



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

CESAD-PDP

21 June 2019

MEMORANDUM FOR Commander, Jacksonville District, 701 San Marco Blvd,  
Jacksonville, Florida 32207-8175

SUBJECT: Approval of Review Plan and Type I IEPR Decision for Rio de la Plata Flood Control Project, Puerto Rico, Continuing Construction for Supplemental Appropriations Bill (2018)

1. References:

a. Memorandum, CESAJ-PD, 3 May 2019, subject: Rio de la Plata Flood Control Puerto Rico, Continuing Construction Final Validation Report for Supplemental Appropriations Bill (2018).

b. Memorandum, CESPDP-PDP (FRM-PCX), 3 June 2019, subject: Review Plan Endorsement for the Rio de la Plata Flood Control Project, Puerto Rico, Validation Report.

c. Memorandum, CECW-P, 7 June 2018, subject: Revised Delegation of Authority in Section 2034(a)(5)(A) of the Water Resources Development Act of 2007 (WRDA 2007), as amended (33 U.S.C. 2343).

2. Jacksonville District prepared the review plan for the Rio de la Plata Flood Control Project Validation Report consistent with EC 1165-2-217. The District coordinated the review plan with the Flood Risk Management Planning Center of Expertise (FRM-PCX), which is the lead office to execute this review plan. For further information, contact FRM-PCX at (415) 503-6852.

3. I approve this review plan (encl) and concur with the level and scope of review identified and supported in the review plan, including the decision to not perform Type I IEPR. The study will not significantly benefit from Type I IEPR because the study scope is extremely limited.

4. The point of contact for this action is Acting Chief, Planning and Policy Division, 404-562-5226, @usace.army.mil.

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Brigadier General,  
USA Commanding

# REVIEW PLAN

May 2019

**Project Name:** Rio de la Plata Flood Control Project, Puerto Rico

**P2 Numbers:** Rio de la Plata - 054450

**Decision Document Type:** Validation Report

**Project Type:** Flood Risk Management

**District:** Jacksonville District

**District Contact:** Planning Technical Lead, 904-232-1428

**Major Subordinate Command (MSC):** South Atlantic Division

**MSC Contact:** Senior Plan Formulator, 404-562-5226

**Review Management Organization (RMO):** Flood Risk Management National Planning Center of Expertise

**RMO Contact:** Deputy Director, 415-503-6852

## Key Review Plan Dates

<b>Date of RMO Endorsement of Review Plan:</b>	3 Jun 19
<b>Date of MSC Approval of Review Plan:</b>	Pending
<b>Date of IEPR Exclusion Approval:</b>	N/A
<b>Has the Review Plan changed since PCX Endorsement?</b>	N/A
<b>Date of Last Review Plan Revision:</b>	None
<b>Date of Review Plan Web Posting:</b>	Pending
<b>Date of Congressional Notifications:</b>	Pending

## Milestone Schedule

	<b>Scheduled</b>	<b>Actual</b>	<b>Complete</b>
<b>District Quality Control (DQC)</b>	6 Aug 18	31 Jan 2019	Yes
<b>Draft report ATR/Policy Review:</b>	22 Feb 19	1 Mar 2019	Yes
<b>Initiate NEPA/Public Review</b>	N/A	(enter date)	No
<b>Final Report Transmittal:</b>	31 May 19	31 May 19	Yes
<b>Final report Policy Review:</b>	N/A	(enter date)	No
<b>Chief's Report or Director's Report:</b>	N/A	(enter date)	No

**Project Fact Sheet**  
May 2019

**Project Name:** Rio de la Plata Flood Control Project, Puerto Rico

**Purpose of Validation Reports:** The Bipartisan Budget Act (BBA) of 2018 provides an opportunity to continue construction of the Rio de la Plata Flood Control Project. The purpose of the report is to update the overall total project costs and the cost of the features proposed to build with Supplemental Funds to FY19 cost levels and to verify environmental compliance, engineering feasibility, and economic feasibility for construction of such project features. The Rio de la Plata Validation Report is not considered a project study because it seeks to validate an existing project, there is no reformulation, no new engineering or new environmental compliance as part of the effort.

Preparation of plans and specifications (P&S) are underway while completing the validation report. Conducting these efforts concurrently is supported by South Atlantic Division (SAD). A separate review plan covering the implementation documents for the remaining contracts of the Rio de la Plata Flood Control Project is being completed to document the review requirements for PED and construction. The PED review plan will help ensure a quality-engineering project is developed by the Corps of Engineers (USACE) in accordance with EC 1165-2-217. The PED review plan will be submitted for endorsement to the RMC and will include District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Biddability, Constructability, Operability, Environmental, and Sustainability (BOCES) Review, Safety Assurance Review (SAR), and Policy and Legal Compliance Review. It is anticipated that the PED review plan will be submitted summer of 2019.

**Location:**

The project area is the Rio de la Plata basin, located in the north central region of Puerto Rico. The Rio de la Plata basin, the largest in Puerto Rico, drains an area of 241 square miles into the Atlantic Ocean at a point approximately 11 miles west of San Juan. See Figure 1.

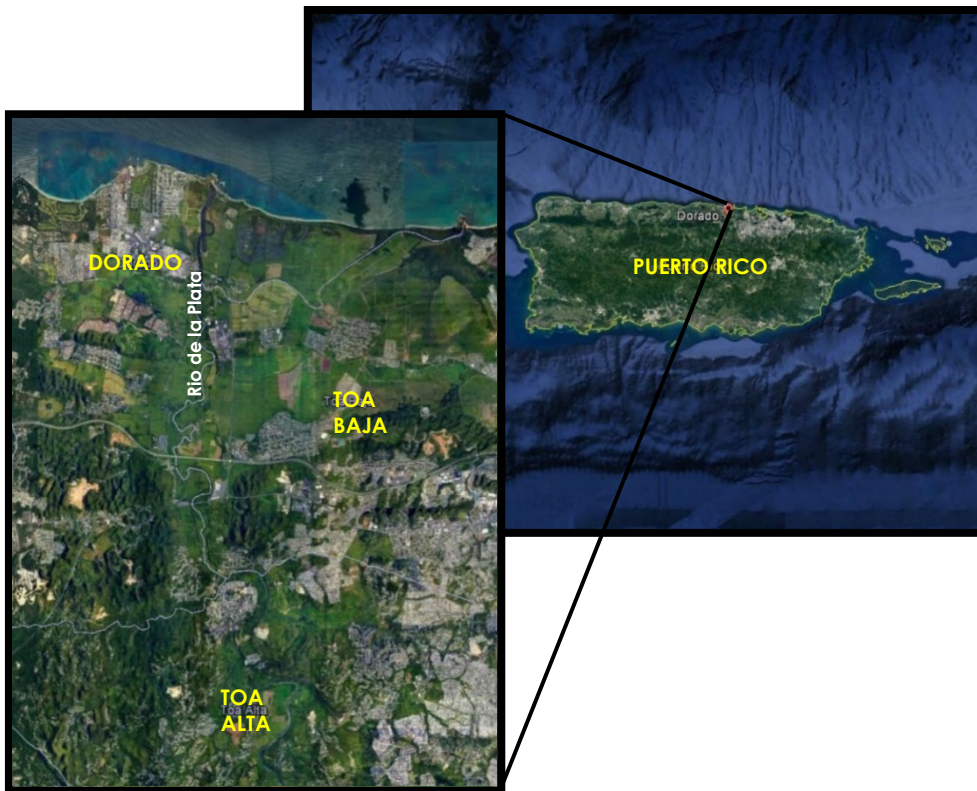


Figure 1: Project location

**Authority:**

The Rio de la Plata Survey Report was authorized under a resolution adopted on May 5, 1966, by the Committee on Public Works of the U.S. House of Representatives. Preliminary investigations were carried out during the late 1960's and 1970's, but were ultimately deferred because of changes in priorities by the sponsor regarding flood control projects. In 1982, the Governor of Puerto Rico requested that the study be reinitiated, and Congress appropriated funds for continuation of detailed investigations.

The Rio de la Plata Feasibility Report and Environmental Impact Statement was completed in 1987 (revised April 1988). The recommendations made in the Chief of Engineers Report, dated January 3, 1989, were transmitted to Congress by the Assistant Secretary of the Army (Civil Works), in letter dated April 21, 1990. The project was authorized by Section 101(a)(19) of the Water Resources Development Act of 1990.

The project for flood control, Rio de la Plata, Puerto Rico: Report of the Chief of Engineers, dated January 3, 1989, at a total cost of \$58,968,000, with an estimated first Federal cost of \$35,900,000 and an estimated first non-Federal cost of \$23,068,000.

**Sponsor:**

The non-Federal sponsor for this project is the Puerto Rico Department of Natural and Environmental Resources (DNER).

## **Type of Study:** Emergency Supplemental Validation Report

**SMART Planning Status:** This effort is an Emergency Supplemental Validation Report to document the information required to support a decision using supplemental appropriations to proceed with project construction as previously approved as part of authorized flood control projects.

### **Project Description:**

The study area for the project is the Rio de la Plata basin, located in the north central region of Puerto Rico. The 63-mile long Rio de la Plata rises at an elevation of 2960 feet above mean sea level on the northerly slopes of the Sierra de Cayey. The study area consists of the coastal floodplain, where the worst flooding occurs, up to the town of Toa Alta. The study area refers to the municipalities of Dorado, Toa Baja, and Toa Alta. The Rio de la Plata Flood Control Project, upon final completion, will begin at the mouth of the river, east of the Mameyal community in Dorado, and end southeast of the town of Toa Alta. The authorized project features are described in a March 1993 Design Memorandum (DM). For the 1993 DM, channel improvements consist of widening and straightening about 6.95 miles (11.18 km) of the main river section, excavating the existing channel bottom to a 230-foot bottom width transitioning to a bottom width of 500 feet and a top width of 378 feet transitioning to a top width of 700 feet. There is a total length of 7.63 miles (12.3 km) of earthen levees (East and West), to be constructed from materials generated by the channel excavation. The design discharge to be contained by the levees is the SPF (1,000-year flood) discharge of 229,500 cubic feet per second (cfs). The design discharge to be contained within the channel is the 100-year flood discharge of 131,000 cfs. The Rio de la Plata Flood Control Project is designed to provide SPF level of protection for flooding from the Rio de la Plata for all developments in the river basin downstream of Highway PR-2, except at El Polvorin and 100-year flood protection for the areas upstream of Highway PR- 2 up to the Toa Alta/San Jose area and El Polvorin area.

The Supplemental Appropriations for Disaster Relief Requirements Act provides an opportunity to continue construction of the Rio de la Plata Flood Control Project. The Rio de la Plata Emergency Supplemental validation report is intended to document the updated engineering and environmental conditions, total project costs, and economic analysis in order to support construction of the remaining features of the project.

### **Problem Statement:**

The project is authorized, and construction is ongoing. The Rio de la Plata Flood Control Project, Chief of Engineers Report was approved on January 3, 1989. A Limited Reevaluation Report (LRR) was submitted in April 1992 and approved in June 1992. A Design Memorandum (DM) was approved in March 1993, capturing the detailed design refinements which were outlined in the 1992 LRR and describes the authorized design. Figure 2 presents the project features described in the 1993 DM. Due to the project's large scope, segmentation of project construction allowed for phased fiscal appropriations. Per the March 1993 DM, the total authorized project was divided into three construction phases (Segments 1, 2, and 3). To execute the three project phases, four construction contracts (1A, 1B, 2, and 3) were identified. Contract 1A was awarded 23 July 2010, completed in June 2015 and transferred to the DNER in December of that year. In 2018, during Preconstruction, Engineering and Design (PED), it was considered necessary to add a separate contract for the Dorado Bridge channel widening and scour protection (DBCWSP).

This contract ( 1 B ) was awarded on 26 September 2017 and the NTP (notice to proceed) for construction was issued on 1 June 2018. Construction of the remaining features of the Rio de la Plata Flood Control Project has not been executed due to lack of funding.

Recent modeling analysis allowed the USACE to perform some optimizations and design refinements. Figure 3 presents the design refinements for the remaining segments (remaining 1, 2 and 3). Total project first cost per the December 13, 2018 cost certification at Fiscal Year 2019 (FY19) price levels is estimated at \$654,481,000; this includes \$63,916,000 in sunk cost and \$590,565,000 in remaining cost. This estimate includes contingency, preconstruction, engineering and design (PED), and supervision and administration (S&A) in accordance with EP 500-1-1 and Engineer Regulation (ER) 500-1-1. Project cost per the December 13, 2018 cost certification inflated through construction is \$757,098,000.

The scope of the Validation Report will focus on three primary factors: economic justification, environmental acceptability and technical feasibility, while validating that the previously approved project features continue to be appropriate to meet the project performance objectives.

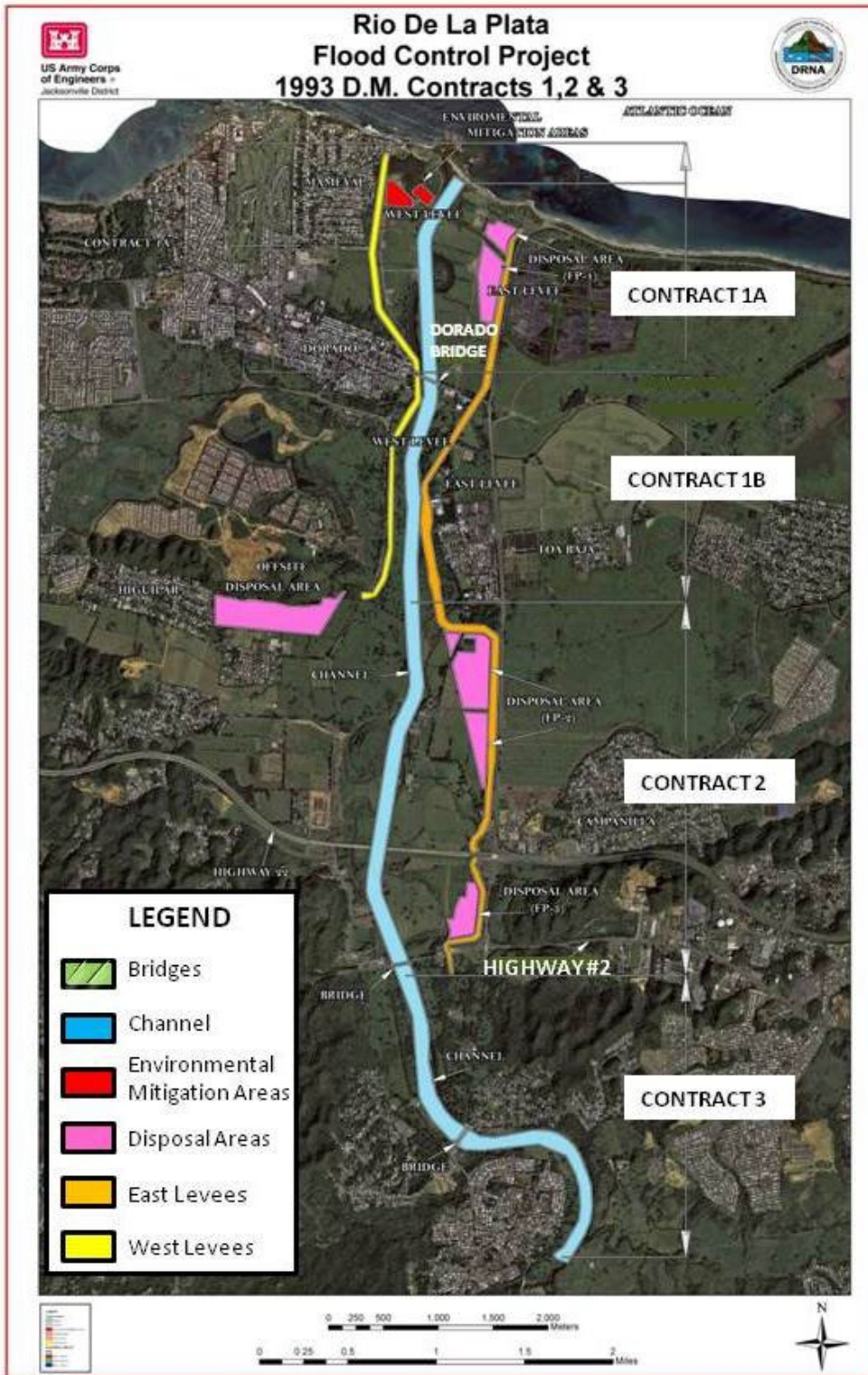


Figure 2: Rio de la Plata Project - 1993 Design Memorandum

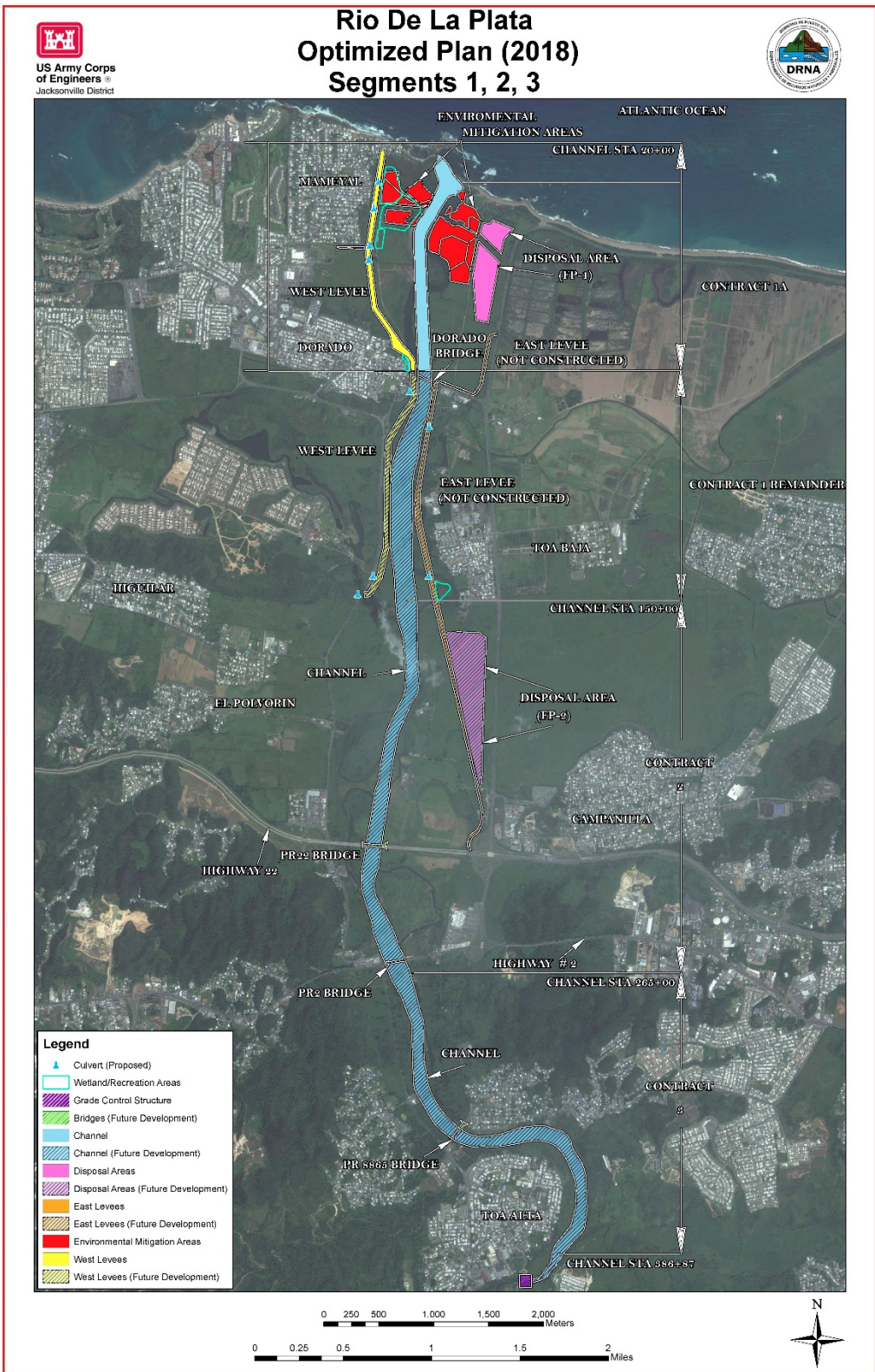


Figure 3: Project optimized recommended features



**Federal Interest:**

This project is an authorized Federal Flood Risk Management Project that established Federal interest. The basin problems of flood risk still persist today. The project is under construction with Federal participation. There is continued Federal interest to complete the authorized project to reduce flood risk within the basin.

**Risk Identification:**

The risks associated with this project include potential implementation risks (cost and schedule), outcome risks and residual risks. There are two broad outcome risk associated with projects that include levees and reducing the threat of flooding in an area: 1) increased flood hazards associated with levee failures, (this outcome is highly unlikely with a very low probability), and 2) spurring development in the protected floodplain, ( while this is certainly not the intent of the projects, it is always a risk of any FRM project). The project team is not aware of any other outcome risks specific to this project. The project will utilize the same design with some refinements and optimizations, and construction techniques that were considered in previous design memorandum reports and construction contracts.

A Safety Assurance Review (SAR), also known as a Type II Independent External Peer Review (IEPR), may be required for implementation documents and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. A risk-informed decision, as described in EC 1165-2-217, is made as to whether a SAR is appropriate. SARs are managed outside the USACE shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare. A site visit will be required by the SAR team during the design and construction phases.

The District Chief of Engineering has made a risk-informed decision that this project poses a significant threat to human life (public safety) in the event of levee and bridge failure. Therefore, during PED, a SAR will be performed for each of the contracts (Contracts 1B, 2, 3, and Puerto Rico Highway 2 (PR-2) Bridge Replacement). Products that will undergo SAR include the P&S and DDR prepared during the Final Design Phase, as well as construction documents at the mid-point of construction.

## 1. FACTORS AFFECTING THE LEVELS OF REVIEW

**Scope of Review.** Due to the fact that the Rio de la Plata validation report is not a project study, the highest level of technical review required will be Agency Technical Review (ATR). The project is currently under construction and this report only focuses on validation of the unconstructed elements of the authorized project. The level of review required was discussed with South Atlantic Division (SAD), the Risk Management Center (RMC), and the Flood Risk Management Planning Center of Expertise (FRM-PCX). The District Quality Control and District Legal review have been completed and certified along with the cost certification from the Cost Center of Expertise (CX) by Walla Walla District.

- Will the study likely be challenging?

The project is authorized and currently under construction. The project will utilize the same design with some refinements and optimizations, and construction techniques that were promoted in the original project reports previously coordinated with the public.

- Provide a preliminary assessment of where the project risks are likely to occur and assess the magnitude of those risks.

Currently, significant urban flooding occurs within the study areas with each significant storm/precipitation event. The project features proposed in the original study were designed to address the situation. If, at some point after construction, one of the levees fails during an extreme rainfall event, the subsequent flooding would likely be much worse than it would have been in the without project condition. Though this outcome is highly unlikely (very low probability), the consequences of this outcome could be large and adverse. Therefore, it is a risk that should be acknowledged.

- Is the project likely to be justified by life safety or is the study or project likely to involve significant life safety issues?

The project will not be justified by life safety; however, the District Chief of Engineering has made a risk-informed decision that this project poses a significant threat to human life (public safety) in the event of levee and bridge failure. Therefore, during PED, a SAR will be performed for each of the contracts (Contracts 1B, 2, 3, and Puerto Rico Highway 2 (PR-2) Bridge Replacement). Products that will undergo SAR include the P&S and DDR prepared during the Final Design Phase, as well as construction documents at the mid-point of construction.

- Has the Governor of an affected state requested a peer review by independent experts?

The Governor of Puerto Rico hasn't requested a peer review by independent experts.

- Will the project likely involve significant public dispute as to the project's size, nature, or effects?

No significant public dispute is anticipated based on the previous history of the project.

- Is the project/study likely to involve significant public dispute as to the economic or

environmental cost or benefit of the project?

No significant public dispute to the economic or environmental costs or benefits is anticipated.

- Is the information in the decision document or anticipated project design likely to be based on novel methods, involve 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?

The information in the study documents demonstrate that the project design is not 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. The project will use the same design and construction techniques that were previously proposed and on similar projects.

- Does the project design require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design/construction schedule? The proposed project designs do not require any additional redundancy, resilience, or robustness.

- Is the estimated total cost of the project greater than \$200 million?

Yes, the estimated total project cost of this project exceeds \$200 M.

- Will an Environmental Impact Statement be prepared as part of the study?

A Final EIS was filed on 12 September 1988 and the project was authorized under the WRDA of 1990. An Environmental Assessment/Finding of No Significant Impact (EA/FONSI) was signed on 4 May 1993. This EA/FONSI updated the project footprint and responded to new environmental laws that became effective after the 1988 Final EIS. An EA /FONSI was signed on 7 February 2005 to consider additional changes in the project footprint. In 2008, the USACE, Regulatory Division prepared a Supplement to the 2005 EA/FONSI with a Statement of Findings concerning issuance of a Department of the Army Permit to the DNER for construction of the project. In 2011, an EA/FONSI was prepared concerning a temporary diversion channel and construction methods in association with construction under contract 1A. The resulting FONSI was signed by the District Engineer on 16 December 2011.

Updates on the Environmental compliance status is provided in the validation report.

- Is the project expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources?

The identification and evaluation of historic properties for the Rio de la Plata Flood Control Project is being conducted in a phased process. Due to the size and scope of the area of potential effects (APE), each Contract has been subject to separate consultation and consideration of project effects to historic properties during PED and based on final designs or modifications of project features. Consultation for Contract 1A and the Dorado Bridge scour protection contract are complete and no further cultural resources investigation are necessary for these portions of the project; however, cultural resources

surveys and coordination with the Puerto Rico State Historic Preservation Office (SHPO) is required for all remaining contracts to be issued for the remainder of the project.

- Is the project expected to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures?  
The project is not expected to have substantial adverse impacts on fish and wildlife species. Agency consultations will be held and documented for the review process
- Is the project expected to have, before mitigation measures, more than a negligible adverse impact on an endangered or threatened species or their designated critical habitat?  
No, the original EIS and EA did not identify any adverse impacts to threatened or endangered listed species nor critical habitat within the project areas. An updated analysis will be conducted during PED.

## 2. REVIEW EXECUTION PLAN

This section describes each level of review to be conducted. Based upon the factors discussed in Section 1, this study will undergo the following types of reviews:

**District Quality Control.** All decision documents (including data, analyses, environmental compliance documents, etc.) undergo DQC. This internal review process covers basic science and engineering work products. It fulfills the project quality requirements of the Project Management Plan.

**Agency Technical Review.** ATR is performed by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. These teams will be comprised of certified USACE personnel. The ATR team lead will be from outside the home Major Subordinate Command (MSC). If significant life safety issues are involved in a study or project a safety assurance review should be conducted during ATR.

**Independent External Peer Review.** Type I IEPR may be required for decision documents under certain circumstances. This is the most independent level of review, and is applied in cases that meet criteria where the risk and magnitude of the project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision is made as to whether Type I IEPR is appropriate.

**Cost Engineering Review.** All decision documents shall be coordinated with the Cost Engineering Mandatory of Expertise (MCX). The MCX will assist in determining the expertise needed on the ATR and IEPR teams. The MCX will provide the Cost Engineering certification. The RMO is responsible for coordinating with the MCX for the reviews. These reviews typically occur as part of ATR.

**Model Review and Approval/Certification.** EC 1105-2-412 mandates the use of certified or approved models for all planning work to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable

assumptions.

**Policy and Legal Review.** All decision documents will be reviewed for compliance with law and policy. ER 1105-2-100, Appendix H provides guidance on policy and legal compliance reviews. These reviews culminate in determinations that report recommendations and the supporting analysis and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. These reviews are not further detailed in this section of the Review Plan.

Table 1 provides the schedules and costs for reviews. The specific expertise required for the teams are identified in later subsections covering each review. These subsections also identify requirements, special reporting provisions, and sources of more information.

**Table 1: Levels of Review**

<b>Product(s) to undergo Review</b>	<b>Review Level</b>	<b>Start Date</b>	<b>End Date</b>	<b>Cost</b>	<b>Complete</b>
Validation Report	DQC	14 DEC 2018	31 JAN 2019	\$15,000	No
Validation Report	ATR with concurrent Policy Review	1 MAR 2019	2 May 2019	\$25,000	No

**a. DISTRICT QUALITY CONTROL**

The home district shall manage DQC and will appoint a DQC Lead to manage the local review (see EC 1165-2-217, section 8.a.1). The DQC Lead should prepare a DQC Plan and provide it to the RMO and MSC prior to starting DQC reviews. Table 2 identifies the required expertise for the DQC team.

**Table 2: Required DQC Expertise**

DQC Team Disciplines	Expertise Required
DQC Lead	A senior professional with extensive experience preparing Civil Works decision documents and conducting DQC. The lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc.).
Economics	A senior economist with demonstrated experience evaluating flood risk management project benefits and costs. Experience with evaluating the appropriateness of cost effectiveness and incremental cost analysis (CE/ICA), as applied to dollar costs & ecosystem restoration benefits; familiarity with the USACE tool IWR-PLAN. Experience in identifying incidental benefits (preferably flood risk management and water supply) is required.
Environmental Resources/NEPA Compliance	A senior biologist/ecologist/environmental engineer, preferably with experience in flood risk management and familiarity with freshwater, coastal and estuarine systems. They must be able to review for NEPA compliance (including cultural resources coordination) and quality and applicability of ecosystem benefits evaluations.
Civil Engineering	The team member should be a registered professional engineer with experience in civil/site work.
Cost Engineering	The team member should be a registered professional with experience in cost engineering.

**Documentation of DQC.** Quality Control should be performed continuously throughout the study. A specific certification of DQC completion is required at the draft and final report stages. Documentation of DQC should follow the District Quality Manual and the MSC Quality Management Plan. An example DQC Certification statement is provided in EC 1165-2-217, page 19, Figure F.

Documentation of completed DQC should be provided to the MSC, RMO and ATR Team leader prior to initiating an ATR. The ATR team will examine DQC records and comment in the ATR report on the adequacy of the DQC effort. Missing or inadequate DQC documentation can result in delays to the start of other reviews (see EC 1165-2-217, section 9).

**b. AGENCY TECHNICAL REVIEW**

The ATR will assess whether the analyses are technically correct and comply with guidance, and that documents explain the analyses and results in a clear manner. An RMO manages ATR. The review is conducted by an ATR Team whose members are certified to perform reviews. Lists of certified reviewers are maintained by the various technical Communities of Practice (see EC 1165- 2-217, section 9(h)(1)). Table 3 identifies the disciplines and required expertise for this ATR Team.

**Table 3: Required ATR Team Expertise**

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and similar studies 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 the reviewer for a specific discipline.
Economics	An economist that is certified to perform ATR with demonstrated experience evaluating flood risk management project benefits and costs. Experience with evaluating the appropriateness of cost effectiveness and incremental cost analysis (CE/ICA), as applied to dollar costs & ecosystem restoration benefits; familiarity with the USACE tool IWR-PLAN. Experience in identifying incidental benefits (preferably flood risk management
Environmental Resources/NEPA Compliance	A senior biologist, ecologist or environmental engineer certified to perform ATR, with experience in ecosystem restoration and familiarity with freshwater, coastal and estuarine systems. Must be able to review for NEPA compliance (including cultural resources coordination) and quality and applicability of ecosystem benefits evaluations.
Civil Engineering	A senior civil engineer with specialized experience in civil/site work and construction.
Geotechnical Engineering	A geologist with specialized experience in geotechnical engineering is preferred.

**Documentation of ATR.** DrChecks will be used to document all ATR comments, responses and resolutions. Comments should be limited to those needed to ensure product adequacy. If a concern cannot be resolved by the ATR team and PDT, it will be elevated to the vertical team for resolution using the EC 1165-2-217 issue resolution process. Concerns can be closed in DrChecks by noting the concern has been elevated for resolution. The ATR Lead will prepare a Statement

of Technical Review (see EC 1165-2-217, Section 9), for the validation report, certifying that review issues have been resolved or elevated. ATR may be certified when all concerns are resolved or referred to the vertical team and the ATR documentation is complete.

### **c. INDEPENDENT EXTERNAL PEER REVIEW**

#### **(i) Type I IEPR.**

**Decision on Type I IEPR.** This study is so limited in scope that it would not significantly benefit from a Type I IEPR and therefore Type I IEPR exclusion is being requested concurrently with approval of this review plan. This report is being developed only to verify that construction of the remaining features of the project is still environmentally acceptable, economically justified and feasible from an engineering and design standpoint. Furthermore, Type II IEPR is intended to be conducted during PED prior to construction.

#### **(ii) Type II IEPR.**

The second kind of IEPR is Type II IEPR. These Safety Assurance Reviews are managed outside of the USACE and are conducted on design and construction for hurricane, storm and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. A Type II IEPR Panel will be convened to review the design and construction activities before construction begins, and until construction activities are completed, and periodically thereafter on a regular schedule.

**Decision on Type II IEPR.** Based on the project as currently envisioned, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, has concluded that a Type II IEPR Safety Assurance Review of this project is not required for this Validation Report. However, a SAR will be completed during PED to include the P&S and DDR, as well as construction documents at the mid-point of construction. A risk-informed decision concerning the timing and the appropriate level of reviews for the project implementation phase will be prepared and submitted for approval in an updated Review Plan prior to initiation of the design/implementation phase of this project.

### **d. MODEL CERTIFICATION OR APPROVAL**

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models are any models and analytical tools used to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of a planning product. The selection and application of the model and the input and output data is the responsibility of the users and is subject to DQC, ATR, and IEPR. Currently the confirmation report is not contemplated to have any additional plan formulation or alternative analysis conducted.



**Table 5: Planning Models.** The following models may be used to develop the decision document:

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Certification / Approval
N/A		

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue. The professional practice of documenting the application of the software and modeling results will be followed. The USACE Scientific and Engineering Technology Initiative has identified many engineering models as preferred or acceptable for use in studies. These models should be used when appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR. Currently the confirmation report is not contemplated to have any additional plan formulation or alternative analysis conducted. However additional engineering analysis will be conducted during PED to complete the design of the project.

**Table 6: Engineering Models.** These models may be used to develop the decision document:

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Approval Status
N/A		

No modeling will be completed during the development of the Validation Reports.

**e. POLICY AND LEGAL REVIEW**

Policy and legal compliance reviews for draft and final planning decision documents are delegated to the MSC (see Director’s Policy Memorandum 2018-05, paragraph 9 and Director’s Policy Memorandum 2019-01).

**(i) Policy Review.**

The policy review team is identified through the collaboration of the MSC Chief of Planning and Policy and the HQUSACE Chief of the Office of Water Project Review. The team is identified in Attachment 1 of this Review Plan. The makeup of the Policy Review team will be drawn from Headquarters (HQUSACE), the MSC, the Planning Centers of Expertise, and other review resources as needed.

The Policy Review Team will be invited to participate in key meetings during the development of decision documents as well as SMART Planning Milestone meetings. These engagements may include In-Progress Reviews, Issue Resolution Conferences or other vertical team meetings plus the milestone events.

The input from the Policy Review team should be documented in a Memorandum for the

Record (MFR) produced for each engagement with the team. The MFR should be distributed to all meeting participants.

In addition, teams may choose to capture some of the policy review input in a risk register if appropriate. These items should be highlighted at future meetings until the issues are resolved. Any key decisions on how to address risk or other considerations should be documented in an MFR.

**(ii) Legal Review.**

Representatives from the Office of Counsel will be assigned to participate in reviews. Members may participate from the District, MSC and HQUSACE. The MSC Chief of Planning and Policy will coordinate membership and participation with the office chiefs.

- In some cases legal review input may be captured in the MFR for the particular meeting or milestone. In other cases, a separate legal memorandum may be used to document the input from the Office of Counsel.
- Each participating Office of Counsel will determine how to document legal review input.

**ATTACHMENT 1: TEAM ROSTERS**

RIO DE LA PLATA FLOOD CONTROL PROJECT DELIVERY TEAM			
Name	Office	Position	Phone Number
	CESAJ-PM-EE	Project Manager	904.232.1454
	CESAJ-PD-PN	Planning, PTL	904.232.1428
	CESAJ-EN-DL	Engineering, ETL	904.232.1604
	CESAJ-EN-TC	Engineering Cost	904.232.2165
	CESAJ-EN-WH	Engineering Hydraulic Design	904.232.1402
	CESAJ-EN-GS	Engineering Geotech	904.232.1657
	CESAJ-PD-D	Planning Socioeconomics	904.232.1652
	CESAJ-PD-EC	Planning Environmental	904.232.1897
	CESAJ-PD-ES	Planning Cultural	904.232.1577
	CESAJ-RE-A	Real Estate Acquisition	904.232.1656
	CESAJ-OC	Office Council	904.232.1102

RIO DE LA PLATA DISTRICT QUALITY CONTROL TEAM			
Name	Office	Position	Phone Number
	CESAJ-PD	Chief, Planning Division	904.232.1665
	CESAJ-EN	Chief, Engineering Division	904.232.2251
	CESAJ-PD-PN	DQC Review Coordinator	904.232.1912
	CESAJ-PD-PW	Chief, Watershed Planning	904.232.1757
	CESAJ-EN-DL	Chief, Civil Section	904.232.2415
	CESAJ-PD-E	Chief, Environmental	904.232.2336
	CESAJ-PD-D	Chief, Socio-Economics	904.232.1058
	CESAJ-EN-TC	Chief, Cost Engineering	904.232.1043

RIO DE LA PLATA POLICY AND LEGAL REVIEW TEAM			
Name	Office	Position	Phone Number
	CESAD-PDH	Review Manager	404.562.5177
	CESAD-EN	Engineering	404 562 5120
	CESAD-OC	Office of Counsel	404 562 5017
	CESAD-RE	Real Estate	404 562 5075
	CESAD-PDP	Environmental	404 562 5225
	CENAD-PD	Socio- Economics	917 359 2819
	CECW-E	Climate Change	202 761 4163

RIO DE LA PLATA ATR TEAM			
Name	Office	Position	Phone Number
	CENAE-PDP	ATR Lead	978 318 8172
	CEMVK-EC-DL	Engineering	601 631 5593
	CELRH-DSPC-GS	Geotechnical engineer	303 963 4570
	CEMVP-PD-P	Environmental	651 290 5428
	CEMVN-PDE	Socio- Economics	309 794 5006