deep-Draft Arctic Ports

Alaska District

MSC Approval Date: 30 October 2012
Last Revision Date: None

US Army Corps
of Engineers ®

REVIEW PLAN

Alaska Regional Ports
Alaska Deep–Draft Arctic Ports Feasibility Study

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan is a component of the Project Management Plan and defines the scope and level of peer review for the Alaska Regional Ports, Alaska Deep-Draft Arctic Port Feasibility Study.

b. References

(1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010 and 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
(5) Project Management Plan (PMP) for study
(6) Pacific Ocean Division (POD) and/or Alaska District (POA) Quality Management Plan(s)
(7) Any other relevant quality control/quality assurance guidance

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) and the Value Management Plan requirements in the PMBP REF 8023G and the ER 11-1-321, Change 1.

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 Deep Draft Navigation Planning Center of Expertise (DDNPCX).

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

3. STUDY INFORMATION

a. **Decision Document.** The Alaska Regional Ports, Alaska Deep–Draft Arctic Ports Feasibility Study will be a single purpose navigation study that will produce a feasibility-level report making recommendations for port development in the Arctic. If the recommendation includes a Corps action the level of approval is HQ and any construction will require specific Congressional authorization. This report would then likely require an Environmental Impact Statement. If a non-Federal only plan is identified, the approval level of the document may be lower.

b. **Study/Project Description.** This study is a collaborative and comprehensive planning effort that seeks to meet future needs for Alaska and the nation. The Alaska Regional Ports, Alaska Deep–Draft Arctic Ports Feasibility Study will identify, determine feasibility, and make recommendations on potential locations for a system of deep-draft ports on Alaska's western and northern coasts.

c. **Factors Affecting the Scope and Level of Review.** There are several factors that affect the scope and complexity and challenges of this study and potential recommendations coming from it.

- This study will involve a significant amount of stakeholder collaboration and interagency cooperation as Alaska Regional Ports, Alaska Deep–Draft Arctic Port system involves a wide range of stakeholders
- Justification for arctic deep draft ports will involve National Economic Development (NED), Regional Economic Development (RED), and Other Social Effects (OSE) factors making the economic analysis complex
- The engineering aspects of a deep-draft port are common and well known (i.e. dredging and potentially protective structures). Dredging rates are typically the most complex item and can affect cost estimating accuracy. Depending on the location, ice factors may play a role as well.
- The magnitude of project has yet to be determined which will have an effect upon the dollar amount of authorization and the associated environmental compliance documentation needed for the eventual recommendation.
- The remoteness of the locations and the effects of sea ice and other harsh conditions make planning, design, and implementation difficult.
- Life safety is not anticipated to be an issue related to the project though Arctic ports may provide a safer operating environment for vessels transiting the area

d. **In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The in-kind products and analyses to be provided by the non-Federal sponsor include: Attendance at meetings, review of interim products, coordination of stakeholder meetings, and other dissemination of information (i.e. website updates, newsletters).

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 PMP. The POA shall manage DQC.

a. **Documentation of DQC.** Documentation of DQC activities is required and should be in accordance with the POA and POD Quality Manuals.

b. **Products to Undergo DQC.** All decision documents, including cost estimates are to be prepared in accordance with the Alaska District Quality Management Plan.

c. **Required DQC Expertise.** DQC reviewers should have a minimum of 4 years experience in planning and/or design of navigation projects

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside of POA that is not involved in the day-to-day production of the project/product. ATR team members will be selected by the RMO and will be comprised of senior U.S. Army Corps of Engineers (USACE) personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside POD.

a. **Products to Undergo ATR.** ATR will be performed throughout the study in accordance with the District and POD Quality Management Plans.

b. **Required ATR Team Expertise.**

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The Planning reviewer should be a senior water resources planner with experience in port and harbor facilities. Though this is a deep draft harbor project, container shipments are

	not prevalent. Bulk commodities and support of resource extraction are the major drivers.
Economics	The Economics reviewer should be experienced in justification of navigation projects related to bulk commodity shipment, as well as, commercial fisheries, remote and subsistence harbors, and similar items.
Environmental Resources	The Environmental reviewer should be familiar with environmental issue related to Deep Draft ports and environments found in northern Pacific waters and dredge material disposal plans.
Cultural Resources	Cultural resources reviewer may be able to be encapsulated by an environmental reviewer with adequate experience in cultural resource coordination and processes.
Coastal/Hydraulics Engineering	The coastal/Hydraulics and Hydrology (H&H) reviewer should be experience in the design of General Navigation Features (GNF) that include dredging, protective structures, and the various model and inputs used to develop these designs
Geotechnical Engineering	The Geotechnical reviewer should be experienced in the geotechnical sampling and analysis related to the design and construction of deep draft navigation projects.
Cost Engineering	The Cost reviewer should be experienced in the cost engineering related to the design and construction of deep draft navigation projects especially Corp of Engineers Dredge Estimating Program (CEDEP) and other related cost engineering tools.
Real Estate	The Real Estate reviewer should be experienced in deep draft issue such as determinations of navigation servitude

*Note:*_The ATR team members for this study and a brief description of their credentials will be included in Attachment 1 once they are selected.

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 Project Delivery Team (PDT) response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes POA, the RMO, POD 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 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 determination regarding whether or not IEPR is necessary for this study cannot be made at this time. If a recommendation comes forth as part of the study that meet the typical IEPR criteria (i.e. a large port with significant dredging, protective structures, and complex environmental issues), IEPR will be done. If, as a result of the study, a recommendation comes forth that does not require Federal involvement (i.e. a port facility only needing upland facilities) no IEPR will be required. Until potential plans are identified and scope determined, this review plan will assume IEPR will be needed.

b. **Products to Undergo Type I IEPR.** These would be the feasibility decision document, related environmental documentation, and technical appendices.

c. **Required Type I IEPR Panel Expertise.** The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-209, Appendix D. Until such time as a tentatively recommended plan comes forth, the determination of the expertise required for an IEPR is unknown though it would be expected IEPR reviews would likely include economics, design of coastal structures, planning, and cost engineering. Once the tentatively selected plan is identified, the list of expertise required to conduct the IEPR of the plan will be included in this sections. The IEPR team members carrying out the review and a brief description of their credentials will be included in Attachment 1 once they are selected.

d. **Documentation of Type I IEPR.** Using DrChecks, panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The

OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- 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; 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.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

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 POD 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.** Use of unapproved or uncertified models is not expected at this time. HarborSim, IWR Plan - CE/ICA, and IWR Plan - MCDA may be utilized in the development of the plan. The names of the models to be used, a brief description of the models and how they will apply in the study, and their certification/approval status will be included in this section when they are identified. Should spreadsheet models be used in the study, appropriate coordination and approval for use will be obtained through the DDNPCX.

b. **Engineering Models.** The following engineering models are anticipated to be used in the development of the decision document: ADCIRC and STWAVE.

Model Name and Version	Brief Description of the Model and How It will be Applied in the Study	Approval Status
ADCIRC	The Advanced Circulation Model (ADCIRC), developed by universities in cooperation with ERDC, is a system of computer programs for solving time dependent, free surface circulation and transport problems in two and three dimensions. These programs utilize the finite element method in space allowing the use of highly flexible, unstructured grids. Typical ADCIRC applications include: (i) modeling tides and wind driven circulation, (ii) analysis of hurricane storm surge and flooding, (iii) dredging feasibility and material disposal studies, (iv) larval transport studies, (v) near shore operations.	Coastal CoP Preferred Model
STWAVE	STWAVE (STeady-state spectral WAVE) is a nearshore spectral wave model developed by the U.S. Army Engineer Research and Development Center (ERDC), Coastal and Hydraulics Laboratory (CHL). It will be used to simulate nearshore wave propagation and transformation including refraction, shoaling, breaking, and wind-wave generation.	Coastal CoP Preferred Model

10. REVIEW SCHEDULES AND COSTS

a. **ATR Schedule and Cost.** The ATR for the Alaska Regional Ports, Alaska Deep–Draft Arctic Port Feasibility Study will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of the Review Plan, the ATR is scheduled for 2015 and may be subject to change. The estimated cost is $70,000.

b. **Type I IEPR Schedule and Cost.** If required, the IEPR for the Alaska Deep-Draft Arctic Ports Feasibility Study will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of this Review Plan, the IEPR is scheduled for 2015 and may be subject to change. The typical cost for an IEPR is $100,000 to $150,000.

c. **Model Certification/Approval Schedule and Cost.** There are no models to be certified and/or approved for this study.

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 will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments. This review plan and all decision documents will be posted on the Alaska District's website for public review.

12. REVIEW PLAN APPROVAL AND UPDATES

The POD Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving POA, POD, RMO 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. POA is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last POD 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 POD Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, will be posted on POA's webpage. The latest Review Plan will also be provided to the RMO and POD.

13. REVIEW PLAN POINTS OF CONTACT

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

- Alaska District POC, Bruce Sexauer, (907) 753-5619
- Pacific Ocean Division POC, Russell Iwamura, (808) 835-4625
- DDNPCX, Johnny Grandison, (251) 694-3804

ATTACHMENT 1: TEAM ROSTERS

Alaska Regional Ports, Alaska Deep–Draft Arctic Ports Study PDT

The Project Delivery Team is comprised of following individuals:

Project Manager	Lorraine Cordova
Planner	Lorraine Cordova
Economics	Lorraine Cordova
Environmental Resources	Mike Salyer
Hydraulics and Hydrology	Ken Eisses
Geotechnical Engineer	Marcus Palmer
Real Estate Specialist	Carmen Osmond
Value Engineering Officer	Donald Tybus
Cost Engineering	Karl Harvey
Office of Counsel	Rob Stolzman
Tribal Liaison	Amanda Shearer

Agency Technical Review Team
An ATR team will be constructed based upon the expertise and qualifications provided in paragraph 5.b. of this Review Plan.

Independent External Peer Review Panel
An IEPR panel will be convened if it is determined that such a review is required.

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

SIGNATURE _____ Date _____

Name
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ Date _____

Name
Project Manager
Office Symbol

SIGNATURE _____ Date _____

Name
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ Date _____

Name
Review Management Office Representative
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 _____ Date _____

Name
Chief, Engineering Division
Office Symbol

SIGNATURE _____ Date _____

Name
Chief, Planning Division
Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DPR	Detailed Project Report	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Engineering Regulation	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