



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION
60 FORSYTH STREET SW, ROOM 10M15
ATLANTA, GA 30303-8801

18 Mar 2015

18 MAR 2015

CESAD-CG

MEMORANDUM FOR Commander, Jacksonville District (CESAJ-PD/E. Bush)

SUBJECT: Rio Culebrinas Detailed Project Report, Puerto Rico – Request for Review
Plan Approval

1. References:

- a. Memorandum, CESAJ-PD, 24 October 2014, subject as above.
- b. Memorandum, CESAJ-PD, 03 February 2015, subject: Rio Culebrinas, Section 205 Flood Control Project, Aguadilla and Aguada, Puerto Rico, Request for Exclusion from Type I Independent External Peer Review.
- c. EC 1165-2-214, 15 December 2012, Civil Works Review.

2. The enclosed Review Plan has been prepared in accordance with Engineer Circular (EC) 1165-2-214. The Review Plan has been coordinated with the South Atlantic Division, which is the Review Management Organization for this Section 205 of the Continuing Authorities Program Feasibility Report. This decision document is so limited in scope or impact that it would not significantly benefit from a Type I Independent External Peer Review (IEPR). I approve the exclusion from the Type I IEPR based upon the risk informed decision presented in this Review Plan and in the Type I IEPR exclusion request memorandum. The timing and the appropriate expertise requirements for a Type II IEPR Panel for the Design and Construction of the proposed project must be assessed and submitted for my approval in an updated Review Plan prior to initiation of the design and implementation phase of this project.

3. This Review Plan 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. The District shall post the approved Review Plan and a copy of this approval

CESAD-CG

SUBJECT: Rio Culebrinas Detailed Project Report, Puerto Rico – Request for Review
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memorandum to the District public internet website and provide a link to South Atlantic Division for our use. Before posting to the website, the names of Corps employees should be removed.

4. The point of contact for this action is [REDACTED] at (404) 562-5226.

Encl
as



C. DAVID TURNER
Brigadier General, USA
Commanding



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

CESAJ-PD

MEMORANDUM FOR COMMANDER, SOUTH ATLANTIC DIVISION,
(ATTN: Wilbert Paynes, CESAD-PDP) 60 Forsyth Street, Room 10M15, Atlanta, Georgia
30303

SUBJECT: Rio Culebrinas, Section 205 Flood Control Project, Aguadilla and Aguada, Puerto Rico, Request for Exclusion from Type I Independent External Peer Review

1. The Jacksonville District (SAJ) is requesting South Atlantic Division's (SAD) endorsement of a request to USACE Head Quarters for an exclusion from the requirements of having to conduct a Type I Independent External Peer Review (IEPR) of the Rio Culebrinas Section 205 Flood Control Project 2015 Detailed Project Report (DPR).
2. The Rio Culebrinas project was originally authorized under Section 205 of the Flood Control Act of 1948, and as amended in Section 218 of Water Resource Development Act (WRDA) of 2000. The authorized project consists of 3.3 kilometers of levees, a 60 meter pilot channel, three road ramps, and 4 interior drainage structures with drainage channels protecting the southwestern section of the town of Aguadilla and the community of Espinar in Aguada against the 0.01 exceedance probability (100 year) flood event. The project's purpose is to address flood damages caused by the overflow of flood waters from Rio Culebrinas River into Cano Madre Vieja stream located in the southwest portions of the town of Aguadilla and the community of Espinar in the Municipality of Aguada. The 2015 DPR amends the approved 2004 DPR by:
 - updating project construction costs
 - updating the economic analysis to justify project benefits,
 - verifying that there are no significant changes in hydrologic conditions, and
 - demonstrates that the recommended plan is still economically justified.

Additionally, a new Finding of No Significant Impact will be coordinated to initiate the process for obtaining the Water Quality Certification as required by the Commonwealth of Puerto Rico.

3. Engineering Circular 1165-2-214 (EC 1165-2-214) dated 15 December 2012, provides a process for determining the requirements and scope of a Type I IEPR if required. If no mandatory factors (triggers) apply to the project, then a risk informed decision process is employed to determine the need for a Type I IEPR (EC 1165-2-214, Section 15) for the project. The authorized Rio Culebrinas project presents no risks or issues that would substantially benefit from conducting a Type I IEPR on this phase of the project. The authorized project has a cost of \$14.8 million (FY 14) which is well below the cost thresholds that would trigger the cost requirement to conduct a Type I IEPR review. Additionally, the

CESAJ-PD

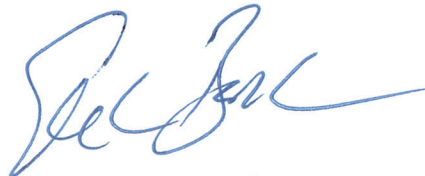
SUBJECT: Rio Culebrinas, Section 205 Flood Control Project, Aguadilla and Aguada, Puerto Rico, Request for Exclusion from Type I Independent External Peer Review

project does not require an Environmental Impact Statement, does not represent a threat to health and safety, and is not considered controversial. Finally, the USACE has not received any requests from the Governor of Puerto Rico or from the head of any Federal or state agency to conduct a Type I IEPR review on the project. Additionally, EC 1165-2-214 Sec. 11. d. (3) (c) allows for project studies to be excluded from Type I IEPR if the project study is pursued under the CAP Program and does not include an EIS.

4. Enclosed with this transmittal memo is a Type I IEPR project trigger work sheet (Appendix D of EC 1165-2-214) to demonstrate compliance with EC 1165-2-214. See Enclosure 1. The enclosure is provided to outline the risk informed decision process used to justify the Type I IEPR exclusion request. Upon approval of the exclusion request, the Peer Review Plan will be revised accordingly and coordinated with the Flood Risk Management Center of Expertise.

5. A copy of the letters submitted in 1997 by the Common Wealth of Puerto Rico requesting a risk waver along with a copy of the Corps memo approving this request is also enclosed. See Enclosure 2. The Jacksonville District's request for a review and endorsement of an exclusion from having to do a Type I IEPR review for this project is partly based on the Corps approval memo excluding the project from having to do a risk analysis for the Rio Culebrinas Section 205 Flood Control Project Detailed Project Report.

6. Please contact [REDACTED] Chief, Watershed Section at (904) 232-1757 or [REDACTED] who is the Planning Technical Lead and the Planning Peer Review Coordinator at 904-232-1818 if you have any questions relating to the documentation provided in this request.



ERIC L. BUSH
Chief, Planning and Policy Division

Encl

REVIEW PLAN

Rio Culebrinas, Aguadilla-Aguada, Puerto Rico Detailed Project Report and Environmental Assessment Update

Jacksonville District



P2 #113383

MSC Approval Date: Pending
Last Revision Date: None



**US Army Corps
of Engineers®**

REVIEW PLAN

Rio Culebrinas, Aguadilla-Aguada, Puerto Rico Detailed Project Report and Environmental Assessment Update

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1. PURPOSE AND REQUIREMENTS

Purpose. This Review Plan defines the scope and level of peer review for the Rio Culebrinas, Aguadilla-Aguada, Puerto Rico, Detailed Project Report (DPR) and Environmental Assessment (EA) update.

a. References

- Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 15 Dec 2012
- EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
- Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- Rio Culebrinas, Aguadilla-Aguada, Puerto Rico, Detailed Project Report and Environmental Assessment dated June 2004

b. Requirements. This review plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-214) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. EC 1165-2-214 states that the RMO may be the home MSC. Because this is a Continuing Authorities Program (CAP) project, the lead RMO may be the MSC, South Atlantic Division (SAD).

The RMO will also coordinate with the Cost Engineering Mandated Center of Expertise (MCX)/Technical Center of Expertise (TCX), to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies. This is a single-purpose flood risk management project. Type II IEPR and Safety Assurance Review (SAR) will be reviewed and coordinated during the design and construction phase for the project.

3. STUDY INFORMATION

Decision Document. The Rio Culebrinas, Aguadilla-Aguada, Puerto Rico, Section 205 Continuing Authorities Program (CAP) Detailed Project Report (DPR) and Environmental Assessment (EA) is being prepared to update the approved June 2004 Rio Culebrinas DPR and EA. The purpose of the June 2004 study was to investigate the frequent flooding and related problems, caused by overflows from Rio Culebrinas into Cano Madre Vieja, in the southwest portions of the town of Aguadilla and the community of Espinar in the Municipality of Aguada. The study investigated feasible alternatives for reducing the

existing flooding problems without causing adverse impacts to the communities, the environment, and the existing infrastructure of the area, and recommends the most appropriate course of action within the Federal and Puerto Rico guidelines and regulations. The study also identified the problems being experienced, determined probable future conditions, identified and evaluated possible structural and non-structural alternatives, evaluated all adverse and beneficial impacts of each alternative, determined public support for such alternatives, and recommend the best course of action. This updated DPR and EA will verify that the recommendation of the approved June 2004 DPR and EA remains economically justified and environmentally acceptable, by verifying there has been no significant change in the existing conditions and updating costs and benefits. The revised cost estimate will factor in changes to design standards since the approved June 2004 DPR that may affect project costs. If no significant impacts are determined during the Environmental Assessment update, a new Finding of No Significant Impact will be coordinated to initiate the process for obtaining the Water Quality Certification as required by the Commonwealth of Puerto Rico.

- a. Study/Project Description.** The study area, figure 1, lies in the alluvial floodplain of Rio Culebrinas between the municipalities of Aguadilla and Aguada in the northwestern coast of Puerto Rico. The Rio Culebrinas has a drainage area of approximately 103 square miles. In the Rio Culebrinas basin floods can occur anytime during the year, however they are most frequent during the period of May through December. There are large peak discharges in the basin that result from storm rainfall, generally associated with the passage of hurricanes, tropical depressions and tropical waves over or near Puerto Rico. Cloudburst storms can occur anytime during the year; and because of the very steep slopes in the upper basin, flash floods are another common type of event affecting this area. The areas that principally flood are the towns of Aguada, Aguadilla and Moca. Below Highway 115, the 0.01-exceedance probability (100 year) flood event inundates over 1,500 acres of land. The community of Espinar in Aguada is located in the middle of the flood plain between Rio Culebrinas and Caño Madre Vieja. During flood events the entire community of Espinar is surrounded by flood water. Floods inundate all the major highways and roads in the Rio Culebrinas floodplain. The project is designed to provide 0.01 exceedance probability (100 year) flood damage reduction for the affected areas in Aguada and Aguadilla.

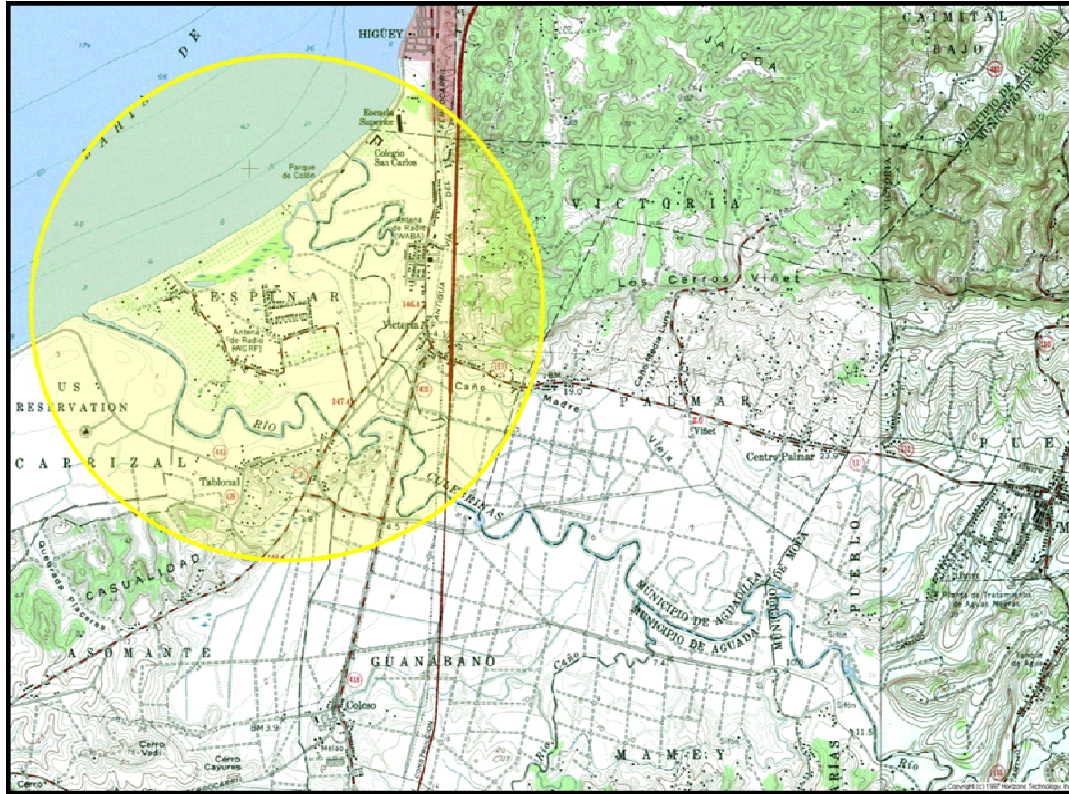


Figure 1. Rio Culebrinas Study Area

The June 2004 recommended plan, figure 2, combines 3.3 kilometers of levees, a 60 meter pilot channel, three road ramps, and 4 interior drainage structures with drainage channels protecting the southwestern section of the town of Aguadilla and the community of Espinar, in Aguada, against the 0.01 exceedance probability (100 year) flood event. The project would include mitigation of impacts to 10.25 acres of degraded tidal and freshwater wetlands through excavation of 13.35 acres to create 11.69 acres of wetlands. The recommended plan would provide flood damage reduction for approximately 247 acres of urban area. No net loss of wetlands is expected and no significant cultural resources sites will be impacted by the recommended project.

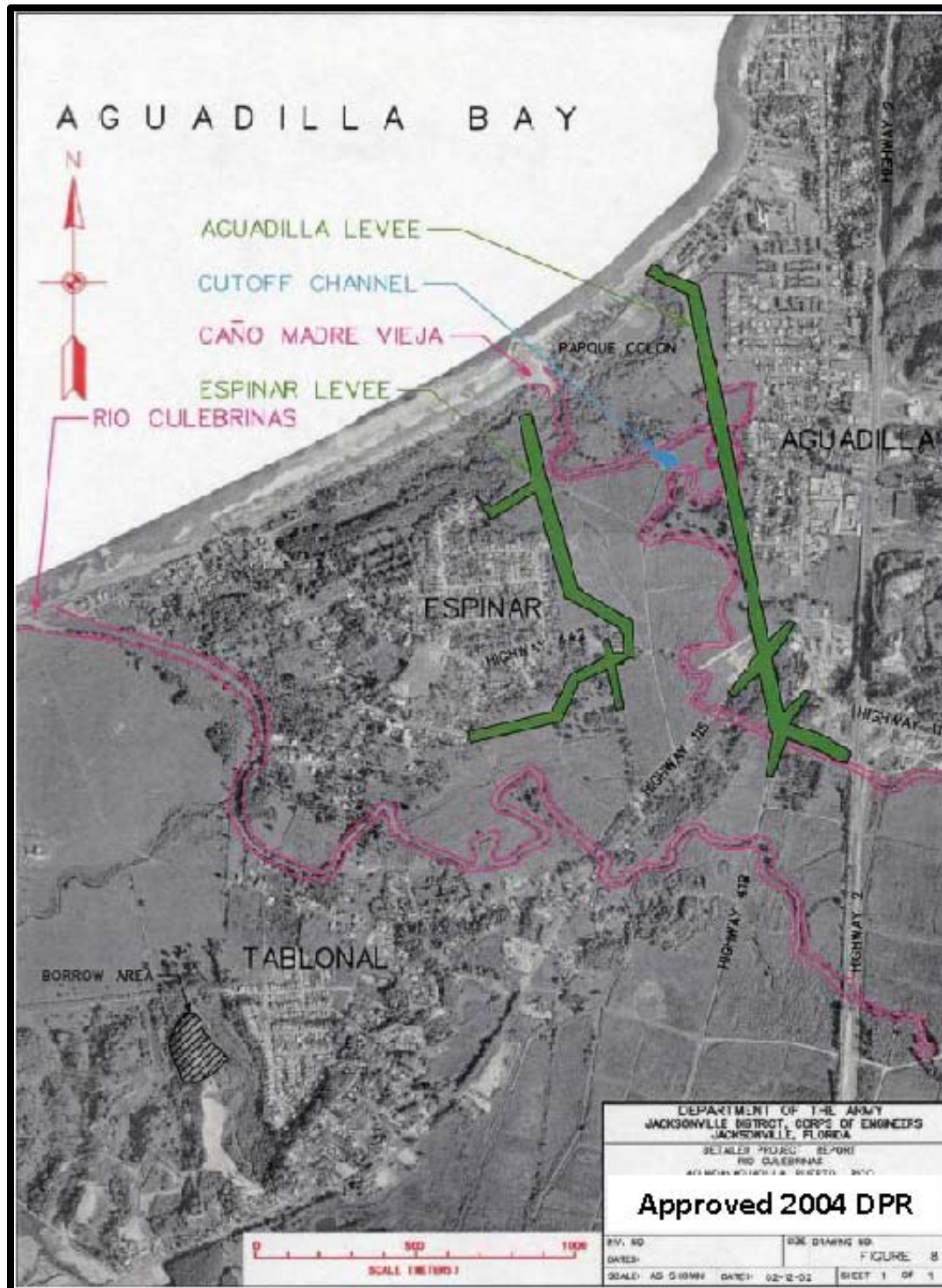


Figure 2. Approved 2004 DPR.

b. Study Authority

By letter dated August 21, 1989, the Municipality of Aguadilla made formal application for a study of the Rio Culebrinas and Cano Madre Vieja area under the CAP authority cited below.

This study is authorized under Section 205 of the Flood Control Act of 1948, as amended (33 USC S.701s).

- c. Factors Affecting the Scope and Level of Review.** This section will discuss the factors affecting the risk informed decisions on the appropriate scope and level of review. The discussion must be detailed enough to assess the level and focus of review and support the PDT, and vertical team decisions on the appropriate level of review and types of expertise represented on the various review teams. Pertinent areas of importance, from EC 1165-2-214 are presented as bullets that are then addressed for this specific report:
- *If parts of the study will likely be challenging.*
 - The purpose of this report is to update the 2004 DPR and EA which is a flooding investigation of the Rio Culebrinas. This investigation was conducted in the Rio Culebrinas Basin, where no major changes have been noticed and challenges are not expected to be within the scope of what has already been experienced.
 - *A preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be:*
 - The risks would mainly be related to construction. Construction techniques would be typical for those measures associated with Flood Risk Management projects. The risks associated with this update to the approved 2004 DPR and EA are low. The design changes contemplated do not change the established construction methods, geodologic data, or flodd risk reduction provided under that report. The report update evaluates the added safety measures of a 3:1 side slope to replace the 2.5:1 side slope in the 2004 report. This change reduces risks to sthe structure. The slightly enlarged footprint for levee embankment will be mitigated with wetland creation.
 - *If the project will likely be justified by life safety or if the project likely involves significant threat to human life/safety assurance:*
 - The approved 2004 DPR and EA was developed to provide flood risk reduction to the Aguadilla and Espinar communities to the east and west of the Caño Madre Vieja. The update to the approved 2004 DPR and EA is to add additional resilience by meeting newer maintenance driven requirements to the approved levees by increasing the side slope to 3:1 from the original approved 2.5:1 side slope. The update to the approved 2004 DPR and EA does not involve significant threat to human life/safety assurance since theupdate is to apply the new Corps Regulations and the construction methods will be the same as approved by the 2004 report..
 - *If there is a request by the Governor of an affected state for a peer review by independent experts:*
 - There has not been, nor is there expected to be, a request by the Governor of an affected state for a peer review by independent experts.
 - *If the project/study is likely to involve significant public dispute as to the size, nature, or effects of the project:*
 - The project/study is not likely to involve significant public dispute as to the size, nature, or effects of the project. Since the footprint of the original study and impacted areas have not changed since the approved 2004 DPR, we don't anticipate significant public dispute from resident, business owners or any other particular group.
-

- *If the project/study is likely to involve significant public dispute as to the economic or environmental cost or benefit of the project:*
 - The project/study is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project. It is noted that the footprint of the project has changed slightly (width of Right of Way went from 33.6 m to 36.05 m) due to a change in levee slope from 2.5:1 to 3:1 with a slight increase of possible environmental impacts since the 2004 authorized DPR and EA was completed. The change in the embankment geometry complies with EM 1110-2-1913, to facilitate maintenance and levee inspections.
- *If the information in the decision document or anticipated project design is likely to be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices:*
 - Neither the decision document nor the anticipated project design is based on novel methods or involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices. No novel methods, innovative materials or techniques were used to collect the information and forecast the problems. The information does not present complex challenges for interpretation.
 - The alternatives proposed are neither novel nor precedent setting. Alternatives were developed to allow the project to function as intended. Choices among alternatives were based on least cost to achieve the functions of the project. The report addresses alternatives that include non structural measures and structural measures. The selected plans studied various levee system configurations until a recommended plan was chosen.
- *If the project design is anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule:*
 - Neither the current DPR design nor the proposed alternatives require redundancy, resiliency, robustness, unique construction sequencing or scheduling over common USACE practice.

- d. In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. There are no in-kind products or analyses to be provided by the non-Federal sponsor.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required.

Documentation of DQC. District Quality Control will be accomplished by comprehensive review by the PDT and independent reviewers. Comments will be provided by tracked changes to the report. Tracked changes/comments will be incorporated into the subsequent version. This DQC will involve the PDT as well as the supervisory chain of command. Internal District Quality Control of product quality will be accomplished by DQC team reviews. DQC comments

and responses will be a permanent part of study documentation and will be provided to the ATR team for use in their reviews.

- a. **Products to Undergo DQC.** The Draft and Final Detailed Project Report and EA, with technical appendices, will be submitted to DQC prior to the formal ATR. On-going DQC may be requested at other times and will generally be of limited scope and managed by the office generating the work product.
- b. **Required DQC Expertise.** 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. Jacksonville District PDT members involved in the execution of the study, representing all pertinent disciplines, will participate in DQC, including: plan formulation, economics, environmental compliance, engineering design, hydraulics and hydrology, geotechnical engineering, cost engineering and real estate.

5. AGENCY TECHNICAL REVIEW (ATR)

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

- a. **Products to Undergo ATR.** The ATR will be conducted on the draft DPR and EA update and ATR backcheck will be conducted on the final DPR and EA update. The draft DPR ATR is anticipated to be comprehensive. It was determined that the existing NEPA documentation for the approved 2004 DPR and EA was still appropriate however to initiate the process for obtaining the Water Quality Certification, as required by the Commonwealth of Puerto Rico, a new Finding of No Significant Impact will be coordinated and included in the update report.
- b. **Required ATR Team Expertise.** The ATR team members should be subject matter experts or regional technical specialist for their fields. The ATR team will be nominated and identified by the RMO and will be comprised of individuals from all the technical disciplines that were significant in the preparation of this report. Eight technical disciplines have been determined to be appropriate for this review include:

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The

	ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Plan Formulation	The Planning reviewer should be experienced in plan formulation and familiar with the reporting requirements for Continuing Authorities Program and experienced in conducting flood risk management studies. Preferably familiar with Puerto Rico issues (but not mandatory).
Economics	The economics reviewer should be experienced in economic analysis of flood risk management projects. Preferably familiar with economic issues in Puerto Rico (but not mandatory).
Environmental Resources	The environmental resources reviewer should be a NEPA compliance specialist with experience in flood risk management projects. Preferably familiar with Puerto Rico (but not mandatory).
Hydraulics and Hydrology	The H & H reviewer should be an engineer with a minimum of five years of experience in hydraulic and hydrology aspects of flood risk management projects and related modeling.
Geotechnical Engineering/Civil Engineering	The geotechnical/civil engineering reviewer should be an engineer with experience in geotechnical and civil engineering issues associated with flood risk management projects. The reviewer will also need to be experienced with performing and presenting risk analyses in accordance with ER 1105-2-101 and other related guidance, including familiarity with how information from the various disciplines involved in the analysis interact and affect the results. Preferably familiar Puerto Rico (but not mandatory).
Cost Engineering	The cost engineering reviewer should be a cost engineer with experience in flood risk management projects. This team member will be designated by the Cost MCX/TCX.
Real Estate	The Real Estate reviewer should have experience in current real estate policy and law relating to flood risk management projects. Preferably familiar with real estate nuances in Puerto Rico (but not mandatory).

c. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the formal review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

- The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
- 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
- The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, ATR team members may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points of any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. 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.

At the conclusion of ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or a summary that represents the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

Type I IEPR is required for all decision documents except where no mandatory triggers apply, criteria for an exclusion are met, and a risk-informed recommendation justifies exclusion. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR (Type I, II) is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- Type I IEPR – for decision documents. Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study.

- Type II IEPR: shall be conducted on design and construction activities for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life. The review shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health, safety, and welfare.

a. Decision on Type of IEPR

The purpose of updating the 2004 Detailed Project Report is to verify the findings of the previous study and update the total project benefits and costs to establish that the recommended project remains justified. Although the study is for a flood risk management project, IEPR exclusion is being requested due to the waiver granted for the risk analysis of the original study. There is also ample experience within the Corps of Engineers and industry to treat the construction activity of this project as being routine, therefore reducing the threat to human life/safety and eliminating the requirement for redundancy, resiliency and/or robustness.

- (1) **Type I IEPR:** The approved 2004 DPR and EA was developed to provide flood risk reduction to the Aguadilla and Espinar communities to the east and west of the Caño Madre Vieja. The update to the 2004 DPR and EA is to add additional resilience by meeting newer Corps regulations and maintenance driven requirements to the approved levees by increasing the side slope to 3:1 from the original approved 2.5:1 side slope. The update to the 2004 DPR and EA does not involve significant threat to human life/safety assurance since the construction methods are the same as contained in the approved 2004 report and will be reviewed during the design and construction phase of the project. This revision to the approved 2004 DPR and EA report does not trip any of the mandatory IEPR triggers. An exclusion from the requirements to conduct an IEPR review on the Rio Culebrinas Project Report has been requested.
- (2) **Type II IEPR:** Type II is generally for implementation documents. The need/requirement for a Type II IEPR is not addressed by this Review Plan. A risk-informed decision concerning the timing and appropriate level of reviews for the project implementation phase shall be prepared and submitted for approval in an updated Review Plan prior to the design/implementation phase of this project.

Support for the Type I IEPR exclusion request and documentation that Type II IEPR is not required, is based on the criteria in EC 1165-2-214 and the discussion in above, Section 3 – Factors Affecting the Scope and Level of Review and is provided in the following bullets.

This section discusses the factors necessary to determine the appropriate scope and level of review for the decision document as specified in EC 1165-2-214. This information has been used to recommend the appropriate level of review and select the types of expertise represented on the review teams. The risk informed decision discussion is below and considers:

- *Significant threat to human life:*
 - The approved 2004 DPR and EA was developed to provide flood risk reduction to the Aguadilla and Espinar communities to the east and west of the Caño Madre Vieja. The update to the approved 2004 DPR and EA is to add additional resilience by meeting newer Corps regulations and maintenance driven requirements to the approved levees by increasing the side slope to 3:1 from the original approved 2.5:1 side slope. The update

to the 2004 DPR and EA does not involve significant threat to human life/safety assurance since the construction methods are the same as approved by the 2004 report.. This revision to the approved 2004 DPR and EA report does not trip any of the mandatory IEPR triggers. There are no significant risks to life safety; all construction would be confined within the existing studied area and there would be no reduction of flood control within the Rio Culebrinas Basin. Although some residential communities border the levee system, these areas are located inside the protected areas; and therefore would not see an increase in safety hazards or risk for construction within the project area.

- Where the estimated total cost of the project, including mitigation costs, is greater than \$45 million:
 - No, the estimated total cost of the project will be less than \$16.7 million which is much less than \$45 million threshold. (note: WRRDA 2014 made the following change to the dollar amount limiting requirement: “(3) PROJECT STUDIES SUBJECT TO PEER REVIEW.—(A) MANDATORY.—A project study shall be subject to peer review under paragraph (1) if—(i) the project has an estimated total cost of more than \$45,000,000\$200,000,000, including mitigation costs, and is not determined by the Chief of Engineers to be exempt from peer review under paragraph (6).)
- Where the Governor of an affected State requests a peer review by independent experts:
 - No such request has been made nor is such a request anticipated.
- Where a request to conduct IEPR has been made by a Federal or state agency charged with reviewing the project, 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 any planned mitigation:
 - No such request has been made nor is such a request anticipated. The proposed project will not have a significant adverse impact on any environmental, cultural or other resources.
- Where there is significant public dispute over the size, nature, or effects of the project or the economic or environmental costs or benefits of the project:
 - The project/study is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project. There was no significant public dispute of the proposed project when the 2004 DPR/EA was made available for public comment.
- 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.
 - No. This project does not include novel methods; present complex challenges for interpretation, contains precedent-setting methods or models, or presents conclusions that are likely change prevailing practices.
- Where the Chief has determined that Type I IEPR is warranted.
 - No such determination has been made.
- How the decision document meets any of the possible exclusions described in Paragraph 11.d.(3) and Appendix D of EC 1165-2-214:

- The report does not include an EIS, and it is expected that the DCW or the Chief will determine that the project:
 - (i) Is not controversial; and
 - (ii) Has no more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources;
 - (iii) Has no substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures; and
 - (iv) Has, before implementation of mitigation measures, no more than 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.

Further, the proposed DPR update is so limited in change of scope or impacts, involving only review and update of the existing information that this work would not significantly benefit from a Type I IEPR.

b. Products to Undergo Type I IEPR. Not Applicable.

c. Required Type I IEPR Panel Expertise. Not Applicable.

d. Documentation of Type I IEPR. Not Applicable

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. COST ENGINEERING MANDATORY CENTER OF EXPERTISE (MCX/TCX) REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Cost Engineering Mandatory Center of Expertise (MCX/TCX), located in the Walla Walla District. The MCX/TCX will assist in determining the expertise needed on the ATR team and Type I IEPR team (if required) and in the development of the review charge(s). The MCX/TCX will also provide the Cost Engineering MCX/TCX certification. The RMO is responsible for coordination with the MCX/TCX.

9. MODEL CERTIFICATION AND APPROVAL

No planning models or engineering models will be used as part of this DPR/EA update.

10. REVIEW SCHEDULES AND COSTS

- a. *ATR Schedule and Cost.*** ATR of the Draft DPR and EA, with technical appendices is currently scheduled for completion 29 January 2015. It is estimated to cost approximately \$50,000. ATR backcheck of the Final Detailed Project Report and EA update is currently anticipated to be completed prior to the submittal of the Final DPR in March 2015. It is estimated to cost approximately \$25,000.
- b. *Type I IEPR Schedule and Cost.*** Not Applicable.
- c. *Model Certification/Approval Schedule and Cost.*** Not Applicable.

11. PUBLIC PARTICIPATION

Extensive resource agency, stakeholder and public coordination was conducted throughout the preparation of the approved June 2004 Decision Document. Coordination meetings were conducted to inform other federal and state agencies, stakeholders and the general public, of the status of the project and alternatives being considered and workshops were held to address technical issues. At a minimum, review will be conducted as part of the National Environment Policy Act (NEPA) compliance process, including public review of the Draft Detailed Project Report and EA. Public comments will be listed and responded to in the Final Detailed Project Report and EA.

12. REVIEW PLAN APPROVAL AND UPDATES

The South Atlantic Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) shall be approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, shall be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO.

13. REVIEW PLAN POINTS OF CONTACT

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

Jacksonville District Project Manager	904-232-1671
Jacksonville District Planning Technical Lead	904-232-1818
Jacksonville District Review Coordinator	904-232-1102
RMO - SAD	404-562-5226

ATTACHMENT 1: TEAM ROSTERS

Team Rosters

PROJECT DELIVERY TEAM (PDT)

Discipline	Agency	Team Member Name
	U.S. Army Corps of Engineers (USACE)	
Economics	USACE	
Engineering Technical Leader	USACE	
Cost Estimating	USACE	
Real Estate	USACE	
Environmental (NEPA)	USACE	
Hydraulics	USACE	
Geotechnical	USACE	
Environmental	USACE	
Planning Technical Leader	USACE	
Office of Council	USACE	
Project Manager	USACE	
GIS	USACE	

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS
COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

SIGNATURE

Name

Date

ATR Team Leader

Office Symbol/Company

SIGNATURE

Name

Date

Project Manager

Office Symbol

SIGNATURE

Name

Date

Architect Engineer Project Manager¹

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.*

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

SIGNATURE

Name

Date

Chief, Engineering Division

Office Symbol

SIGNATURE

Name

Date

Chief, Planning Division

Office Symbol

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 3: Review Plan Revisions

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS (*please note this is a generalized list of acronyms typically used in civil works projects; each acronym may or may not be used in this specific document)

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DPR	Detailed Project Report	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
Home District/MSD	The District or MSD responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSD	Major Subordinate Command	WRDA	Water Resources Development Act