DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, D.C. 20314-1000

CECW

DEC 20 2012

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Programmatic Review Plan for Routine Operations and Maintenance Products

1. Purpose. This document is to serve as the U.S. Army Corps of Engineers (USACE) National Programmatic Review Plan (RP) for routine Operations and Maintenance (O&M) products as required by EC 1165-2-214 (Civil Works Review Policy). RPs are in place to ensure product credibility and serve to ensure compliance with applicable requirements for products. The purpose of this National Programmatic RP is to define the requirements, procedures, and specific details of how District Quality Control (DQC) will be conducted for routine O&M products. Appendix B of EC 1165-2-214 states:

> "For large projects, whether in planning, design, construction, or an operating project, a single RP covering all the various work associated with the project should be developed. However, when an activity generally covered under such an overarching RP involves complexities, controversy, or other attributes that would require review beyond that envisioned in the overall RP, a separate review plan is required for that activity. For example, at an operational Corps Lake, most routine activities would be covered under the overarching RP while others such as major rehabilitation studies, dam safety modification reports, activities requiring a separate environmental impact statement, etc. would require individual RP's".

The purpose of this National Programmatic RP is to serve as a single overarching plan to meet this requirement for all routine O&M products. The further intent of this RP is to highlight the requirements, procedures and specific details of how DQC will be conducted for routine O&M products.

2. References.

a. Engineering Circular No. 1165-2-214 - Water Resources Policies and Authorities Civil Works Review Policy.

b. USACE Memorandum Subject: Civil Works Response to Engineer Inspector General "Inspection of USACE Civil Works Review Processes, 22 August 2012".

c. USACE Memorandum Subject: Operations under a Fiscal Year 2013 Continuing Resolution-Civil Works Program, 12 September 2012.

3. Applicability. This National Programmatic RP applies to all routine O&M products that only require a DQC. In general, a product is a written document (e.g. plan, report, agreement, manual, contract, etc.), that presents results or findings of work activities that have been performed. This Review Plan does not apply to Decision or Implementation documents, or any other products that require Agency Technical Review (ATR) or Independent External Peer Review (IEPR).

4. Guidance. At a minimum, all routine O&M products require DQC review. Each routine O&M product must be evaluated against EC 1165-2-214; paragraph 15 to ensure an ATR and/or an IEPR is not required. If it is determined that an ATR and/or an IEPR are required, that routine O&M product must have a separate individual review plan submitted for approval. Refer to Enclosure 6 for a decision matrix on the process to determine if an ATR and/or an IEPR are required. The Routine O&M Product Determination Form must be completed for each routine O&M product (see Enclosure 7). The form shall include a statement that supports that the district has determined that the routine O&M product does not require an ATR and/or IEPR and be signed by the District Operations Chief or their designee. In addition, any routine O&M product that triggers any of the criteria contained within EC 1165-2-214, paragraph 15, should be coordinated with MSCs to ensure consistent and effective review are accomplished throughout a region.

Enclosures 1-5 include examples of routine O&M products that are covered by this Review Plan. This Review Plan is a living document and the list of products covered is not all inclusive. The appendices define, as a minimum, what office(s) must be involved in the DQC review for each product type. MSC business line managers, subject matter experts, etc., should be involved in DQC procedures where district DQC processes or MSC quality management processes dictate higher level review and/or coordination to ensure greatest efficiency and effectiveness of program and product delivery and to reduce disruption to regional systems, improve life safety, or to foster enhanced regional consistency and operations (see EC 1165-2-214 Appendix F).

In addition, review procedures addressed in existing technical engineering circulars and/or engineering regulations should be followed, as required, even if those activities are routine and may be covered by this RP.

This RP does not obviate the need for districts to provide a complete package for routine O&M products for MSC approval where MSC commander or their designee's approval is required.

5. District Quality Control Review. DQC is required for all routine O&M products covered under this National Programmatic RP. District quality control manuals will prescribe specific procedures for the conduct of DQC including documentation requirements and maintenance of associated records for internal audits to check for proper DQC implementation. Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team reviews, etc.

Quality checks and reviews occur during the development process and are carried out as a routine management practice. 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.

DQC efforts will include the necessary expertise to address compliance with published Corps policy. When policy and/or legal concerns arise during DQC efforts that are not readily and mutually resolved by the PDT and the reviewers, the district will seek resolution support from the MSC and HQUSACE.

6. By my signature below, this RP is approved and will be posted on the HQUSACE website. O&M projects that develop the routine O&M products covered in this RP shall use the approval date of this memorandum for their P2 CW035 milestone.

7. This National Programmatic RP for routine O&M products is a living document. Periodic reviews and updates to this plan are expected to occur and may result in improvements to this plan. My point of contact for this action is Ms. Margaret Gaffney-Smith, Acting Deputy Chief, Operations and Regulatory Division who can be reached at 202-761-8560 or meg.e.gaffney-smith@usace.army.mil.

FOR THE COMMANDER:

STEVEN L. STOCKTON, P.E.
Director of Civil Works

Encls
1. Hydropower
2. Navigation
3. Natural Resource Management
4. Flood Risk Management
5. Other Miscellaneous O&M Products
6. Decision Matrix Prior to Using Routine O&M Review Plan
7. Routine O&M Work Product Determination Form

Enclosure 1

Hydropower
Routine O&M Products

Routine O&M Product	Review Team		
	District BLM	District Offices	HDC
Changes to Control System, SCADA Systems, PLC Based Systems and Other Software Configurable Devices	X	Rg HTC, IAM	X
Changes to Telecommunications Systems that are Used for SCADA/Control Systems	X	Rg HTC, IAM	
Development/Update of Drawings and Manuals	X	Rg HTC	
Equipment and System Repairs and Direct Component Replacement for Hydropower Equipment*	X	Rg HTC	X
Equipment and System Repairs and Direct Component Replacement for non-Hydropower Equipment	X	EN, Rg HTC	
Maintenance Plans	X	Rg HTC	
Project Operation Plans – e.g. Black Start	X	Rg HTC	
Protective Relaying – Replacements or Setting Changes	X	Rg HTC	X
Testing Plans and Procedures	X	Rg HTC	

* As defined in ER 1110-2-109

BLM – Local District's Hydropower Business Line Manager
EN – Engineering Division
HDC – Hydroelectric Design Center
IAM – Information Assurance Manager
Rg HTC – Regional Hydropower Technical Center (If Applicable)

Enclosure 2

Navigation
Routine O&M Products

Routine O&M Product	Review Team		
	BLM	District Offices	MDC
Advanced Maintenance Dredging Requests	X	EN	
Condition Surveys, Reports and Assessments (Channels and Structures)	X	EN	
Debris Removal Plans	X		
Disposal Site Dike Raise Plans to Include Construction Funded	X	EN	
Dredged Material Management Plans	X	EN, PD, OC, RE	
Dredged Material Placement Facility Management Plans	X	EN	
Emergency Dredging Requests	X	PD	
Environmental Compliance Documents and Reports – Including Environmental Assessments and Biological Assessments	X	EN/PD	
Fish Monitoring Reports	X	PD	
Floating Plant Procurement Documents	X		X
Funding Agreements	X	OC, PD	
Letter Reports/Monitoring Plans	X	EN, PD	
Lock Closure Plan	X	PA, NAV CX	
Lock Levels of Service Plans	X	PA	
Maintenance Dredging Documents	X		
Maintenance Plans	X		
Major Floating Plant Repair Documents*	X		X
Major Maintenance Reports	X	EN	
Minor Floating Plant Repair Documents	X		
Periodic Inspections and Operational Condition Assessment	X	EN	
Plan for In-Place Repairs on Major Components, including Plans and Specifications	X	EN	
Plan for In-Place Repairs on Minor Components, including Plans and Specifications	X		
Plans for Structure Maintenance – Including Jetties and Bridges	X	EN	
Project Operation Plans	X		
Raise the Flag Requests	X		
Safety Sign Plans/Replacement (Structures)	X	EN	
Sampling & Analysis Plans	X	EN, PD	

Sand Mitigation Documents	**X**	**EN**	
Sounding Charts	**X**	**EN**	
Water Quality Reports & NOIs	**X**	**EN, PD**	
Wreck Removal Plans	**X**		

* Items requiring PRIP funding are considered major.

BLM – Local District's Navigation Business Line Manager
EN – Engineering Division
MDC – Marine Design Center
NAV CX – Navigation Regional Center of Expertise (If Applicable)
OC – Office of Counsel
PA – Public Affairs Office
PD – Planning Division
RE – Real Estate Division

Enclosure 3

Natural Resource Management
Routine O&M Products

Routine O&M Product	Review Team	
	OP NRM/BLM	District Offices
Accessibility Survey/ Transition Plans	X	
Annual Pesticide Mgt Plans	X	ECC
Annual Water Safety Plan	X	SO
Annual Work Plan	X	
Categorical Exclusion Records of Decision and Environmental Assessment Documents	X	PD
Contributions Plans	X	OC, RM
Cooperative Association Agreements	X	OC, RM, RE
Environmental Compliance Reviews (ERGO)		ECC
Environmental Management System Documents and Plans.		ECC
Historic Properties/Cultural Resources Management Plan	X	ECC, PD
Master Plans and Updates w/o an EIS	X	PD, RE, OC
OMB Approved Surveys	X	
Operational Management Plans (includes but not limited to plans related to park, forest, wildlife, vegetation, threatened and endangered species and fire management.)	X	
Park Closure/Significant Operational Change Plans	X	PA
Park development plans	X	EN
Partnership Agreements	X	OC, RM, RE
Preliminary Assessment Survey for Real Estate Instrument, Environmental Condition Property Report or Report of Availability (ROA) for (Lease/License) New & renewal	X	RE, ECC
Prescribed Fire Plan	X	SO
Project Sign Plans	X	
Publications/Brochures	X	PA
Routine Maintenance Plans	X	
Shoreline Mgt Plans w/o an EIS	X	OC, RE, SO
Spill Prevention and Control Plans	X	ECC, SO

BLM – Local District's REC or ES Business Line Manager
ECC – Environmental Compliance Coordinator
EN – Engineering Division
NRM – Natural Resource Manager
OC – Office of Counsel
PA – Public Affairs
PD – Planning Division
RE – Real Estate
RM - Resource Management
SO – Safety Office

Enclosure 4

Flood Risk Management
Routine O&M Products

Routine O&M Product	Review Team	
	BLM	District Offices
Closure Plan	X	RCX
Emergency Action Plans	X	OPS, EN, PAO
Funding Agreements	X	OC, PD
In-Place Repairs on Major Components, including Plans and Specifications	X	EN
In-Place Repairs on Minor Components, including Plans and Specifications	X	OPS
Interim Risk Reduction Measures	X	EN, RCX, PAO
Maintenance Plans (Dams)	X	OPS, EN
Major Plant Repairs*	X	EN, RCX
Minor Plant Repairs	X	OPS
Periodic Assessments	X	EN, RCX
Periodic Inspections**	X	EN
Project Operation Plans (Dams)	X	OPS, EN
Reservoir Scheduling/Deviations	X	EN
Routine Inspections**	X	EN

* Items requiring PRIP funding are considered major.
**Follow existing DQC requirements for Dam & Levee Safety Program ECs and ERs and their associated processes.

BLM – Local District's FRM Business Line Manager
EN – Engineering Division
OC – Office of Counsel
PD – Planning Division
RCX – Regional Center of Expertise (If Applicable)
OPS – Operations Division

Enclosure 5

Other Miscellaneous O&M Products

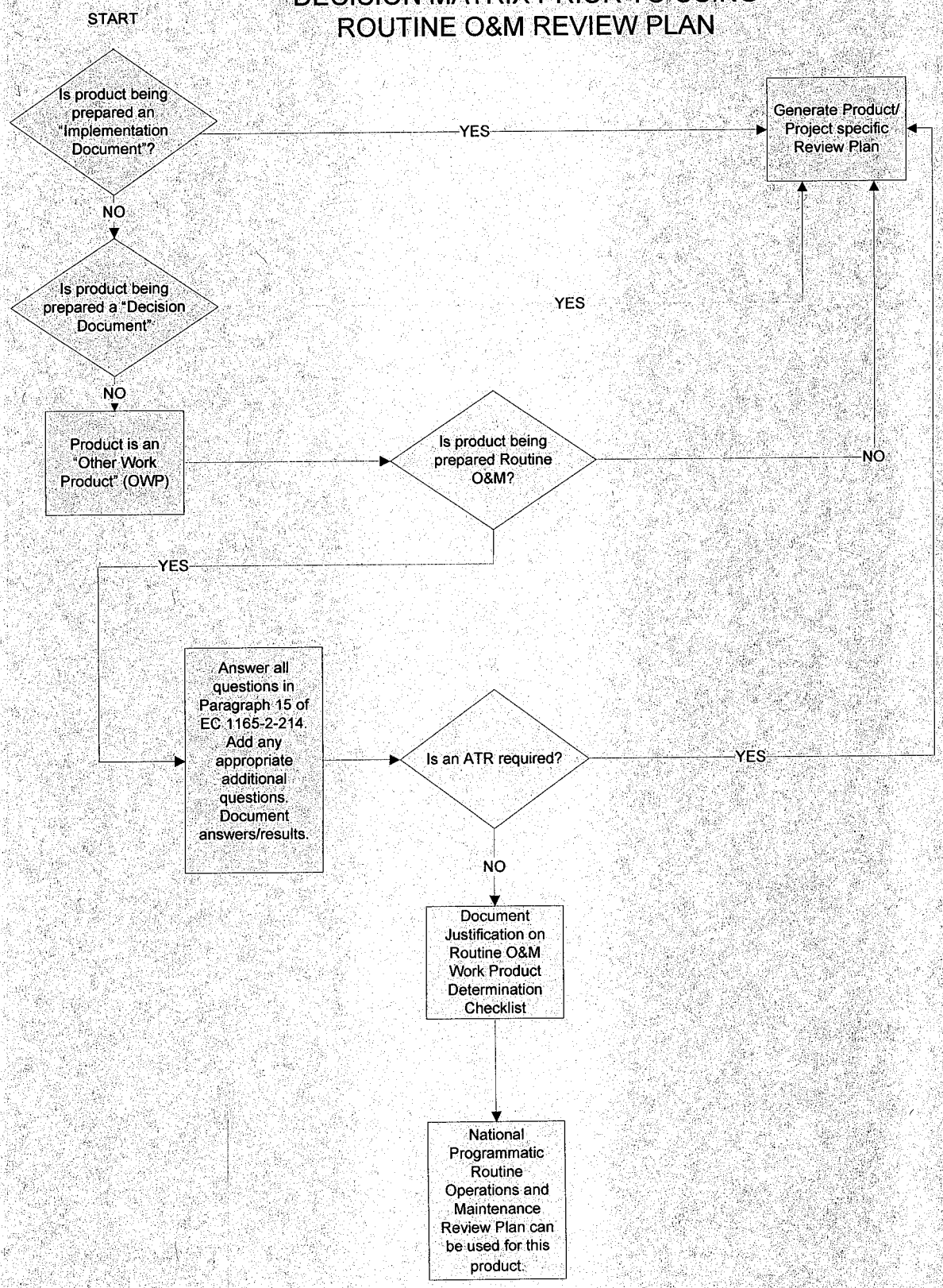
Routine O&M Product	Review Team	
	District OPS	District Offices
Communications Plans	X	PA, RCX, EN
COR Reports	X	
District Budgets (i.e. Operating Budget)	X	
District Workload Assessment	X	PM
Facility and Equipment Maintenance (FEM) Program Plans	X	RMM
Operational Condition Assessments (OCA) Program Plans	X	EN, BLM, RAM, RMM
PRIP Requests	X	RM
Routine Contracts* Including Plans & Specifications	X	CT
Sustainability Reports	X	
Visa Reports	X	

* District contracting procedures must be followed including BCOE review if applicable

BLM – Local District's Business Line Manager for the Work Product
PA – Public Affairs Office
CT – Contracting
PM – Project Management
RAM – Regional Asset Manager
RMM – Regional Maintenance Manager

Enclosure 6

DECISION MATRIX PRIOR TO USING ROUTINE O&M REVIEW PLAN



Enclosure 7

Routine O&M
Work Product Determination Form

Work Product Description: _____

Facility: _____

This work product is an Other Work Product per EC 1165-2-214 **Y / N**

This work product is Routine O&M **Y / N**

Does not require an ATR per EC 1165-2-214 paragraph 15 **Y / N**

Justification: _____

_____

_____

Note: If any of the above are no, the Routine O&M Review Plan cannot be used.

_____ _____

Chief, Operations Division **Date**

DEPARTMENT OF THE ARMY EC 1165-2-214
U.S. Army Corps of Engineers
CECW Washington, D.C. 20314-1000

Circular
No. 1165-2-214 15 December 2012

EXPIRES 15 DECEMBER 2014
Water Resources Policies and Authorities
CIVIL WORKS REVIEW

1. Purpose. This Circular 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. This EC puts quality on equal footing with cost and schedule compliance. It presents a framework for establishing the appropriate level of independence of reviews as well as detailed requirements, including documentation and dissemination. This circular addresses OMB peer review requirements under the "Information Quality Act" and the Final Information Quality Bulletin for Peer Review by the Office of Management and Budget (referred to as the "OMB Peer Review Bulletin"). It also provides guidance for the implementation of both Sections 2034 and 2035 of the Water Resources Development Act (WRDA) of 2007 (Public Law (P.L.) 110-114).

2. Applicability. This circular is applicable to all HQUSACE elements, major subordinate commands (MSC), districts, laboratories, centers of expertise and field operating activities having civil works planning, engineering, design, construction; and operations & maintenance (O&M) responsibilities.

3. Distribution Statement. Approved for public release; distribution is unlimited.

4. References and Definitions. References are at Appendix A and a Glossary is included after Appendix G.

5. Policy.

a. It is the policy of USACE that all of its planning, engineering and scientific work will undergo an open, dynamic, and rigorous review process. Technical, scientific and engineering information that is relied upon to support recommendations in decision documents or form the basis of designs, specifications, and/or O&M requirements will be reviewed to ensure technical quality and practical application.

b. Review approaches will be scalable and customized for each effort, commensurate with the level of complexity and relative importance of the actions being supported. All decisions on the types and scopes of review required on a particular product will be risk-informed, as described in paragraph 15 below, and documented.

c. Depending on the particular circumstances, reviews may be managed entirely within USACE or in various combinations with external parties. In cases requiring the most independence, the management of the review will be performed by an organization other than USACE and will involve independent experts. Commanders must be actively involved in establishing effective review approaches for all work products. The quality management procedures of each major subordinate command, as contained in their Quality Management Plans (QMPs), shall comply with the principles of this Circular.

d. All civil works planning, engineering, and O&M products must undergo review. As illustrated in Figure 1, all products shall undergo District Quality Control/Quality Assurance (DQC), described in paragraph 8 below. A subset of these work products will undergo Agency Technical Review (ATR), described in paragraph 9, below. Smaller subsets of the ATR group will undergo one or both types of Independent External Peer Review (IEPR – See Glossary) described in paragraphs 10 through 12 below. For clarity, Policy Compliance Review and Legal Certification are not shown.

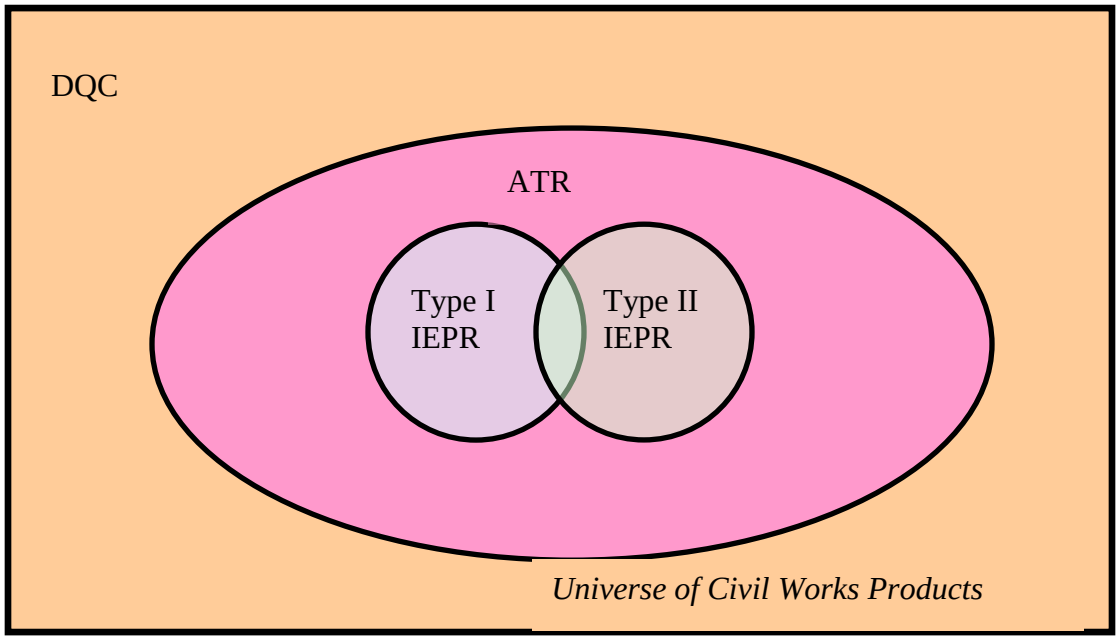


Figure 1 – Universe of Civil Works Products

6. Background.

a. The goal of the USACE Civil Works program is always to provide the most scientifically sound, sustainable water resource solutions for the nation. The USACE review processes are essential to ensuring project safety and quality of the products USACE provides to the American people. Over the past few years, USACE has recognized that its

Civil Works review processes, while generally effective, needed to be strengthened. The National Research Council (NRC) report, *Review Procedures for Water Resources Project Planning*, (NRC 2002); the report, *Decision-Making Chronology for the Lake Pontchartrain & Vicinity Hurricane Protection Project*, (2008); the Interagency Performance Evaluation Taskforce final report, *Performance Evaluation of the New Orleans and Southeast Louisiana Hurricane Protection System*, (2009); and the National Research Council report, *The New Orleans Hurricane Protection System, Assessing Pre-Katrina Vulnerability and Improving Mitigation and Preparedness* (2009) clearly show the importance of external peer review in improving USACE plans, projects and programs.

b. The USACE review process is based on a few simple but fundamental principles:

(1) Peer review is key to high quality decision and implementation documents. Reviews have significantly contributed to improved quality of work in the planning, design, and construction of projects;

(2) Reviews shall be scalable, deliberate, life cycle and concurrent with normal business processes;

(3) A review performed outside the "home" district, shall be completed on all decision and implementation documents. For other products, a risk-informed decision, as described in paragraph 15 below, will be made on whether to perform such a review;

(4) Selection of review panel members for Independent External Peer Review efforts will adhere to the National Academy of Science (NAS) Policy on Committee Composition and Balance and Conflicts of Interest, which sets the standard for "independence" in review process and complexity in a national context; and

(5) Consistent review policy shall be applied to all CW work products.

7. Conduct of Review.

a. Review Plans. The Review Plan (RP) is the lynchpin to ensure product credibility and accountability. The RP is also the basis for our compliance with the Information Quality Act requirement to ensure and maximize the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by the agency. The Review Plan describes the scope of review for the current and/or upcoming phase of work (Feasibility, PED, construction, etc) and is a component of the Quality Management Plan (QMP) in the Project Management Plan (PMP) or Program Management Plan (PgMP). All appropriate levels of review (DQC, ATR, BCOE, IEPR and Policy and Legal Review) will be included in the Review Plan and any levels not included will require documentation in the Review Plan of the risk-informed decision not to undertake that level of review (as discussed in paragraph 15 below). The MSC Commander's approval of the RP is the essential first step in product accountability and is required to assure that the plan is in compliance with the principles of this Circular and the MSC QMP and that all elements of the command have agreed to the review strategy. Like the PMP, the RP is a living document and must be kept up-to-date to

reflect the proper scale and scope of the anticipated reviews. It is the responsibility of the Project Manager to implement the RP and validate the execution and appropriate documentation of each step.

(1) The Review Plan is the primary opportunity to scale reviews appropriate to project size, level of complexity, and level of risk throughout its life cycle. Together with the "Charge" discussed in paragraph 7.c., below, the RP shall identify the most important skill sets needed in the reviews (dictating the number of reviewers on the panel) and the objective of the review and the specific advice sought, thus setting the appropriate scale and scope of review for the individual project.

(2) The PMP or PgMP must list all review requirements, costs and schedules as integrated features of the overall project execution. To the maximum extent practicable, reviews shall be scheduled and conducted early in the process to avoid or minimize any delays in study or project completion. This is particularly pertinent in the case of independent external peer reviews. The following guidance is essential to timely review:

(a) The project budget shall include adequate funds for all necessary reviews.

(b) The project schedule shall provide sufficient time for all reviews at the appropriate points in the schedule.

(c) For decision documents, all required reviews, with the exception of the USACE policy compliance review, shall be completed before the District Commander signs the report. The USACE policy compliance review shall be completed before the Chief of Engineers signs the report.

(d) In developing a RP, the home district shall provide an opportunity for public comment by posting the approved RP on its public website. This is not a formal comment period and there is no set timeframe for the opportunity for public comment. If and when comments are received, the PDT should consider them and decide if revisions to the review plan are necessary. This engagement will ensure that the peer review approach is responsive to the wide array of stakeholders and customers, both within and outside the Federal Government.

(e) Project managers shall insure that the P-2 schedule for the project identifies the required activities for both a Type I IEPR and a Type II IEPR including any meetings to be held with the project team and the independent reviewers. The P-2 schedule shall allot funding for the various organizations involved in the review (ATR team, RMO, IEPR contract, etc). The activities shall be clearly defined and scheduled.

(3) See Appendix B for further discussion of RPs.

b. Review Management Organization. The management of a review effort is a critical factor in assuring the level of independence of the review, as required by law, USACE policy, or both. With the exception of District Quality Control/Quality Assurance, all reviews shall

be managed by an office outside the home district and shall be accomplished by professionals that are not associated with the work that is being reviewed. The USACE organization managing a particular review effort is designated the Review Management Organization (RMO) for that effort. Different levels of review and reviews associated with different phases of a single project can have different RMOs.

c. Charge. When preparing to initiate review of a USACE product, the "charge" to the reviewers on both the ATR teams and IEPR panels will contain the instructions regarding the objective of the review and the specific advice sought. Review should be conducted to identify, examine, and comment upon assumptions that underlie analyses (i.e. public safety, economic, engineering, environmental, real estate, and others) appropriate to the "charge," as well as to evaluate the soundness of models and analytic methods. Panels should also be able to evaluate whether the interpretations of analyses and conclusions are reasonable. To provide effective review, in terms of both usefulness and credibility of results, the charge should give reviewers the flexibility to bring important issues to the attention of decision makers. However, reviewers should be explicitly instructed in the charge to not make a recommendation on whether a particular alternative should be implemented, as the Chief of Engineers is ultimately responsible for the final decision on USACE work products. The RMO is responsible for preparing the charge.

d. Documentation and Response.

(1) DrChecks^{sm}. DrChecks^{sm} will be the official system for the continuity of the review record. DrChecks^{sm} will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. MSC and district Quality Manuals will establish procedures for documenting DQC.

(2) Publishing comments and responses to IEPR. Regardless of whether or not the views expressed in the IEPR Report are adopted, the home district, with assistance from the RMO, shall prepare a written proposed response to the report, detailing any actions undertaken or to be undertaken in response to the report, and the reasons those actions are believed to satisfy the key concerns stated in the review report (if applicable). All Issues in the IEPR must be addressed. The proposed response will be coordinated with the MSC District Support Teams and HQUSACE to ensure consistency with law, policy, project guidance, ongoing policy and legal compliance review, and other USACE or National considerations.

(a) For decision documents presented to the Deputy Commanding General of Civil and Emergency Operations (DCG-CEO) for approval, IEPR (see paragraph 11) comments and responses will be discussed at the meeting with an IEPR panel or Outside Eligible Organization (OEO) representative in attendance. Upon satisfying any concerns, HQUSACE will determine the appropriate command level for issuing the formal USACE response to the IEPR Review Report. When the USACE response is issued, the district shall disseminate the final IEPR Review Report, USACE response, and all other materials related to the review on its website and include them in the applicable decision document. Chief of Engineers' reports for decision documents that undergo Type I IEPR shall summarize the IEPR Review

Report and provide full USACE responses to each concern raised by the IEPR panel. This documentation will become a critical part of the review record and will be addressed in recommendations made by the Chief of Engineers.

(b) IEPR comments and responses pertaining to the design and construction activities (see paragraph 12) shall be summarized in a report, reviewed and approved by the MSC and posted on the home district website.

(c) See Appendix E for IEPR Type II documentation and reporting requirements.

8. District Quality Control/Quality Assurance.

a. All work products and reports, evaluations, and assessments shall undergo necessary and appropriate District Quality Control/Quality Assurance (DQC). 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 responsible MSC; product issues identified via DQC should be resolved prior to ATR and IEPR. The DQC of products and reports shall also cover any necessary National Environmental Policy Act (NEPA) documents and other environmental compliance products and any in-kind services provided by local sponsors.

b. DQC is the backbone of the Corps' quality process. It 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). Reliance on subsequent levels of review by external teams is not an acceptable substitute for DQC. 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.

(1) Quality checks and reviews occur during the development process and are carried out as a routine management practice. 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.

(2) PDT reviews are performed by members of the PDT to ensure consistency and effective coordination across all project disciplines. 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.

c. DQC efforts will include the necessary expertise to address compliance with published Corps policy. When policy and/or legal concerns arise during DQC efforts that are not readily and mutually resolved by the PDT and the reviewers, the district will seek immediate issue resolution support from the MSC and HQUSACE in accordance with the procedures outlined in Appendix H, Amendment #1, ER 1105-2-100 or other appropriate guidance.

d. MSC and district quality manuals will prescribe specific procedures for the conduct of DQC including documentation requirements and maintenance of associated records for internal audits to check for proper DQC implementation. For each Agency Technical Review (ATR) event, the ATR team will examine, as part of its ATR activities, relevant DQC records and provide written comment in the ATR report as to the apparent adequacy of the DQC effort for the associated product or service.

9. Agency Technical Review.

a. Agency Technical Review (ATR) is undertaken to "ensure the quality and credibility of the government's scientific information" in accordance with this circular, and the QM of the responsible MSC. (This level of review was previously named “Independent Technical Review” and may be described as such in some referenced guidance.) This level of review shall also cover any necessary National Environmental Policy Act (NEPA) documents and other environmental compliance products and any in-kind services provided by local sponsors.

b. ATR is mandatory for all decision and implementation documents. For other work products, a case specific risk-informed decision, as described in paragraph 15 below, shall be made as to whether ATR is appropriate. Refer to the Planning SMART Guide for further procedures on reviews of SMART Planning studies (http://planning.usace.army.mil/toolbox/smart.cfm).

c. Management of ATR reviews is dependent upon the phase of work, and the reviews are all conducted by professionals outside of the home district. ATR teams will be assigned by the appropriate RMO and 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.

(1) Decision Documents. For ATR on decision documents, the RMO generally will be the appropriate Planning Center of Expertise (PCX), e.g. for flood risk management (FRM) decision documents, the FRM PCX would manage the effort. For dam or levee safety modification studies, the USACE Risk Management Center (RMC) will be the RMO, in close coordination with the FRM PCX or the Coastal Storm Damage Reduction PCX, as appropriate. See Appendix G for special provisions associated with the Continuing Authorities Program (CAP).

(a) ATR will be conducted by a qualified team from outside of the home district that is not involved in the day-to-day production of the project/product.

(b) For decision documents with multiple purposes (or project purposes not clearly aligned with the PCXs), the home MSC should designate a lead PCX to conduct the review after coordinating with each of the relevant Centers.

(c) There shall be appropriate consultation throughout the review with the allied Communities of Practice (CoPs) such as engineering and real estate, other relevant CXs, and other relevant offices to ensure that a review team with appropriate expertise is assembled and a cohesive and comprehensive review is accomplished.

(d) There shall be coordination with the Cost Engineering Mandatory Center of Expertise (MCX) located in the Walla Walla District, which will provide the cost engineering review and resulting certification.

(2) Other Work Products. For other work products, the ATR shall be managed and performed outside of the home district. The USACE Risk Management Center (RMC) shall serve as the RMO for Dam Safety Modifications projects and Levee Safety Modification projects. For all other projects, the MSC shall serve as the RMO. 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.

d. ATR efforts will include the necessary expertise to address compliance with applicable published policy. When policy and/or legal concerns arise during ATR efforts that are not readily and mutually resolved by the PDT and the reviewers, the district will seek issue resolution support from the MSC and HQUSACE in accordance with the procedures outlined in ER 1105-2-100 (Appendix H), or other appropriate guidance.

e. Additional discussion on ATR is in Appendix C and the Planning SMART Guide.

10. Independent External Peer Review.

a. Independent External Peer Review (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. Any work product, report, evaluation, or assessment that undergoes DQC and ATR also **MAY** be required to undergo IEPR under certain circumstances. A risk-informed decision, as described in paragraph 15 below, will be made as to whether IEPR is appropriate for that product.

b. Review Teams and Panels. IEPR panels will be made up 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. Panel members will be selected using the National Academies of Science (NAS) policy for selecting reviewers.

c. IEPR teams are not expected to be knowledgeable of Army and administration policies, nor are they expected to address such concerns. However, an IEPR team should be given the flexibility to bring important issues to the attention of decision makers.

d. The Water Resources Development Act of 2007 included two separate requirements for review by external experts. The first, Section 2034, required independent peer review of

project studies under certain conditions. The second, Section 2035, required a Safety Assurance Review (SAR) of "the design and construction activities for hurricane and storm damage reduction and flood damage reduction projects." USACE policy extends this to all projects with life safety issues. These statutory requirements, as well as the USACE existing requirements for review of work products are the basis for this circular. Sections 2034 and 2035, besides having different foci, also differ significantly in legislative language. This necessitates some variation in the scope and procedures for IEPR, depending on the phase and purposes of the project under review. For clarity, IEPR is divided into two types, Type 1 is generally for decision documents and Type II is generally for implementation documents. The differing criteria for conducting the two types of IEPR can result in work products being required to have Type I IEPR only, Type II IEPR only, both Type I and Type II IEPR, or no IEPR.

11. Type I IEPR**.**

a. Type I IEPR is conducted on project studies. It is of critical importance for those decision documents and supporting work products where there are public safety concerns, significant controversy, a high level of complexity, or significant economic, environmental and social effects to the nation. However, it is not limited to only those cases and most studies should undergo Type I IEPR.

b. The requirement for Type I IEPR is based upon Section 2034 of WRDA 2007, the OMB Peer Review Bulletin and other USACE policy considerations.

c. Type I IEPR reviews are managed outside the USACE, panel members will be selected by an Outside Eligible Organization (OEO - see Glossary) using the National Academies of Science (NAS) policy for selecting reviewers. Although the NAS is frequently cited for the type of IEPR process the USACE should follow, actual reviews by the NAS are expected to be rare. Decisions to approach NAS must be made by the Director of Civil Works (DCW) based on the recommendation of the appropriate Regional Integration Team (RIT) at HQUSACE in coordination with appropriate Community of Practice (CoP), generally the Planning and Policy CoP. The panels will conduct reviews that cover the entire project concurrent with the product development.

d. In keeping with the principle that IEPR should be scalable to the work product being reviewed, there may be cases that warrant a project study or decision document, which would otherwise be required to undergo a Type I IEPR, being excluded from the Type I process. For IEPR on decision documents, the RMO will be the appropriate PCX or, in the case of dam or levee safety modification reports, the USACE RMC in close coordination with the appropriate PCX. The vertical team (involving district, MSC, PCX, RMC, and HQ members) will advise the MSC Commander as to whether Type I IEPR is appropriate or whether sufficient rationale exists to support a request for an exclusion. Requests seeking an exclusion from Type I IEPR shall comply with Paragraph 15, Risk-Informed Decisions on Appropriate Reviews, below. The conditions determining whether Type I IEPR will be undertaken are as follows:

(1) Type I IEPR is mandatory if any of the following are true:

(a) Significant threat to human life. The decision document phase is the initial concept design phase of a project. Therefore, when life safety issues exist, a Type I IEPR that includes a Safety Assurance Review is required;

(b) Where the estimated total cost of the project, including mitigation costs, is greater than $45 million based on a reasonable estimate at the end of the reconnaissance phase. If a project has a cost estimate of less than $45 million at the end of the reconnaissance phase, but the estimated costs subsequently increase to more than $45 million, a determination will be made by HQUSACE whether a Type I IEPR is required. There is a potential, albeit an extremely limited one, for projects costing over $45 Million to be excluded from Type I IEPR. This potential only exists when no other mandatory conditions listed in this section are met, the project does not include an EIS, the various aspects of the problems or opportunities being addressed are not complex, and there is no controversy surrounding the study. An exclusion from Type I IEPR for a project costing more than $45 Million can only be granted by the Chief of Engineers;

(c) Where the Governor of an affected State requests a peer review by independent experts; or

(d) Where the DCW or the Chief of Engineers determines that the project study is controversial due to significant public dispute over either the size, nature, or effects of the project or the economic or environmental costs or benefits of the project.

(2) Type I IEPR is discretionary where the head of a Federal or state agency charged with reviewing the project study determines that the project is not likely to have a significant adverse impact on environmental, cultural, or other resources under the jurisdiction of the agency after implementation of proposed mitigation plans and he/she requests an IEPR.

(a) A decision whether to conduct IEPR must be made within 21 days of the date of receipt of the request by the head of the Federal or State agency.

(b) If the Chief of Engineers decides not to conduct an IEPR following such a request the Chief shall make publicly available the reasons for not conducting the IEPR.

(c) If the Chief of Engineers decides not to conduct an IEPR following such a request, it may be appealed to the Chairman of the Council on Environmental Quality within 30-days of the Chief's decision and the Chairman shall decide the appeal within 30 days of the date of the appeal.

(3) Section 2034 permits project studies to be excluded from independent peer review under certain circumstances. However, the Conference Report for WRDA 2007 describes a "very limited number of project studies" being excluded from independent peer review, which are "so limited in scope or impact that they would not significantly benefit from an independent peer review." In most cases, requests for exclusions will be decided by the

DCW. As noted in Paragraph 11.d.(2)(b), requests for exclusions for projects costing over $45 million will be routed through the Deputy Commanding General for Civil and Emergency Operations with the decision made by the Chief of Engineers. A project study may be excluded from Type I IEPR in cases where none of the above mandatory triggers (with the limited exception noted in Paragraph 11.d.(2)(b)) are met and:

(a) It does not include an EIS, and the DCW or the Chief determines that the project:

• Is not controversial; and

• Has no more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources;

• Has no substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures; and

• Has, before implementation of mitigation measures, no more than a negligible adverse impact on a species listed as endangered or threatened species under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) or the critical habitat of such species designated under such Act;

OR

(b) If the project study

• Involves only the rehabilitation or replacement of existing hydropower turbines, lock structures, or flood control gates within the same footprint and for the same purpose as an existing water resources project; or

• Is for an activity for which there is ample experience within the USACE and industry to treat the activity as being routine; AND

• Has minimal life safety risk;

OR

(c) If the project study does not include an EIS and is a project study pursued under the CAP Program.

e. Type I IEPRs are exempted by law from the Federal Advisory Committee Act (FACA). Additional discussion on Type I IEPR is in Appendix D.

12. Type II IEPR (SAR).

a. A Type II IEPR (SAR) shall be conducted on design and construction activities for any project where potential hazards pose a significant threat to human life (public safety).

This applies to new projects and to the major repair, rehabilitation, replacement, or modification of existing facilities.

b. The requirement for Type II IEPR is based upon Section 2035 of WRDA 2007, the OMB Peer Review Bulletin and other USACE policy considerations.

c. External panels will conduct reviews of the design and construction activities prior to the 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. See Appendix E for further discussion of panels.

d. The Review Management Office for Type II IEPR reviews is the USACE Risk Management Center (RMC). Panel members will be selected using the National Academies of Science (NAS) policy for selecting reviewers. See Appendix E for further discussion of panels.

e. Type II IEPRs are not exempted by statute from the Federal Advisory Committee Act (FACA). Type II IEPR procedures to follow are in Appendix E.

13. Special Cases IEPR.

a. Special cases exist where non-Federal interests undertake the study, design or implementation of a Federal project or a modification to a USACE project. Authorities for such actions include, but are not limited to, 33 USC 408, Sections 203 and 204 of WRDA 1986, Section 206 of WRDA 1992, and Section 211 of WRDA 1996.

b. When a non-Federal interest undertakes a study, design, or implementation of a Federal project, or requests permission to alter a Federal project, the non-Federal interest is required to undertake, at its own expense, any IEPR that the Government determines would have been required if the Government were doing the work. The non-Federal interest shall make a risk informed decision, as described in paragraph 15 below, on whether to undertake a Type I and/or Type II IEPR and document their proposed reviews in a Review Plan that will be reviewed by the local district and approved by the host MSC Commander. The Federal Advisory Committee Act does not apply to peer reviews undertaken by non-Federal interests. The non-Federal interest is required to use the National Academies of Science (NAS) policy for selecting reviewers and is encouraged to use an OEO for management of the effort.

c. Any IEPR undertaken by a non-Federal Interest shall be submitted as part of the decision package for review by USACE and ultimate action by USACE or Army. See Appendix G for review requirements other than IEPR for non-federal special cases.

14. Policy and Legal Compliance Reviews. 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. The technical review efforts addressed in this Circular, i.e. DQC and ATR, are to 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.

15. Risk Informed Decisions on Appropriate Reviews.

a. Appropriate Reviews. All work products must undergo DQC. Beyond DQC, however, there is some level of judgment involved in determining whether ATR and/or IEPR levels of review are appropriate for any work product. Therefore, the RP for all work products shall include documentation of risk-informed decisions on those levels of review. Additional details on the various levels of review are provided below.

b. ATR. All decision and implementation documents are required to undergo ATR, regardless of the originating organization (Planning, Engineering, Construction, or Operations). In deciding whether to undertake ATR for other work products, answering a series of questions will aid the PDT to help identify work products as decision or implementation documents, even if they are not identified as such. Also, this process provides a basis for making a recommendation whether undertaking ATR is appropriate for products that are not either a decision or implementation document. A "yes" answer does not necessarily indicate ATR is required, rather it indicates an area where reasoned thought and judgment should be applied and documented in the recommendation. The following questions, and any appropriate additional questions, shall be explicitly considered:

(1) Does it include any design (structural, mechanical, hydraulic, etc)?

(2) Does it evaluate alternatives?

(3) Does it include a recommendation?

(4) Does it have a formal cost estimate?

(5) Does it have or will it require a NEPA document?

(6) Does it impact a structure or feature of a structure whose performance involves potential life safety risks?

(7) What are the consequences of non-performance?

(8) Does it support a significant investment of public monies?

(9) Does it support a budget request?

(10) Does it change the operation of the project?

(11) Does it involve excavation, subsurface investigations (drilling or sampling or both), or placement of soil?

(12) Does it affect any special features, such as cultural resources, historic properties, survey markers, etc, that should be protected or avoided?

(13) Does it involve activities that trigger regulatory permitting such as Section 404 or stormwater/NPDES related actions?

(14) Does it involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos?

(15) Does it reference use of or reliance on manufacturers' engineers and specifications for items such as prefabricated buildings, playground equipment, etc?

(16) Does it reference reliance on local authorities for inspection/certification of utility systems like wastewater, stormwater, electrical, etc?

(17) Is there or is there expected to be any controversy surrounding the Federal action associated with the work product?

c. IEPR. Any work product that undergoes ATR may also be required to undergo Type I and/or Type II IEPR. Meeting the specific conditions identified for **possible** exclusions is not, in and of itself, sufficient grounds for recommending an exclusion. A deliberate, risk-informed recommendation whether to undertake IEPR shall be made and documented by the PDT, as discussed below. The recommendation will be submitted to the MSC. The MSC Commander has approval authority to undertake IEPR. However, if the MSC concurs with a recommendation to exclude the project from IEPR, the MSC will forward the recommendation with its endorsement to the appropriate RIT for coordination in HQ and appropriate action. Once the DCW's or the Chief's decision is rendered, the recommendation and decision will be documented in the review plan.

d. Type I IEPR. Type I IEPR is mandatory under the circumstances described in Paragraph 11.d.1. and in Appendix D. When a decision document does not trigger a mandatory Type I IEPR (as discussed in Paragraph 11.d.1), a risk- informed recommendation will be developed. This process shall explicitly consider the consequences of non-performance on project economics, the environment, and social well-being (public safety and social justice), as well as indicate whether the product is likely to contain influential scientific information or be a highly influential scientific assessment; or involve any other issues that provide a rationale for determining the appropriate level of review. Furthermore, the recommendation must make a case that the study is so limited in scope or impact that it would not significantly benefit from IEPR.

e. Type II IEPR. A Type II IEPR is required to insure public health, safety, and welfare. The circumstances requiring a Type II IEPR are described in Appendix E. Each of those

circumstances must be explicitly considered in developing a risk-informed rationale for determining the appropriate level of review, including the need for a safety assurance review.

16. Administration.

a. Federal Advisory Committee Act (FACA). FACA imposes requirements on groups established by statute, or established or utilized by the President or an agency that provide advice or recommendations to the President or an agency pertaining to Executive policy. Under WRDA 2007 Section 2034, FACA does not apply to Type I IEPR panels established in accordance with this circular. Section 2035 of WRDA 2007 does not specifically exempt panels for Type II IEPR from FACA.

b. If the PDT is uncertain whether FACA applies to a particular review, it should consider the following characteristics of groups that must comply with FACA:

(1) The group includes a member that is not a Federal employee, or State, local or Tribal government employee;

(2) The group is established, controlled, and/or managed by the USACE;

(3) The group has a fixed membership, established purpose, and an agenda set by the USACE;

(4) The group strives to produce group, rather than individual, advice to the USACE.

c. Peer reviews performed solely by Federal employees or State, local and Tribal government employees do not trigger FACA, although to ensure independence USACE employees should not be involved in performing the review. Questions regarding the applicability of FACA to external peer review should be addressed to the district Office of Counsel.

d. Judicial Review. This Circular is intended to improve the internal management of the USACE Civil Works Program, and is not intended to, and does not create any right or benefit, substantive or procedural, enforceable at law or in equity, against the United States, its agencies or other entities, its officers or employees, or any other person.

e. This Circular also does not apply to information that is:

(1) Related to certain national security, foreign affairs, or negotiations involving international trade or treaties where compliance with this Circular would interfere with the need for secrecy or promptness.

(2) Disseminated in the course of an individual agency adjudication or permit proceeding (including a registration, approval, licensing, site-specific determination), unless USACE determines that review is practical and appropriate and that the influential dissemination is

scientifically or technically novel or likely to have precedent setting influence on future adjudications and/or permit proceedings.

(3) A health or safety dissemination where USACE determines that the dissemination is time-sensitive.

(4) A USACE regulatory impact analysis or regulatory flexibility analysis subject to interagency review under Executive Order 12866, except for underlying data and analytical models used.

(5) Routine statistical information released by Federal statistical agencies (e.g., periodic demographic and economic statistics) and analyses of these data to compute standard indicators and trends (e.g., unemployment and poverty rates).

(6) Accounting, budget, actuarial, and financial information, including that which is generated or used by agencies that focus on interest rates, banking, currency, securities, commodities, futures, or taxes.

(7) Information disseminated in connection with routine rules that materially alter entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients thereof.

(8) Responses to letters of inquiry, responses to Freedom of Information Act (FOIA) requests, and internal disseminations.

17. Implementation.

a. Decision Documents. This guidance is effective immediately and shall be applied to all studies and reports regardless of the date the FCSA was signed, except for only those cases where the submittal of the final decision document package had been forwarded to HQUSACE prior to 22 August 2008. The costs associated with DQC and ATR will be shared in accordance with the project purpose(s) and the phase of work. The costs associated with Type I IEPR, excluding the costs of contracts for panels, are also cost shared. The costs of contracts for Type I IEPR panels executed after the enactment of WRDA 2007, 8 November 2007, will be a Federal expense and will not exceed $500,000 unless the Chief of Engineers determines that a higher cost may be appropriate in a specific case. Any contracts for Type I IEPR panels that were executed prior to 8 November 2007 and whose costs were shared in accordance with Sec 105 (a) of WRDA 1986 will remain cost shared. For studies conducted by non-Federal interests Type I IEPR costs will initially be borne by the non-Federal sponsor and, if the project is implemented at some later date, these costs may be eligible for credit, subject to the cost limits above.

b. Implementation Documents. This guidance is effective immediately for any projects subject to Type II IEPR in Pre-Construction Engineering and Design (PED) or under construction as of 8 November 2007. All costs associated with Type II IEPR, will be shared in accordance with the project purpose(s) and the phase of work. In planning for a Type II

review, estimates will need to include the cost for the RMO to administer and manage the Type II review and the cost of the independent panel. The cost of a Type II review through completion of construction should be reasonable, scalable and a function of the complexity and duration of the project.

c. Guidance for Additional Funding. Normal budgetary procedures will be used to seek funds where IEPR funds have not been appropriated. The costs for any anticipated IEPR will be requested by study (or project) as part of the normal budget development process.

FOR THE COMMANDER:

BERNARD R. LINDSTROM
Colonel, Corps of Engineers
Executive Director of Civil Works

7 Appendices
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Appendix F – Roles and Responsibilities
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Glossary

APPENDIX A

References

Treasury and General Government Appropriations Act of 2001, Section 515, Pub. L. 106-554 (often called The Information Quality Act).

Water Resources Development Act of 2007, Sections 2034 & 2035, Pub. L. 110-114.
Privacy Act, 5 U.S.C. § 522a as amended

Executive Order 12866 (Regulatory Planning and Review)

OMB Circular A-130, Appendix I, (February 20, 1996)

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DOD Joint Ethics Regulation – DOD 5500.7-R

APPENDIX B

Review Plans

1. Applicability. In general, all projects or activities will be covered by a Review Plan (RP). The RP is the basis for our addressing the Information Quality Act requirement to ensure and maximize the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by the agency. For large projects, whether in planning, design, construction, or an operating project, a single RP covering all the various work associated with the project should be developed. However, when an activity generally covered under such an overarching RP involves complexities, controversy, or other attributes that would require review beyond that envisioned in the overall RP, a separate review plan is required for that activity. For example, at an operational Corps Lake, most routine activities would be covered under the overarching RP while others such as major rehabilitation studies, dam safety modification reports, activities requiring a separate EIS, etc. would require individual RP's. Similarly, to ensure nationwide consistency, the MSC's, together with the appropriate PCX, shall develop a single national RP for each Continuing Authority program that includes the anticipated review process for that authority. The national CAP RP's must also clearly describe the circumstances when an individual RP must be developed for a specific CAP, e.g. when the study requires an EIS or involves life safety issues. The PCX shall recommend, if appropriate, a single nationwide exclusion for projects covered by the review plan. Programmatic review plans may also be appropriate in other instances, such as regional environmental infrastructure authorities. Such review plans would also be developed by the appropriate PCX. Prior to initiating RP development, the PCX should coordinate with HQUSACE for guidance on whether a programmatic review plan is appropriate. Approval of all programmatic Review Plans rests with the Director of Civil Works (DCW).

2. Responsibilities. The development of the RP is generally the responsibility of the Project Delivery Team (PDT), in concert with the Review Management Organization (RMO). The PDT is responsible for recommending the necessary type(s) of reviews as well as the particular disciplines/expertise required. The Review Plan will be published on the district's public internet site following endorsement by the RMO and signature approval by the MSC Commander.

3. Development of Review Plans.

a. In developing RPs, the home district shall provide an opportunity for public comments and for considering those comments in the decision of the type of review to be carried out. Review Plans must be detailed enough to assess the necessary level and focus of review – which parts of the study will likely be challenging, which models and data are proposed, model certification needs, etc. RPs must anticipate and define the appropriate level of review from the very start of the effort based upon a preliminary assessment of where project risks are most likely to occur and the magnitude of what this risk might be.

b. The RP shall be prepared within the district or other USACE office responsible for the project, in coordination with the appropriate RMO, and approved by the MSC

Commander. For prospective projects, an initial RP will be developed prior to completing a feasibility cost sharing agreement and revised prior to the completion of each phase to detail the reviews in subsequent phases. The RP must be updated and approved by the MSC throughout the PED and Construction Phases.

c. The RP is a living document and must be kept up-to-date, in coordination with the MSC, to reflect the proper scale and scope of the anticipated reviews. RP updates will be performed to reflect minor changes. Re-approval of RPs should be performed when there are changes in the level of review (i.e. for Type I or Type II IEPR). Other situations requiring MSC re-approval should be very limited, including when a project transitions from legacy to SMART Planning milestones/peer review requirements or when there are significant changes in study/project scope (e.g., adding subtracting a purpose, etc).

4. Content of Review Plans.

a. A paragraph including the project title, subject and purpose of the work product, discipline/area of expertise of reviewers and designated points of contact in the home district, MSC and RMO to whom inquiries about the plan may be directed.

b. Documentation of risk-informed decisions on which levels of review are appropriate for the product. This documentation is to include the District Chief of Engineering's assessment as to whether there is a significant threat to human life associated with the project.

c. The timing and sequence of the reviews (including deferrals). Refer to the Planning SMART Guide (http://planning.usace.army.mil/toolbox/smart.cfm) for further procedures on timing and sequence of reviews of SMART Planning studies.

d. How and when there will be opportunities for the public to comment on the study or project to be reviewed.

e. When significant and relevant public comments will be provided to the reviewers before they conduct their review.

f. The anticipated number of reviewers.

g. A succinct description of the primary disciplines or expertise needed in the review.

h. Whether the public, including scientific or professional societies, will be asked to nominate potential reviewers.

i. A list of the models expected to be used in developing recommendations, and the model certification/acceptance status of those models.

j. A list of expected in-kind contributions to be provided by the sponsor.

k. The Review Plan shall also contain an execution plan that explains how all the reviews will be accomplished and documented. The following are factors that must be considered in developing the Review Plan and selecting reviewers:

(1) Reviewers' Expertise and Balance. Subject matter experts from within USACE or outside USACE may conduct ATR. ATR reviewers shall be selected by the RMO and IEPR reviewers by the RMO, contractor, or OEO, as appropriate. Selections will be based on expertise, experience, and skills, including specialists from multiple disciplines as necessary to ensure comprehensive review. The group of qualified reviewers shall be formed into panels that are sufficiently broad and diverse to fairly represent the relevant scientific and engineering perspectives and fields of knowledge.

(2) Reviewers' Conflicts. RMO shall ensure that reviewers serving as Federal employees (including special government employees) comply with applicable Federal ethics requirements. In selecting reviewers who are not Federal government employees, the National Academy of Sciences' policy for committee selection with respect to evaluating the potential for conflicts (e.g., those arising from investments; agency, employer, and business affiliations; grants, contracts and consulting income) shall be adopted or adapted.

(3) Reviewers' Independence. IEPR must be performed by subject matter experts from outside of USACE. Peer reviewers shall not have participated in development of the report, appendix, or other work product to be reviewed. RMOs are encouraged to rotate membership on standing panels across the pool of qualified reviewers. OEOs shall bar participation of scientists employed by USACE.

(4) Reviewers' Privacy. Peer reviewers will be advised whether information about them (name, credentials, and affiliation) will be disclosed. The RMO shall comply with the requirements of the Privacy Act. Also see paragraph 13 (b).

(5) Reviewers' Compensation. External Reviewers will be paid labor and any necessary travel and per diem expenses in accordance with their contract with the RMO, NAS, or OEO.

(6) Reviewers' Charge. The RMO will prepare the charge to the reviewers, containing the instructions regarding the objective of the peer review and the specific advice sought. Reviewers shall be charged with reviewing scientific and technical matters, leaving policy determinations for USACE and the Army. The charge should specify the structure of the review comments to fully communicate the reviewer’s intent by including: the comment, why it is important, any potential consequences of failure to address, and suggestions on how to address the comment. It should include specific technical questions while also directing reviewers to offer a broad evaluation of the overall document. The charge should be determined in advance of the selection of the reviewers.

(7) Confidentiality. Review shall be conducted in a manner that respects confidential business information and intellectual property.

(8) Choice of Review Mechanism. The choice of a review mechanism (including the make-up of the review panel and the number of external reviewers) shall be based on the novelty and complexity of the information to be reviewed, the importance of the information to decision making, the extent of prior review, and the expected benefits and costs of review, as well as the factors regarding transparency described below. For decision documents undergoing Type I IEPR, the RMO must commission eligible entities to manage the review process, including the selection of reviewers, in accordance with this Circular.

(9) Reviewers' Access to Information. The RMO shall provide reviewers with sufficient information, including background information about key studies or models, to enable them to understand the data, analytic procedures, and assumptions used to support the key findings or conclusions. Reviewers shall be informed of applicable access, objectivity, reproducibility and other quality standards under the federal laws governing information access and quality.

(10) Disclaimer. Information distributed for review must include the following disclaimer: "This information is distributed solely for the purpose of pre-dissemination review under applicable information quality guidelines. It has not been formally disseminated by USACE. It does not represent and should not be construed to represent any agency determination or policy."

(11) Opportunity for Public Participation. Whenever feasible and appropriate, the office producing the document shall make the draft decision document available to the public for comment at the same time it is submitted for review (or during the review process) and sponsor a public meeting where oral presentations on scientific issues can be made to the reviewers by interested members of the public. When employing a public comment process, the RMO shall, whenever practical, provide reviewers with access to public comments that address significant scientific or technical issues. To ensure that public participation does not unduly delay USACE activities, the RMO shall clearly specify time limits for public participation throughout the review process.

(12) Transparency.

(a) The RMO shall notify reviewers in advance regarding the extent of disclosure and attribution planned by USACE.

(b) The RMO, ATR leader, or OEO shall prepare a Review Report that 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.

- 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.

(13) Documentation of Responses. The RP will also document how written responses to the Review Report will be prepared to explain the agreement or disagreement with the views expressed in the report, the actions undertaken or to be undertaken in response to the report, and the reasons those actions are believed to satisfy the key concerns stated in the report (if applicable). The plan will detail how the RMO shall disseminate the final Review Report, USACE response, and all other materials related to the review, and include them in the applicable decision document. The final decision document for project studies that undergo IEPR shall summarize the Review Report and USACE responses.

5. Approval of the Review Plan.

a. The MSC that oversees the home district is responsible for approving the RP. An MSC approval letter (Figure 1) is required for each review plan and must be included in the posted version of the RP. The approval of each RP shall be signed by the MSC Commander; delegation of signature authority for Review Plans is not allowed. If there is disagreement over the scope, content or other aspects of the Review Plan, the MSC should coordinate resolution between the district and the RMO. The commander's approval should reflect vertical team input (involving district, MSC, RMO and Headquarters members) whether the covered subject matter (including data, use of models, assumptions, and other scientific and engineering information) has public safety concerns, is novel, is controversial, is precedent setting, has significant interagency interest, or has significant economic, environmental and social effects to the nation or where specific requests for IEPR are likely. For decision documents, if the RP does not include IEPR, the MSC must obtain an exclusion from IEPR from the Director of Civil Works (DCW) or the Chief of Engineers, prior to approval of the RP.

FIGURE 1

Date:

Subject: Review Plan approval for (work product name here)

The attached Review Plan for the (work product name here) has been prepared in accordance with EC 1165-2-214.

The Review Plan has been coordinated with the (RMO name here) of the (MSC) which is the lead office to execute this plan. For further information, contact the RMO at xxx-xxx-xxxx. The Review Plan (includes / does not include) independent external peer review.

I hereby approve this Review Plan, which is subject to change as 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.

MSC Commander Signature Block

b. Upon MSC approval of each RP, the MSC will provide a copy of the signed MSC Approval Memo to its respective HQUSACE Regional Integration Team (RIT). An approved RP does not supersede or waive regulatory requirements.

c. Like any aspect of a PMP, the RP is a living document and may change as the study/project progresses. In particular, review plans for studies shall be updated at least three times; when the without-project conditions are identified; when the array of alternatives to be considered are identified; and when the preferred alternative is identified. These updates are especially important in those rare cases where an exclusion from IEPR has been granted. As part of the update, the specific conditions and circumstances that supported the exclusion must be reassessed. The PDT, RMO and the vertical team shall jointly recommend whether or not the exclusion should be withdrawn and IEPR be undertaken. For studies where IEPR has been planned but not yet initiated, the RP updates will include an assessment of whether IEPR initiation should occur earlier than previously planned. Re-approval of an RP due to significant changes in the study/scope or level of review should be approved by following the process used for initially approving an RP. In all cases the MSCs will review the decision on the level of review, and any changes made to the RP.

d. Prior to completion of all decision documents, the home district shall prepare an updated Review Plan for the next phase. When a decision document goes before the DCG-CEO, the updated RP detailing the reviews for the Preconstruction Engineering and Design (PED) and Construction Phases will be presented by the MSC Commander.

e. For those projects that do not come to HQ, the District and MSC should ensure that , at a minimum, the next phase of work is covered by an up-to-date Review Plan that outlines the upcoming reviews and milestones. If the next phase of the project has never been covered in

a previously approved RP (RMO endorsement and MSC Commander signature), that formal approval process is required.

6. Posting Review Plans.

a. District. Each district will maintain a web site that hosts electronic versions of review plans for it studies/projects with their MSC approval letters as well as a list of the current and active Review Plans with links to the documents. In posted documents, lists of the names of USACE reviewers should not be displayed. PCX, MSC and HQ postings will link to the district's site. Each district shall establish a mechanism on their web site for allowing the public to comment on the adequacy of the Review Plans, and shall consider public comments on Review Plans.

b. MSC. Each MSC shall post on its website, and update at least every three months, an agenda (list) of Review Plans. The agenda shall describe all decision documents covered by this Circular, describe the Review Plan for each entry on the agenda, and provide a link from the agenda to each document that has been made public pursuant to this Circular. MSCs are encouraged to offer electronic notification mechanisms to alert interested members of the public when entries are added or updated.

c. Each PCX shall post on its website, and update monthly, a listing of all review plans for studies/projects that include relevant project purposes, including links to the documents.

d. CECW-CP will establish and maintain a web site that provides links to the appropriate MSC and PCX sites.

APPENDIX C

District Quality Control and Agency Technical Review

1. All Civil Works work products will undergo necessary and appropriate DQC and ATR to ensure the quality and credibility of the government's scientific and budgetary information in accordance with this circular and the quality management procedures of the responsible command. The level of review should be commensurate with the significance of the information being reviewed. ATR shall not serve as a substitute for DQC.

2. DQC shall be implemented and documented in accordance with procedures prescribed in MSC and district quality manuals and Paragraph 8 of the main body of this circular. Attachment C-1 provides a sample statement of technical review and completion of quality assurance review and agency technical review.

3. ATR, previously known as ITR (and referred to in this way in some referenced publications) shall be conducted in accordance with Paragraph 9 of this circular and the following additional information:

a. Purpose. The purpose of agency reviews throughout the project life cycle, including ATR, policy compliance and legal reviews, generally is to ensure that the appropriate problems and opportunities are addressed; confirm that appropriate solutions are considered; confirm that the appropriate solution is recommended; assure that accurate cost, scheduling and associated risks are presented; confirm that the recommended solution warrants USACE participation; is in accord with current policies; can be implemented in accordance with environmental laws and statutes; and has a sponsor willing and able to fulfill the non-Federal responsibilities; and ensure that the decision document appropriately represents the views of the Corps of Engineers, the Army, and the President.

b. Definition of Success. The corporate intent is for an ATR to not only ensure technical analyses are correct, but to also ensure compliance with all pertinent USACE guidance in order to achieve adequate quality early in studies and help shift HQUSACE policy compliance review to a more confirmatory role and a less confrontational, less corrective role. The scope, extent and type of subsequent HQUSACE policy compliance review comments may be considered a measure of the effectiveness of the PDT and ATR efforts.

c. Supporting Principles.

(1) Each Commander is responsible for assuring that the work product complies with all applicable statutory and policy requirements and, most importantly, has been read for consistency as well, prior to forwarding to higher authority.

(2) The PDT is responsible for project success and for delivering a quality product in accordance with ER 5-1-11. The PDT is responsible for developing work products in accordance with the procedures and policies set forth in USACE engineering regulations and circulars.

(3) The PDT, supported by the appropriate Communities of Practice, is knowledgeable of USACE water resources policies and procedures, and has the expertise to support the project development process.

(4) Home district Office of Counsel is responsible for the legal review of each decision document and signing a certification of legal sufficiency.

(5) MSC Commanders are responsible for ensuring policy and legal compliance, and documenting technical, policy and legal compliance for decision documents that have been delegated to MSCs for review and approval in accordance with ER 1165-2-502.

(6) For decision documents that are required to be presented to the DCG-CEO, the District Commander will address the review, including the major concerns expressed and how those concerns were resolved. The MSC Commander will present the certifications of technical, legal and policy compliance, and any MSC quality assurance observations. The MSC Commander will summarize the field QA/QC efforts, specifically the certifications of technical, cost, legal and policy compliance. They will present the review process and results, including the involvement, comments and comment resolution of the Planning Centers of Expertise, Cost Engineering MCX, IEPR team, and any significant and/or unresolved technical, legal or policy compliance concerns. The leader of the ATR team will participate to address review concerns.

(7) HQUSACE is responsible for confirming the technical, cost, policy and legal compliance of planning products; supporting the resolution of issues requiring HQUSACE, ASA (CW) or OMB decisions; continuously evaluating the overall project development process, including the review and policy compliance processes (including responsibilities delegated to MSCs); and recommending appropriate changes when warranted.

d. Policy

(1) Objective of ATR. 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 results in a reasonably clear manner for the public and decision makers.

(2) Scope of ATR.

(a) The ATR will examine the materials submitted to ensure the adequacy of the presented methods, assumptions, criteria, decision factors, applications, and explanations.

(b) Policy compliance is explicitly within the scope of ATR. The corporate intent is for ATR to identify and, through participation of the vertical team, resolve common policy concerns early and prior to HQUSACE policy compliance reviews. The scope, extent and type of subsequent HQUSACE policy compliance review comments may be considered a measure of the efficacy of the study and ATR efforts.

e. Planning for ATR.

(1) The ATR tasks and related resource, funding and schedule needs will be addressed in the Review Plan before the FCSA or Design Agreement is executed. The ATR efforts should be integrated into the product development schedule to avoid and minimize impacts on the schedule as much as possible; and to avoid rework and delays that would likely occur if reviews are deferred to the end of the study. Once a review is opened for comment (be it for one or more product components), a reasonable time should be established for both issue identification and issue resolution. Reviews shall not be left open for indefinite periods and all comments should be backchecked prior to closing a review. Unresolved comments involving disagreement between the ATR team and the PDT shall be closed with the notation that the comment has been elevated for resolution. Any such issues shall be explicitly listed on the ATR certification form prior to signature.

(2) The PDT will coordinate the RP with the appropriate RMO to ensure that ATR activities are reasonably represented in the PMP, particularly the schedule and resource needs.

f. ATR Team.

(1) The ATR team shall be established shortly after the PDT is established, and in the case of feasibility studies, after the FCSA is executed.

(2) The disciplines represented on the ATR team should mirror the significant disciplines involved in the accomplishment of the work.

(3) For decision documents involving hydrologic, hydraulic, and/or coastal related risk reduction measures, the ATR team will include a subject matter expert in multi-discipline flood risk analysis to ensure consistent and appropriate identification, analysis and written communication of risk and uncertainty.

g. ATR Timing.

(1) Each application of ATR should build upon any and all prior cycles of review for any product. Each ATR review iteration needs to only address incremental changes and additions to documents and analyses addressed in prior ATR reviews, unless the ATR team determines that certain subjects or aspects warrant revisiting due to other changes or a need to adequately understand a larger portion of the product or project. The risk informed decision process outlined in this EC should help guide whether ATR should also be applied at different times in the project development process.

(2) The scheduling of ATR should be presented as part of the Review Plan. ATR will normally occur during key stages in the development of the particular work product and be discussed at milestone meetings, briefings, and IPRs.

(3) Decision documents must adhere to review requirements in ER 1105-2-100, Appendix H Amendment #1. For decision documents prepared under SMART Planning, review requirements will follow the milestones identified in SMART Planning Guide and shall be documented in the Review plan. See Appendix G.

(a) The draft report and supporting analyses warrant ATR because they provide the basis for HQUSACE to determine whether vertical team agreement with the future without project condition and support for the tentatively selected plan is warranted.

(b) The draft report and supporting materials merit ATR because they will be released to the public for review and determine the public, stakeholder, state, other agency and other interest group positions on the tentatively selected plan.

(c) The final report and supporting analyses warrant ATR because they will provide the basis for the Chief of Engineers interagency coordination and the Chief's approval or further recommendation to the Secretary of the Army and the Congress, as needed.

(4) During the design and construction phases, the timing of ATR will be dependent on the complexity of the project and will be explicitly laid out in the review plan, with the concurrence of the vertical team, including the RMO.

(5) All portions of the final work product submittal will have undergone ATR, including any recent revisions that impact cost, schedule or scope.

h. Review Criteria for ATR.

(1) Products will be reviewed against published guidance, including Engineering Regulations, Engineering Circulars, Engineering Manuals, Engineering Technical Letters, Engineering Construction Bulletins, Policy Guidance Letters, implementation guidance, project guidance memoranda, and other formal guidance memoranda issued by HQUSACE. Any justified and approved waivers should have been obtained from HQUSACE for any deviations from USACE guidance.

(2) Key considerations include:

(a) The project meets the customer's scope, intent and quality objectives as defined in the PMP.

(b) Formulation and evaluation of alternatives are consistent with applicable regulations and guidance.

(c) Concepts and project costs are valid.

(d) The non-Federal sponsor is aware of its requirements and concurs with the proposed recommendations.

(e) The recommended alternative is feasible and will be safe, functional, constructible, environmentally sustainable, within the Federal interest, and economically justified according to policy.

(f) All relevant engineering and scientific disciplines have been effectively integrated.

(g) Appropriate computer models and methods of analysis were used and basic assumptions are valid and used for the intended purpose.

(h) The source, amount, and level of detail of the data used in the analysis are appropriate for the complexity of the project.

(i) The project complies with accepted practice within USACE.

(j) Content is sufficiently complete for the current phase of the project and provides an adequate basis for future development effort.

(k) Project documentation is appropriate and adequate for the project phase.

(3) Additional considerations for Decision Documents.

(a) Recognizing that the quality of each decision document has a direct and immediate impact on the credibility of the Corps of Engineers and the Department of the Army, ATR on decision documents should address the basic communication aspects of the documents. Quality decision documents allow the public and stakeholders to understand the planning effort and its results, and enable decision makers to reach the same conclusions as the reporting officers (i.e., Quality decision documents are not a simple reporting of PDT findings or a record repository of PDT activities).

(b) The main decision document and appendices should form an integrated and consistent product.

(c) As an initial guide, the ATR team should consider the Project Study Issue Checklist in Exhibit H-2, Appendix H, ER 1105-2-100, which includes many of the more frequent and sensitive policy areas encountered in studies.

(d) Other key considerations include:

- Are the existing and future without-project conditions reasonable and appropriate?

- Are the planning objectives, constraints and assumptions consistent with the without-project conditions?

- Do the alternative plans provide a reasonably complete array of solutions, make sense relative to the planning objectives and the without-project conditions, and are they complete, effective, efficient and acceptable?

- Are sufficient alternatives formulated to determine the appropriate combination of measures and a reasonable scale for the selected plan (the National Economic Development (NED), National Ecosystem Restoration (NER) or NED/NER Plan)?

- Are the required plans included, such as nonstructural flood risk management plans?

- Are alternatives safe, functional, constructible, economical, reasonable and sustainable?

- Are calculations and results of analyses essentially correct? There should be documentation in the DQC record on this issue.

- Is the engineering content at a feasibility level-of-detail and is it sufficiently complete to provide an adequate basis for the baseline cost estimate (ER 1110-2-1150)?

- Is the real estate content at a feasibility level-of-detail and is it sufficiently complete to provide an adequate basis for the baseline cost estimate (ER 1110-2-1150)?

- Is the environmental mitigation content at a feasibility level-of-detail and is it sufficiently complete to provide an adequate basis for the baseline cost estimate (ER 1110-2-1150)?

- Are comparable cost estimates used for comparing, screening and selecting alternative plans?

- Are analyses for the engineering, economic, environmental, real estate and other disciplines fully described, technically correct, and do they comply with established policy requirements and accepted practices within USACE?

- Is the appropriate plan selected based on the National Objectives and evaluation criteria expressed in Principles and Guidelines and USACE policy? And

- Does the implementation plan have an appropriate division of responsibilities?

i. ATR Comments.

(1) Each review comment should be succinct and enable timely resolution of the concern. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment normally include:

(a) The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;

(b) The basis for the concern – cite the appropriate law, ASA (CW)/USACE policy, guidance or procedure that has not been properly followed;

(c) 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

(d) The probable specific action needed to resolve the concern – identify the action(s) that must be taken to resolve the concern.

(2) In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist. In such situations, the comments generally would defer identifying a probable solution as indicated under dispute resolution below.

(3) ATR comments should generally not include:

(a) Attempts to enforce personal preferences over otherwise acceptable practices, i.e., alternate solutions or analysis methods when the practitioners have already used appropriate methods to develop an adequate solution;

(b) Any other issues that do not add value towards the planning decisions and recommendations, or do not make the recommended plan safe, functional, or more economical.

j. ATR Process.

(1) The ATR process will be conducted using the DrChecks^{sm} review software. The ATR team will provide a written summary of its actions and written specific concerns to the PDT through the RMO.

(2) Upon receipt of the ATR comment memorandum, the PDT will develop responses to the specific concerns and coordinate those responses with the ATR team through the RMO. Technical responses shall be made by product author or by an individual experienced in that discipline area. Responses shall acknowledge and specifically address the comments, indicating resolution steps taken.

(3) Dispute Resolution. The ATR team will complete its review in DrChecks. Thereupon, the PDT will develop and coordinate responses with the ATR team for each comment. The responses and the ensuing discussion are to seek resolution of the ATR concerns to the mutual satisfaction of the PDT and the ATR team. When resolution is not readily achievable, the RMO should engage the PCX or MSC subject matter experts (SMEs) to help facilitate resolution, and they in turn may choose to engage HQUSACE SMEs.

(4) The Agency Technical Review team will identify significant issues that they believe are not satisfactorily resolved and will note these concerns in the Technical Review Certification documentation. The ATR team will prepare a Review Report which includes a

summary of each unresolved issue. Review Reports will be considered an integral part of the ATR documentation.

(5) Significant unresolved ATR concerns that are documented by the RMO will be forwarded through the MSC to the HQUSACE RIT, including basic research of USACE guidance and an expression of desired outcome, for further resolution. HQUSACE may choose to defer the issue to the policy compliance review process or address it directly. At this point the ATR documentation for the concern may be closed with a notation that the concern has been elevated for resolution by HQUSACE. Subsequent submittals of reports for MSC and/or HQUSACE review and approval shall include documentation of the issue resolution process.

(6) 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 ensuing discussion, including any vertical coordination, and lastly the agreed upon resolution.

(7) Statement of Technical Review. The ATR leader must complete a statement of technical review for all final products and final documents. In the case of civil works decision documents forwarded to HQUSACE for review, a statement of technical review will accompany both draft and final documents. The ATR team leader, project manager, RMO, and the chief of the function shall certify that the issues raised by the ATR team have been resolved. By signing the ATR certification, the district leadership certifies policy compliance of the document and also that the District Quality Control (DQC) activities were sufficient and documented. Before the ATR certification is completed, the PDT shall ensure that all agreed upon changes have been incorporated into the final product. For those cases where commitments are made to incorporate changes in the next phase of work (e.g. advancing from Planning into PED), agreed upon deferrals shall be documented in the ATR certification. A sample statement of technical review and certification of ATR is included as Attachment C-1 to this appendix. The statement should always include signatures from the ATR leader, RMO and Project Manager and senior level staff as indicated in the sample. When an A-E performs the ATR, the appropriate principal of the contractor shall sign the statement.

k. Decision Documents - ATR Reporting in Submittals. See Exhibits H-3 through H-7, ER 1105-2-100. For decision documents prepared under SMART Planning, review requirements will follow the milestones identified in SMART Planning Guide and shall be documented in the Review plan. See Appendix G.

(1) For draft report submittals, the district will provide the review certification(s) and the review documentation for the draft decision document, preliminary draft NEPA document, and the supporting analyses. Review will be complete for all supporting technical work products prior to document submission. Any unresolved review issues and the expected path to resolve these issues will be identified. The documentation will address the PCX and Cost Engineering coordination and the application of the Cost Engineering MCX technical review checklist, review comments and certifications and, for the draft reports submission, include the Real Estate Gross Appraisal Review certification.

(2) For final report submittals, the district will provide the documentation and certification of review and, if applicable, IEPR. The documentation will address the PCX and Cost Engineering MCX coordination, review comments and certifications and include the Real Estate Gross Appraisal Review certification.

(3) The project summary accompanying the final report will present the dates of the certifications of the technical and legal adequacy of the final feasibility report, describe the involvement of the PCX, describe the involvement of the Real Estate appraisal reviewer, and summarize the involvement of the Cost Engineering MCX in the approval of the total project cost estimate.

l. Architect-Engineer (AE) or Sponsor Work - All parties that produce deliverables for USACE (studies, designs, etc) are responsible for the quality of those deliverables; their plan to manage quality should be presented in their Quality Control Plan for the product and a District's quality assurance procedures shall insure reasonable adherence to the approved QCP. The formal ATR of the product will be the responsibility of the Review Management Organization (RMO) as defined in Section 7 of this circular. The AE or Sponsor will be accountable for the resolution of any issues identified during the ATR. If IEPR is required, sponsor or AE deliverables will be treated just like any other in-house product except that issue resolution will be a dual responsibility between the product provider and USACE, with USACE having the final authority.

Attachment C-1

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the [product type & short description of item] 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[sm].

SIGNATURE _____ _____
[Name] Date
ATR Team Leader
[Office Symbol or Name of AE Firm]

SIGNATURE _____ _____
[Name] Date
Project Manager (home district)
[Office Symbol]

SIGNATURE _____ _____
[Name] Date
Architect Engineer Project Manager [1]
[Company, location]

SIGNATURE _____ _____
[Name] Date
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 and specifically list any agreed-upon deferrals to be completed in the next phase of work.]

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE _____ _____
[Name] Date
Chief, Engineering Division (home district)
[Office Symbol]

SIGNATURE _____ _____
[Name] Date
Chief, Planning Division[2] (home district)
[Office Symbol]

Add appropriate additional signatures (Operations, Construction, AE principal for ATR solely conducted by AE, etc) and/or modify to accommodate local organizational structure.

1 Only needed if some portion of the ATR was contracted 2Decision Documents Only.

Attachment C-1 Instructions: [Input] – Information in Blue brackets and text is required. Once the input is provided, text should be formatted in black and the brackets should be deleted. Delete these instructions in the completed form.

APPENDIX D

Type I - IEPR, Independent Peer Review

1. General.

a. Type I IEPR will be performed if there is a vertical team decision (involving district, major subordinate command, and PCX and Headquarters members) that the review of the covered subject matter (including data, use of models, assumptions, and other scientific and engineering information) is triggered by one or more of the following factors.

b. Type I IEPR. Any of the following factors require a Type I IEPR:

(1) Significant threat to human life. The decision document phase is the initial concept design phase of a project. Therefore, when life safety issues exist, a Type I IEPR that includes a Safety Assurance Review (SAR) is required.

(2) Total Project Cost > $45M. In considering the $45 million cost trigger, the term "total cost", means the cost of construction (including planning and designing) of the project and includes lands, easements, rights of way, relocations, and disposal areas (LERRDs). In the case of a project for hurricane and storm risk management or flood risk management that includes periodic nourishment over the life of the project, the term includes the total cost of the nourishment. The total cost shall be based upon the reasonable USACE estimates at the completion of the reconnaissance study for the project. If the reasonable estimate of total costs is subsequently determined to be in excess of $45 million the MSC will determine if the Review Plan should be modified.

(3) A request by a State Governor of an affected state (all or a portion of a state which is within the drainage basin in which the project is or would be located and would be economically or environmentally affected as a consequence of the project).

(4) A request by the head of a Federal or state agency charged with reviewing the project study if he/she determines that the project is likely to have a significant adverse impact on environmental, cultural, or other resources under the jurisdiction of the agency after implementation of proposed mitigation plans.

(a) A decision whether to conduct Type I IEPR must be made within 21 days of the date of receipt of the request by the head of the Federal or State agency.

(b) If the Chief of Engineers decides not to conduct a Type I IEPR following such a request the Chief shall make publicly available the reasons for not conducting the Type I IEPR.

(c) If the Chief of Engineers decides not to conduct an Type I IEPR following such a request, it may be appealed to the Chairman of the Council on Environmental Quality within

30-days of the Chief's decision and the Chairman shall decide the appeal within 30 days of the date of the appeal.

(5) Significant public dispute as to size, nature or effects of the project.

(6) Significant public dispute as to the economic or environmental cost or benefit of the project.

(7) Cases where information is based on novel methods, presents complex challenges for interpretation, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices.

(8) Any other circumstance where the Chief of Engineers determines Type I IEPR is warranted.

2. Type I IEPR Panels. Panels should also be able to evaluate whether the interpretations of analysis and conclusions based on analysis are reasonable. To provide effective review, in terms of both usefulness of results and credibility, review panels should be given the flexibility to bring important issues to the attention of decision makers. However, review panels should be instructed to not make a recommendation on whether a particular alternative should be implemented, as the Chief of Engineers is ultimately responsible for the final decision on a planning or reoperations study. External panels may, however, offer their opinions as to whether there are sufficient analyses upon which to base a recommendation. Type I IEPR panels will accomplish a concurrent review that covers the entire decision document or action. The panel will address all the underlying engineering, economics, and environmental work, not just one aspect of the project. This level of review is governed primarily by Sections 2034 and 2035 of WRDA 2007 and the OMB Peer Review Bulletin.

a. Establishment of Panels.

(1) For Type I IEPR, an outside eligible organization will select the reviewers according to the guidance in paragraph 2b, below. By statute, the Federal Advisory Committee Act does not apply to Type I IEPR panels.

(2) Eligible Organizations. Type I IEPR panels will be established by the responsible RMO through contract with an independent scientific and technical advisory organization that must be a 501(c)(3) (Internal Revenue Code of 1986) organization or with the National Academy of Sciences.

(3) The highest degree of credibility of external reviews will be achieved if the responsibility for coordinating the external review process is granted to an organization independent of USACE. Such an independent Outside Eligible Organization (OEO) must be in charge of selecting reviewers, all of whom should be independent of USACE and free of conflicts of interests. The OEO will also be assessed for potential organizational conflict of interest on a task order basis.

(4) The OEO that selects reviewers for projects should be knowledgeable of the USACE mission, its statutory authorities and related administrative regulations, and other evaluation procedures.

(5) The OEO shall have the following qualifications:

(a) Is described in section 501(c)(3), and exempt from Federal tax under section 501(a) of the Internal Revenue Code of 1986.

(b) Is independent

(c) Is free from conflicts of interest

(d) Does not carry out or advocate for or against Federal water resources projects;

(e) Has experience in establishing and administering independent review panels;

(f) Has proven ability to deliver under significant time constraints.

(6) Type I IEPR reviews will ultimately be more effective if the review panel maintains communication with USACE during the review. This communication, which should not compromise the review's independence, can help the review panel understand USACE assumptions and methods, as well as the practical implications of the review panel's finding and recommendations. The OEO should coordinate this communication between the district, RMO (usually PCX for planning studies) and review panel, as well as communication between the panel and relevant federal agencies, interest groups, and the public.

b. Guidelines for Selection. The three most important considerations in selecting reviewers are the credentials of the reviewers (which include affiliations as well as expertise), the absence of conflict of interest, and the independence of the group that selects the reviewers. The OEO should select reviewers and structure the review such that good science, sound engineering, and public welfare are the most important factors producing a sound review.

(1) All potential reviewers carry professional and personal biases, and it is important that these biases be disclosed when reviewers are considered and selected. The OEO leading the review shall determine which biases, if any, will disqualify prospective reviewers. It shall also develop criteria for determining if review panels are properly balanced, both in terms of professional expertise as well as in points of view on the study or project at hand.

(2) There is also a challenge of selecting review panels that are viewed as credible and balanced, but that also have adequate knowledge of USACE's often highly complex guidance and analytical methods.

c. Panel Responsibilities. The panel of experts established for a review for a project shall:

(1) Conduct the review for the subject project in a timely manner in accordance with the study and RP schedule;

(2) Assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analyses, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in evaluation of economic or environmental impacts of proposed projects, and any biological opinions of the project study.

(3) For those decision documents where a Safety Assurance Review is required as defined in Appendix E, the panel should address the following questions for the selected alternative:

(a) In accordance with ER 1110-2-1150, is the quality and quantity of the surveys, investigations, and engineering sufficient for a concept design?

(b) Are the models used to assess hazards appropriate?

(c) Are the assumptions made for the hazards appropriate?

(d) Does the analysis adequately address the uncertainty and residual risk given the consequences associated with the potential for loss of life for this type of project?

(4) Assess the considered and recommended alternatives from the perspective of systems. This includes (but is not limited to) aspects such as the hydraulic and hydrologic effects throughout a watershed, the impact on competing ports within an area of influence, or the impacts on resources used by transiting migratory species. It should also include systemic aspects being considered from a temporal perspective, including the potential effects of climate change.

(5) Receive from USACE any public written and oral comments provided on the project;

(6) Provide timely written and oral comments throughout the development of the project, as specified in the scope of work with the OEO; and

(7) Submit a final report, no more than 60 days following the close of the public comment period for the draft project study to enable the district to address all necessary actions before the final report is signed. The report will contain the panel's economic, engineering, and environmental analysis of the project study, including the panel's assessment of the adequacy and acceptability of the economic, engineering, and environmental methods, models, and analyses used. All comments in the report will be finalized prior to their release to USACE for each study phase. If the panel does not complete its review in this period, the processing of the report will continue without delay.

d. Panel Recommendations.

(1) The panel will submit to USACE through the managing organization a final report containing the panel's economic, engineering, and environmental analysis of the project study, including the panel's assessment of the adequacy and acceptability of the economic, engineering, and environmental methods, models, and analyses used by the Corps of Engineers.

(2) The report from the panel of experts will be considered and documentation presented on how issues were resolved or will be resolved by the District Engineer before the district report is signed. The recommendations and responses will be presented to the DCG-CEO by the District Engineer with a Type I IEPR panel or OEO representative participating, preferably in person.

(3) After receiving a report on a project from a panel of experts, USACE shall consider all recommendations contained in the report and prepare a written response for all recommendations adopted or not adopted. Written recommendations of a reviewer or panel of reviewers and the responses of USACE shall be made available to the public, including through electronic means on the Internet. The panel's final report and the responses of USACE shall also accompany the publication of any report of the Chief of Engineers for the project. In cases where there is no Chief's report, the DCW will certify the agency response.

e. Guidelines for Developing the "Charge."

(1) Reviews should identify, explain, and comment upon assumptions that underlie all the analyses, as well as evaluate the soundness of models, surveys, investigations, and methods. A review panel should bring important issues to the attention of the agency. Review panels should be able to evaluate whether the interpretations of analysis and the conclusions based on analysis are reasonable. However, review panels should be instructed to not present a final judgment on whether a project should be constructed or whether a particular operations plan should be implemented, as the Chief of Engineers is ultimately responsible for this final decision.

(2) Peer reviews, no matter how useful, should not be expected to resolve fundamental disagreements and controversies. Reviewers should aim to draw distinctions between criticisms of the regulations and guidelines and criticisms of how well USACE conformed to the guidance. Reviews should focus on assumptions, data, methods, and models.

(3) Reviews will assist USACE in making decisions, but reviewers should not be asked to make decisions. Reviewers should avoid findings that become "directives" in that they call for modifications or additional studies or suggest new conclusions and recommendations. In such circumstances the reviewers may have assumed the role of advisors as well as reviewers, thus introducing bias and potential conflict in their ability to provide objective review later in the project. Reviewers engaged in the review processes should be selected based upon their independence and professional expertise and should not be "stakeholders".

(4) The MSC's choice about the appropriate level of review should be informed by deliberation with the vertical team.

(5) Frequent communication will help the review panel understand the technical and practical implications of its recommendations. Review panels should highlight areas of disagreement and controversies that may need resolution.

(6) An issue that frequently arises in review, and one not always easily agreed upon, is defining a review panel's boundaries of inquiry. It is not uncommon for an agency or other administrative group to try to limit a review panel's deliberation. However, the line between technical and policy issues is often blurred, and it is often difficult to clearly separate them. USACE should accept comments, but make a distinction in responses when comments pertain to policy which is beyond the scope of a Type I IEPR, but elevated to HQUSACE for consideration under a non-project specific policy review. It is important that panelists focus on their review, and not become defenders of their recommendations.

f. Record of Review. USACE shall make all written recommendations of a reviewer or panel of reviewers and related USACE responses available to the public, including through electronic means on the Internet.

3. Planning Centers of Expertise.

a. PCXs are responsible for the accomplishment and quality of Type I IEPR for documents covered by this Circular. In cases where the Type I IEPR includes SAR, the PCX will coordinate with the USACE Risk Management Center in developing the charge. Centers must use outside eligible organizations to manage the selection of panels, the conduct of the review, and the organization and disposition of comments.

b. Review will be assigned to the appropriate USACE PCX based on business programs. Districts shall develop Review Plans in coordination with the Centers based on the primary purpose of the basic decision document to be reviewed.

c. For decision documents with multiple purposes (or project purposes not clearly aligned with the PCXs), the home MSC will designate a lead PCX to conduct the review after coordinating with each of the relevant Centers. The assigned PCX will coordinate with other PCX and offices to ensure that a review team with appropriate expertise is assembled.

d. Each PCX must coordinate with the Cost Engineering Mandatory Center of Expertise (MCX) at the Walla Walla District. In cases where the Cost Engineering MCX identifies the need for Type I IEPR, it will inform the assigned PCX and will assist the PCX with establishing the charge for the independent external peer review.

4. Reporting Requirements.

a. When it is determined that IEPR will be undertaken, the Chief of Engineers is required to notify the Committee on Environment and Public Works of the Senate and the Committee

on Transportation and Infrastructure of the House of Representatives of the review, prior to the initiation of peer review. Upon MSC approval of each RP with Type I IEPR, the MSC will provide a copy of the signed MSC Approval Memo to its respective HQUSACE RIT. The RIT will then process a notification letter, signed by the Director of Civil Works (DCW) to both the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives with a copy to ASA (CW).

b. Public Availability and Transmittal to Congress. After receiving a report on a project study from a panel of experts under this Circular, the Chief of Engineers (through the respective HQUSACE RIT) shall:

(1) Post the panel report on the HQUSACE public website within ten days of receipt of the report.

(2) Make a copy of the report, and any written response of the Chief of Engineers on recommendations contained in the report, available to the public by electronic means, including the Internet; and

(3) Transmit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a copy of the report, together with any such written response, on the date of a final report of the Chief of Engineers or other final decision document for the project study.

c. Annual Report. By 1 November each year, each MSC shall provide HQUSACE, through their respective RIT, a summary of the Type I IEPRs undertaken by the MSC during the previous fiscal year. CECW- P will consolidate the summaries received by the RITs and will provide the Administrator of the Office of Information and Regulatory Affairs in the Office of Management and Budget with a consolidated summary of USACE Type I IEPRs by 15 December of each year. Annual summaries of Type I IEPRs shall include:

(1) The number of Type I IEPRs conducted subject to this Circular and the authorities under which each IEPR was conducted.

(2) The number of times alternative procedures were invoked.

(3) The number of times waivers or deferrals were invoked (and in the case of deferrals, the length of time elapsed between the deferral and the Type I IEPR).

(4) Any decision to appoint a reviewer pursuant to any exception to the applicable independence or conflict of interest standards of the OMB Peer Review Bulletin, including determinations by the Secretary of Defense pursuant to Section III (3)(c) of the OMB Peer Review Bulletin.

(5) The number of Type I IEPR panels that were conducted in public and the number that allowed public comment.

(6) The number of public comments provided on each Civil Works Review Plan.

(7) The number of peer reviewers that the Center used that were recommended by professional societies.

d. Report on implementation of Section 2034 of WRDA 2007.

(1) Not later than 8 November 2010, the Chief of Engineers shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the implementation of this section. (Completed)

(2) Not later than 8 November 2013, the Chief of Engineers shall update the previous report taking into account any further information on implementation of this section and submit such updated report to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

APPENDIX E

Type II - IEPR, Safety Assurance Review (SAR)

1. General.

a. A Type II IEPR SAR shall be conducted on design and construction activities for any project where potential hazards pose a significant threat to human life. The District Chief of Engineering, as the Engineer in Responsible Charge, needs to assess whether the threat is significant and document that in the Review Plan. A recommendation to not conduct a SAR shall (like any Review Plan recommendation) have the endorsement of the RMO prior to approval of the Review Plan. 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. Since design initiates in the decision document phase, Appendix D, paragraph 2.c.4 incorporates the SAR into the Type I IEPR. Appendix E provides guidance for reviews conducted on design and construction activities performed after the approval of a decision document. 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.

b. When a Type II review is included in the project's approved Review Plan, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, is responsible for ensuring the Type II review is conducted in accordance with this Circular, and will fully coordinate with the Chief of Construction, the Chief of Operations, and the project manager through the Pre-Engineering and Design (PED) and construction phases. The project manager will coordinate with the RMO to develop the review requirements and to include them in the Review Plan. The default RMO for flood risk management projects and Type II reviews is the USACE Risk Management Center (RMC). If the RMC and MSC agree that a Type II review does not need to be conducted, the MSC may assume RMO responsibilities for the implementation phase. Any such a transfer of responsibility should be mutually agreed upon and mindful of all the remaining phases of the project.

2. Risk Informed Decision. Any project the Federal action is would pose a significant threat to human life (public safety) requires a Type II review. Other factors to consider for conducting a Type II review of a project or components of a project are:

a. The project involves the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices;

b. The project design requires redundancy, resiliency, and robustness.

(1) Redundancy. Redundancy is the duplication of critical components of a system with the intention of increasing reliability of the system, usually in the case of a backup or fail-safe.

(2) Resiliency. Resiliency is the ability to avoid, minimize, withstand, and recover from the effects of adversity, whether natural or manmade, under all circumstances of use.

(3) Robustness. Robustness is the ability of a system to continue to operate correctly across a wide range of operational conditions (the wider the range of conditions, the more robust the system), with minimal damage, alteration or loss of functionality, and to fail gracefully outside of that range.

c. The project has unique construction sequencing or a reduced or overlapping design construction schedule; for example, significant project features accomplished using the Design-Build or Early Contractor Involvement (ECI) delivery systems.

3. Review Plans. As detailed in Appendix B, the Review Plan (RP) shall include the SAR or an explanation as to why an SAR is not required. The MSC Commander's approval of the RP is required to assure that the plan is in compliance with the principles of this guidance and the MSC Quality Management Plan and that all elements of the command have agreed to the review approach. The RP must anticipate and define the appropriate level of review.

4. Timing of Reviews.

a. The SAR team shall perform reviews and site visits in accordance with milestones identified in the Review Plan. Milestones to consider for an SAR are at the record of final design in the Design Documentation Report; at the completion of the plans, specifications, and cost estimate; at the midpoint of construction for a particular contract, prior to final inspection, or at any critical design or construction decision milestones. The SAR panel may recommend to the RMO additional or alternate milestones. The MSC should approve these recommendations when they are warranted and reasonable.

b. Note that the SAR is an extension (not a replacement) of the ATR (formerly Independent Technical Review) requirements outlined in ER 1110-1-12, Engineering and Design Quality Management (or a subsequent edition under development, EC 1165-2-xxx, Quality Management for Civil Works); however, the intent of the SAR is to complement the ATR and to avoid impacts to program schedules and cost. Where appropriate and reasonable, the District can conduct the ATR and SAR concurrent and in concert if it enhances the review process. The SAR is a strategic level review and every effort should be made to avoid having the SAR duplicate the ATR.

5. Guidelines for Developing the Scope of Work or "Charge".

a. The review shall cover the design and construction phase of the project as outlined below.

b. Reference Appendix D, paragraph 2.e for guidelines for developing the "Charge".

c. The review plan should establish a milestone schedule aligned with critical features of the project design and construction. The review should complement the ATR and focus on unique features and changes from the assumptions made and conditions that formed the basis for the design during the decision document phase.

d. IEPR panels should be able to evaluate whether the interpretations of analysis and conclusions based on analysis are reasonable. In terms of both usefulness of results and credibility, review panels should be given the flexibility to bring important issues to the attention of decision makers. However, review panels should be instructed to not make a recommendation on whether a particular alternative should be implemented, as the Chief of Engineers is ultimately responsible for the final decision. External panels may, however, offer their opinions as to whether there are sufficient analyses upon which to base a recommendation.

e. For the decision document phase, the review requirements are defined in Appendix D and included in the Type I review.

f. For the PED or design phase, the SAR should focus on unique features and changes from the assumptions made and conditions that formed the basis for the design during the decision document phase. The SAR shall address the following questions:

(1) Do the assumptions made during the decision document phase for hazards remain valid through the completion of design as additional knowledge is gained and the state-of-the-art evolves?

(2) Do the project features adequately address redundancy, resiliency, or robustness with an emphasis on interfaces between structures, materials, members, and project phases?

(3) Do the project features and/or components effectively work as a system?

g. For those unique projects authorized and appropriated or approved without a decision document and in the PED or design phase, the SAR shall address the following questions:

(1) Are the models used to assess hazards appropriate?

(2) Are the assumptions made for the hazards appropriate?

(3) Is the quality and quantity of the surveys, investigations, and engineering for the design in accordance with ER 1110-2-1150 sufficient to support the models and assumptions made for determining the hazards?

(4) Does the analysis adequately address the uncertainty given the consequences associated with the potential for loss of life for this type of project?

(5) Do the project features adequately address redundancy, resiliency, or robustness with an emphasis on interfaces between structures, materials, members, and project phases?

(6) From a public safety perspective, is the proposed alternative reasonably appropriate or are there other alternatives that should be considered?

(7) Is the environmental assessment reasonably comprehensive or are there significant environmental impacts that should be considered.

(8) Assess the recommended alternatives from the perspective of systems. This includes (but is not limited to) aspects such as the hydraulic and hydrologic effects throughout a watershed, the impact on competing ports within an area of influence, or the impacts on resources used by transiting migratory species. It should also include systemic aspects being considered from a temporal perspective, including the potential effects of climate change.

h. For the construction phase, the SAR shall address the following questions:

(1) Do the assumptions made during design remain valid through construction as additional knowledge is gained and the state of the art evolves?

(2) For O&M manuals, do the requirements adequately maintain the conditions assumed during design and validated during construction; and will the project monitoring adequately reveal any deviations from assumptions made for performance?

6. Requirements for Establishing Type II – IEPR Panels.

a. RMO Responsibilities.

(1) The RMO is responsible for ensuring the panels are established in accordance with this Circular. To avoid potentially triggering the requirements of the Federal Advisory Committee Act (FACA), all Type II – IEPR panels shall be established in accordance with this circular. The following requirements do not apply to Type I - IEPR panels established pursuant to Section 2034 of WRDA 2007.

(2) The RMO shall define the required competencies for each of the panel members insuring a balance of perspectives and may specify a particular expertise as the team lead. It can recommend candidates for consideration.

b. Review team led by and composed of other government employees.

(1) As noted in body of the regulation, section 16, Administration, peer reviews performed solely by Federal employees other than USACE or state, local and Tribal government employees do not trigger FACA.

(2) For projects where the panel composition is one person, FACA does not apply; however, the practice of establishing a panel composed of reviewers reporting as individuals to avoid FACA is not an acceptable practice.

c. Review team led by and composed of contractors.

(1) A contractor can be used to carry out these panels, including selecting panel members for the Type II- IEPR panel. Type II IEPR panels established by USACE personnel may require compliance with FACA and should only be established after consultation with local counsel. Unlike Type I – IEPR panels, competition for Type II – IEPR contractors may not be limited to OEOs. The solicitation for such a contract should include the minimum professional requirements for panel members, but should not be so narrowly written that only specific persons may be selected.

(2) Due to potential organizational conflicts of interest and the potential for contractors to have access to other contractors' information, contracting officers must be particularly aware of potential conflicts of interest and avoid or mitigate them in accordance with FAR Part 9 when procuring Type II – IEPR panel services. In addition, solicitations must include non-disclosure agreements and language analogous to that found in the Army Source Selection manual for contractors who assist in evaluations of proposals to ensure that contractor information is protected from disclosure by reviewing contractors. If an existing contract is considered for use, the Contracting Officer must determine that this work would be in scope of the contract scope and determine, if non-disclosure agreements and organizational conflict of interest language is not included in the contract, whether they could be added to the contract as an in scope modification before the existing contract may be used for a Type II – IEPR panel.

d. Guidance for the contractor (or USACE) for establishing review teams.

(1) If the panel meetings will be closed to the public, then the contractor should establish a process for members of the public to apply for membership on the panel. The contractor, however, is not under any obligation to select any of these public applicants.

(2) The RMO and other USACE officials may approve the panel members selected by the contractor, but should not participate in the vetting or selection of members. Moreover, USACE officials should not veto or disapprove of a selected panel member unless the selected panel member does not meet the objective criteria for panel members provided to the contractor.

(3) The contractor shall be required in the solicitation and instructions to apply the National Academy of Science's policy for selecting reviewers to ensure the panel members have no conflict of interest with the project being reviewed. The following website provides academy guidance for assessing composition and the appropriate forms for prospective panel members in General Scientific and Technical Studies: http://www.nationalacademies.org/coi/index.html. The contractor shall also develop criteria for determining if review panels are properly balanced, as defined by criteria in the contract,

both in terms of professional expertise as well as in points of view on the study or project at hand. If necessary, the contractor shall remove and replace panel members during a review if a conflict arises.

(4) In developing a solicitation package for Type II IEPR review services, the District should consider the following considerations presented in *Review Procedures for Water Resources Project Planning*, National Research Council of the National Academies, 2002:

(a) All potential reviewers carry professional and personal biases, and it is important that these biases be disclosed when reviewers are considered and selected. The contractor leading the review shall determine which biases, if any, will disqualify prospective reviewers. It should also develop criteria for determining if review panels are properly balanced, both in terms of professional expertise as well as in points of view on the study or project at hand.

(b) There is also a challenge of selecting review panels that are viewed as credible and balanced, but that also have adequate knowledge of USACE's often highly complex guidance and analytical methods.

(c) The most important considerations in selecting reviewers are the credentials of the reviewers (which include affiliations as well as expertise) and the absence of conflict of interest.

(5) The contractor shall be responsible for adjusting the panel membership as necessary to maintain the skill set necessary as the project progresses and the need for different expertise arises.

(6) USACE officials may attend panel meetings, but may not participate in the management or control of the group. In other words, USACE can't be a voting member of the group, may not direct activities at the meetings, and may not develop the agenda for the meetings.

(7) USACE officials must refrain from participating in the development of any reports or final work product of the group.

(8) The peer review panel can take the form of a panel of consultants, but the members are limited to reviewing and commenting on the work being done by others. The peer review can work concurrent with on-going work, be interactive as needed, and provide real time over the shoulder input. Timely input on the appropriateness of hazard analyses, models and methods of analysis used, and the assumptions made is critical to maintaining project schedules.

(9) At a minimum, one member is required, but the panel composition shall be a size appropriate for the size and complexity of the project. Composition of the panel can change depending on the need of the particular phase of review.

7. Panel Responsibilities. The panel of experts established for a review for a project shall:

a. Conduct the review for the subject project in a timely manner in accordance with the study and RP schedule;

b. Follow the "Charge", but when deemed appropriate by the team lead, request other products relevant to the project and the purpose of the review.

c. Receive from USACE any public written and oral comments provided on the project;

d. Provide timely written and oral comments throughout the development of the project, as requested; and

e. Assure the review avoids replicating an ATR and focuses on the questions in the "Charge", but the panel can recommend additional questions for consideration. The SAR panel may recommend to the RMO additional or alternate questions.

f. Offer any lessons learned to improve the review process.

g. Submit reports in accordance with the review plan milestones.

h. The team panel lead shall be responsible for insuring that comments represent the group, be non-attributable to individuals, and where there is lack of consensus, note the non-concurrence and why.

8. Record of Review. The review team will prepare a review report. All review panel comments shall be entered as team comments that represent the group and be non-attributable to individuals. The team lead is to seek consensus, but where there is a lack of consensus, note the non-concurrence and why. A suggested report outline is an introduction, the composition of the review team, a summary of the review during design, a summary of the review during construction, any lessons learned in both the process and/or design and construction, and appendices for conflict of disclosure forms, for comments to include any appendices for supporting analyses and assessments of the adequacy and acceptability of the methods, models, and analyses used. All comments in the report will be finalized by the panel prior to their release to USACE for each review plan milestone.

9. District Responsibilities to Complete the SAR Report.

a. The host district Chief of Engineering is responsible for coordinating with the RMO, for attending review meetings with the SAR review panel, communicating with the agency or contractor selecting the panel members, and for coordinating the approval of the final report with the MSC Chief of Business Technical Division.

b. After receiving a report on a project from the peer review panel, the District Chief of Engineering, with full coordination with the Chiefs of Construction and Operations, shall consider all comments contained in the report and prepare a written response for all

comments and note concurrence and subsequent action or non-concurrence with an explanation. The District Chief of Engineering shall submit the panel's report and the Districts responses to the MSC Chief of Business Technical Division for final review and concurrence. The final report is then presented to the MSC Commander for approval. After MSC Commander approval, the report and responses shall be made available to the public on the District's website.

APPENDIX F

Roles and Responsibilities

DISTRICT:

- Prepare Review Plan (RP) as part of PMP to include scope of review, data and models, etc.
- Post/Publish RP on website with MSC approval memo
- District Quality Control (DQC) conducted and documented at appropriate times
- PDT is responsible for a complete reading of the report prior to District Commander approval
- Complete all document reviews prior to signature from District Commander
- Seek issue resolution support from MSC
- Update RP to include review strategy for PED and Construction phases, to present at CWRB
- Draft proposed response to IEPR review report & coordinate with RMO
- When USACE response to IEPR is issued, District will disseminate final Review Report, USACE response & other materials to post on website and include in Decision Document

MSC:

- Establish Quality Management Plan (to include discussion of how DQC will be conducted and documented in Districts) and execute procedures
- Approve all Review Plans (and updates), assuring RMO endorsement and vertical team participation
- Support the District for ATR issue resolution
- Maintain and update agenda (list) of Review Plans
- Coordinate and provide input to Type I IEPR annual report
- Approves final Agency Response to Type II IEPR review reports

RMO (applicability varies by product under review):

- Coordinate all Review Plans, including agreement on scope and details of effort
- Assign ATR team and ensure that lead is outside home MSC
- Obtain the services of the Cost Engineering MCX for review and certification of cost estimates
- Manage the ATR
- For Type I IEPR, contract with Outside Eligible Organization (OEO), and for Type II IEPR, contract with an A/E contractor or arrange with another government agency to manage IEPRs
- Assist District with preparing written responses to the IEPR review report
- For Type I IEPR, participate in Agency Decision Milestone/CWRB

HQUSACE:

- Complete policy reviews
- Participate in issue resolution
- Conduct Agency Decision Milestone/CWRB

- For feasibility studies, release draft Chief's report and decision documents for public review
- Approve or deny requests for exclusions from Type I IEPR
- Review requests to use NAS for Type I IEPR
- Consider the District's proposed response to the Type I IEPR review report
- Determine appropriate command level for issuing formal USACE response to Type I IEPR review report

ALL:

- Uphold professional standards
- Communicate well and often
- Learn from prior reviews
- Share your PDT's lessons learned with the rest of the Community of Practice

APPENDIX G

Special Cases and Provisions

1. This section modifies the policy requirements in this circular for the specific cases outlined below; special provisions found in this appendix do not extend to projects or programs not explicitly identified in this appendix.

2. Continuing Authorities Program (CAP) – This special provision modifies the general requirements for decision documents to facilitate program execution and simplifying policy requirements for this program. Accountability for compliance with existing policy and these modifications remains with the MSC. Inspections will be conducted to ensure that the program is being executed in accord with guidance. The individual authorities known collectively as the CAP are: Section 14, Flood Control Act of 1946 (PL 79-526), as amended, for emergency streambank and shoreline erosion protection for public facilities and services; Section 103, River and Harbor Act of 1962 (PL 87-874), as amended, amends PL 727, an Act approved August 13, 1946 which authorized Federal participation in the cost of protecting the shores of publicly owned property from hurricane and storm damage; Section 107, River and Harbor Act of 1960 (PL 86-645), as amended, for navigation; Section 111, River and Harbor Act of 1968 (PL 90-483), as amended, for mitigation of shoreline erosion damage caused by Federal navigation projects; Section 204, Water Resources Development Act of 1992 (PL 102-580), as amended, for beneficial uses of dredged material; Section 205, Flood Control Act of 1948 (PL 80-858), as amended, for flood control; Section 206, Water Resources Development Act of 1996 (PL 104-303), as amended, for aquatic ecosystem restoration; Section 208, Flood Control Act of 1954 (PL 83-780), as amended, originally Section 2, Flood Control Act of August 28, 1937 (PL 75-406) for snagging and clearing for flood control; and Section 1135, Water Resources Development Act of 1986 (PL 99- 662), as amended, project modifications for improvement of the environment.

a. For CAP projects, the review policy is modified as follows:

(1) All CAP projects are excluded from Type I Independent External Peer Review (IEPR) except Section 205 and Section 103, or those projects that include an EIS or meet the mandatory triggers for Type I IEPR as stated in Appendix D.

(2) Exclusions from Type I IEPR for Section 205 and Section 103 projects will be approved on a case by case basis by the MSC Commander, based upon a risk informed decision process as outlined in the Appendix D. That approval may not be delegated.

(3) Type II IEPR is still required for those CAP projects where life safety risk is significant as documented in the approved Review Plan.

(4) Review Plans are required for all projects. MSC's are strongly urged to adopt a programmatic approach to review of CAP projects; CAP programmatic review plans shall be approved by the MSC Commander.

(5) The Review Management Organization (RMO) for ATR for CAP projects may be the home MSC in lieu of a National Planning Center of Expertise (PCX). The PCXs will continue to serve in their roles of providing advice and may serve as the RMO under appropriate agreements with an MSC. The ATR lead is to be outside the home MSC unless the Review Plan justifies an exception and is explicitly approved by the MSC Commander.

(6) For CAP projects, ATR of the cost estimate may be conducted by pre-certified district cost personnel within the region as designated by the Walla Walla Cost MCX. The pre-certified list of cost personnel has been established and is maintained by the Cost MCX. The cost ATR member will coordinate with the Cost MCX for execution of cost ATR and cost certification. The Cost MCX will be responsible for final cost certification and may be delegated at the discretion of the Cost MCX.

(7) The Risk Management Center is only required for dam and levee safety projects. However, the MSC commander will ensure that all decision documents involving flood and coastal related risk reduction measures are fully and appropriately reviewed, all issues resolved, and that a consistent and appropriate level of communicating risk and uncertainty is reflected in the study documents.

3. SMART Planning – For SMART Planning products, the Review Plan shall document the reviews to be employed and milestones designating when they will be conducted. See the SMART Planning Guide in the Planning Toolbox for information about SMART Planning.

4. Non-Federal Activities at USACE Projects - Special cases exist where non-Federal interests undertake the study, design or implementation of a Federal project or a modification to a USACE project. Authorities for such actions include, but are not limited to, 33 USC 408, Sections 203 and 204 of WRDA 1986, Section 206 of WRDA 1992, and Section 211 of WRDA 1996. These types of activities are not a Corps product and the specific ATR requirements in this circular do not apply. However, as the intent of the non-federal interest may be to seek authorization for a federal project or modification of an existing project, use of and compliance with this EC may be advisable to help expedite an eventual USACE review and approval process. The host district should communicate the quality requirements expected from the non-federal interests and require a Review Plan that will be reviewed by the host district and approved by the host MSC Commander. The District should do a rigorous technical review commensurate with the risk of the proposed activities; reviewers can be from the host district. If lacking the appropriate expertise, the district should supplement their staff with outside subject matter experts. The district shall coordinate with their Headquarters Regional Integration Team (RIT) to ensure all necessary approvals are met throughout the process. See Paragraph 13 in this circular for discussion of IEPR requirements for non-federal activities at USACE projects.

GLOSSARY

Definitions and Acronyms

Decision Document - For application of the policy contained in this circular, a "decision document" is any product that provides analysis and recommendations for an Agency decision to obtain project authorization to commit Federal funds for project implementation or project modification. They are the basis for approval to spend/receive funds as a result of entering into agreements with other agencies or organizations including those to obtain Congressional authorization.

Implementation Document - For application of the policy contained in this circular, an "implementation document" is defined as a document prepared, generally subsequent to the decision document (e.g. Plans and Specifications), that supports project implementation or project modification in accordance with the decision document and its authorization.

Peer Review - the process of subjecting research, assumptions, analyses, and conclusions to the scrutiny of others who are experts in the same field. Peer review requires a community of experts in a given (and often narrowly defined) field, who are qualified and able to perform impartial review.

Outside Eligible Organization - An organization that:

(1) is described in section 501(c)(3), and exempt from Federal tax under section 501(a), of the Internal Revenue Code of 1986;
(2) is independent;
(3) is free from conflicts of interest;
(4) does not carry out or advocate for or against Federal water resources projects; and
(5) has experience in establishing and administering peer review panels.

List of Acronyms

AFB – Alternatives Formulation Briefing
ATR - Agency Technical Review
BCOE – Biddability, Constructibility, Operability and Environmental Review
CAP – Continuing Authorities Program
DCG-CEO – Deputy Commanding General of Civil and Environmental Operations
DCW – Director of Civil Works
DQC - District Quality Control
EC – Engineering Circular
EIS – Environmental Impact Statement
ER – Engineering Regulation
FACA – Federal Advisory Committee Act
FCSA – Feasibility Cost Sharing Agreement
FOIA – Freedom of Information Act
FY – Fiscal Year
HQUSACE – Headquarters, U. S. Army Corps of Engineers

IEPR – Independent External Peer Review
IPR – In Progress Review
NED – National Economic Development
NER – National Ecosystem Restoration
MCX – Mandatory Center of Expertise
MSC – Major Subordinate Command
NAS – National Academy of Sciences
NEPA –National Environmental Protection Act
OEO – Outside Eligible Organization
OMB – Office of Management and Budget
OMRRR – Operations, Maintenance, Repair, Replacement and Rehabilitation
PCX – Planning Center of Expertise
PDT – Project Development Team
PMP – Project Management Plan
QA/QC – Quality Assurance / Quality Control
QM – Quality Manual, the document specifying the QMS of an organization.
QMP –Quality Management Plan
QMS – Quality Management System
RIT – Regional Integration Team (HQUSACE)
RP – Project Review Plan
RMC – Risk Management Center
RMO – Review Management Organization
RTS – Regional Technical Specialist
SAR – Safety Assurance Review
SME – Subject Matter Expert
USACE – U. S. Army Corps of Engineers
USC – United States Code
WRDA – Water Resources Development Act