



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

6 July 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 Puerto Nuevo Flood
Control Project, Puerto Rico, Validation Report

1. References:

a. Memorandum, CESAJ-PD, 12 June 2019, subject: Rio Puerto Nuevo Flood Control
Project, Puerto Rico, Continuing Construction Validation Report Review Plan Submittal for
Major Subordinate Command Approval.

b. Memorandum, CESPDP-PDP (FRM-PCX), 3 June 2019, subject: Review Plan
Endorsement for the Rio Puerto Nuevo 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 Puerto Nuevo 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 (enclosed) 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

June 2019

Project Names: Rio Puerto Nuevo Flood Control Project, Puerto Rico

P2 Numbers: Rio Puerto Nuevo – 012462

Decision Document Type: Validation Report

Project Type: Flood Risk Management

District: Jacksonville District

District Contact: Planning Technical Lead, 904-232-1061

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

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

Milestone Schedule

	Scheduled	Actual	Complete
District Quality Control (DQC)	17 Dec 19	28 Jan 2019	Yes
Initiate ATR/MSC/HQ Review:	19 Feb 19	19 Mar 2019	No
Initiate NEPA/Public Review	N/A	N/A	N/A
Final Report Transmittal:	24 Jun 19	(enter date)	No
Chief's Report or Director's Report:	N/A	N/A	N/A

Project Fact Sheet

June 2019

Project Name: Rio Puerto Nuevo (RPN) 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 Puerto Nuevo 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 Puerto Nuevo 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.

The RPN project is currently under construction and the total project cost was approaching the 902 limit when the Bipartisan Budget Act (BBA) of 2018 was passed. The BBA provides an opportunity to complete construction of the RPN Flood Control Project. At the time the BBA was passed the team was seeking an increase in the 902 limit via a Limited Reevaluation Report. Since the 902 limit was waived by the BBA, the team changed direction and prepared a validation report to document construction strategies that could be implemented using the full funds allocated under the BBA. The purpose of the report is to update total project costs and economic analysis (level 1) to FY19 cost levels and to show the costs of the features being recommended for continued construction and to verify environmental compliance and engineering feasibility based on the authorized General Design Memorandum (1991).

It is important to note that preparation of plans and specifications (P&S) are underway for the construction contracts while completing the validation report. The effort was presented and supported by South Atlantic Division (SAD). A separate review plan 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 (DQC)/Quality Assurance (QA), Agency Technical Review (ATR), Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review, Safety Assurance Review (SAR), and Policy and Legal Compliance Review.

Location:

The Rio Puerto Nuevo drainage basin is located in the middle of the San Juan Metropolitan Area along the north coast of Puerto Rico. This highly developed basin extends from the 3-mile wide lower flood plain, in the southeast side of San Juan Harbor, up to the foothills of the central mountains of Puerto Rico. The river basin includes the following major tributaries: Quebrada Margarita, Bechara Canal, Quebrada Josefina, Quebrada Doña Ana, Quebrada Buena Vista, and Quebrada Guaracanal. See Figure 1

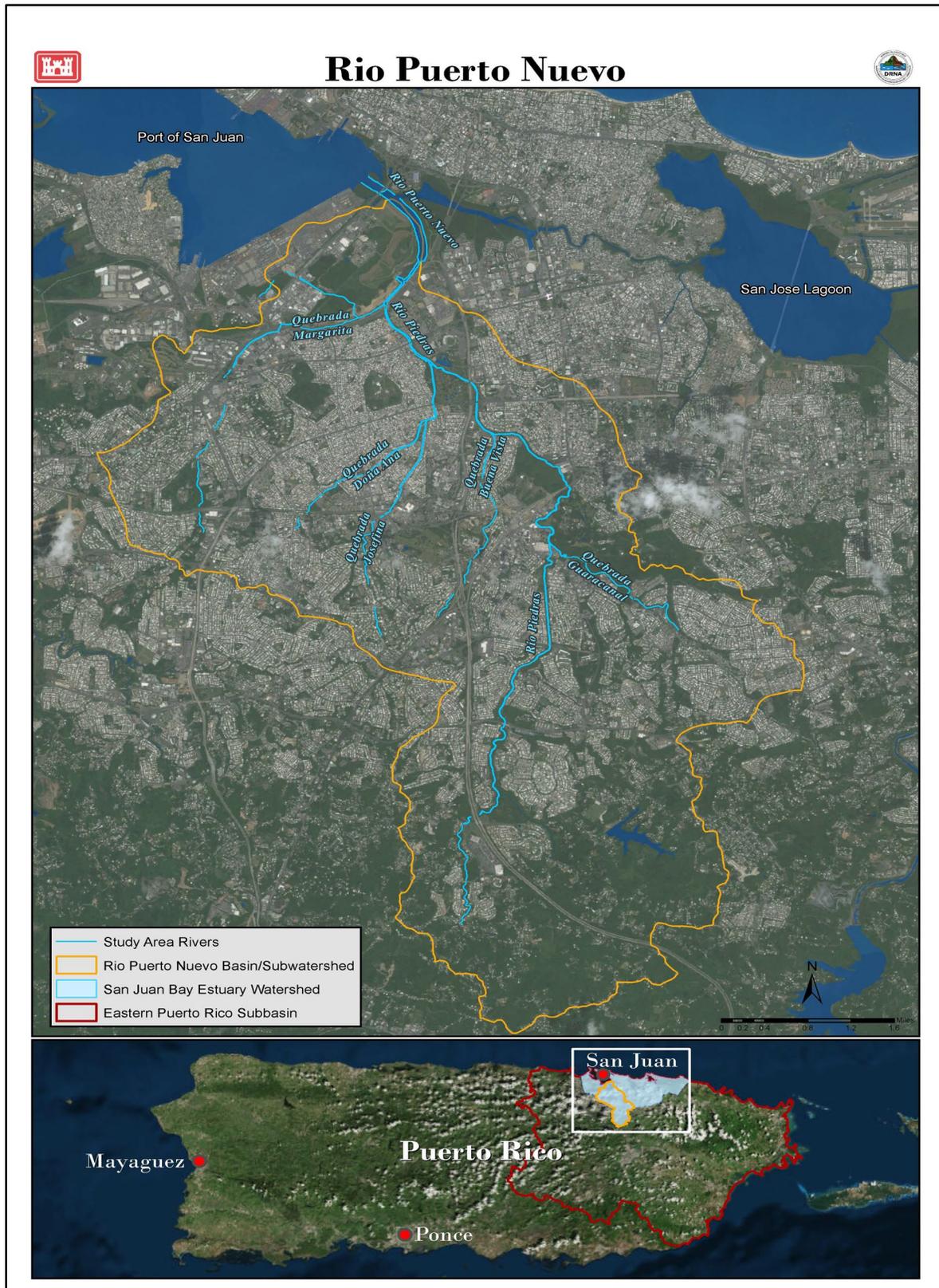


Figure 1 – Rio Puerto Nuevo Watershed and Study Area

Authority:

The original feasibility study, called the Rio Puerto Nuevo Survey Investigation, was initiated in 1978 at the request of the Commonwealth of Puerto Rico. It was conducted under the authority of Section 204 of The Flood Control Act of 1970 (Public Law 91-611). The survey report was completed in October 1984 and further revised in June 1985; the revised report will be referred to as the Survey Report. In Section 401(a) of the Water Resource Development Act (WRDA) of 1986 (Public Law 99-662 dated 17 November 1986), Congress authorized the construction of the Rio Puerto Nuevo Project consisting of flood control improvements to the Rio Puerto Nuevo at a total cost of \$234 million dollars (1986 price levels) with the sponsor being responsible for operating and maintaining the project.

Sponsors:

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

Type of Studies: Emergency Supplemental Validation Report

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

Project Description:

The Rio Puerto Nuevo basin drains an area of 26 square miles and is located within a highly developed urban area that empties into the San Juan Bay. Presently, the basin is over 80 percent developed. The primary purpose of the project is to provide flood risk management benefits for structures, contents, and transportation infrastructure in the Rio Puerto Nuevo Basin. The project is also designed to improve human health and safety and to provide incidental economic benefits (recreation, redevelopment, etc). The authorized project consists of improvements to 11.2 miles of Rio Puerto Nuevo and its tributaries. The project includes 1.66 miles of lined trapezoidal channel, 9.54 miles of concrete rectangular channel, 5.1 miles of which are high velocity, and 2,160 feet of double box culvert. Additional features include two baffle pier stilling areas, two high velocity flow junctions with tributary streams Buena Vista Diversion Channel and Guaracanal Channel, two upstream debris basin with side-overflow spillways, and numerous other features including bridge replacements and modifications.

The project is extremely complex; it includes a couple dozen construction contracts and numerous individual features. Adding to this complexity is the challenge of constructing 11.2 miles of channel improvements in a highly urbanized area. For example, all three of the city's inflows to the regional sewage treatment plant and its outfall lines are impacted by the project. The project also impacts the city's principal power and water supplies, secondary sewer lines, highway bridges, telephone, fiber optics, and cable television lines. Also, soils in the region are known to be problematic as they are alluvial in the lower basin and will vary with karst going

upstream. Overall, Rio Puerto Nuevo is one of the most difficult and challenging projects currently being constructed by the USACE.

The authorized design provides the 100-year flood level of protection for the city of San Juan. The Supplemental Appropriations for Disaster Relief Requirements Act provides an opportunity to continue construction of the Rio Puerto Nuevo Flood Control Project. The Rio Puerto Nuevo 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.

The report will present the overall cost of remaining unconstructed elements of the authorized project and benefits. Should that cost exceed current project funding estimates associated with the BBA, separable feasible elements will be presented that are within the initial BBA funding.

Table 1: Status of Construction Contracts for Rio Puerto Nuevo Project

Supplemental Contract	Contract	Description	Construction Status as of 2018
N/A	1	Lower Rio Puerto Nuevo channel (mouth of river)	Complete
N/A	1A	Kennedy Bridge modifications	Complete
N/A	2A	Lower Margarita Channel	Complete
N/A	2AR	Completion of 2A work including channel excavation	Complete
N/A	2AA	Bechara Industrial Area and Bechara Mid-Section	Complete
2	2B	Roosevelt Bridge	Not Initiated
N/A	2C1	Lower Margarita Channel and Stilling Basin	In-Progress
1	2C2	Upper Margarita Channel including sewer line relocation	Not Initiated
1	2C3	Upper Margarita Channel completion including U-Frame channel ties to 2C1	Not Initiated
3	2D	Lower Rio Puerto Nuevo Subcritical Channel walls	In-Progress
N/A	2D1	DeDiego Bridge Seismic Retrofit	Complete
3	2E	Lower Rio Puerto Nuevo Subcritical Channel bottom	Not Initiated
7	3A	Bridge replacement of 10 bridges	Not Initiated
5	3AA	Bridge replacement – Pinero Avenue West	Not Initiated
7	3B-1	Quebrada Josefina and Stilling Basins	Not Initiated
7	3B-2	Quebrada Dona Ana tributary channels and Stilling Basins	Not Initiated
4	4A	Bridge Modifications (Las Americas, Pinera Ave, NE Access ramp, SE Access ramp)	Not Initiated
5	4B	Bridge replacement – Notre Dame Street bridge	Not Initiated
6	4	Middle Main Channel – Sta 147+40 to Sta 206+50	Not Initiated
6	4D-1	Buena Vista Bridges – 2 bridge replacements	Not Initiated

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6	4D-2	Buena Vista Diversion Channel	Not Initiated
8	5A	New PR 1 Highway Bridge	Not Initiated
6	5B-1	Middle Puerto Nuevo Channel (Sta 206+50 to PR HWY 1) and Debris basin	Not Initiated
8	5B-2	Middle Main Channel – PR Highway 1 to Sta 271+50	Not Initiated
8	6	Upper Reach 1 Bridge replacement and 1 bridge foundation modification	Not Initiated

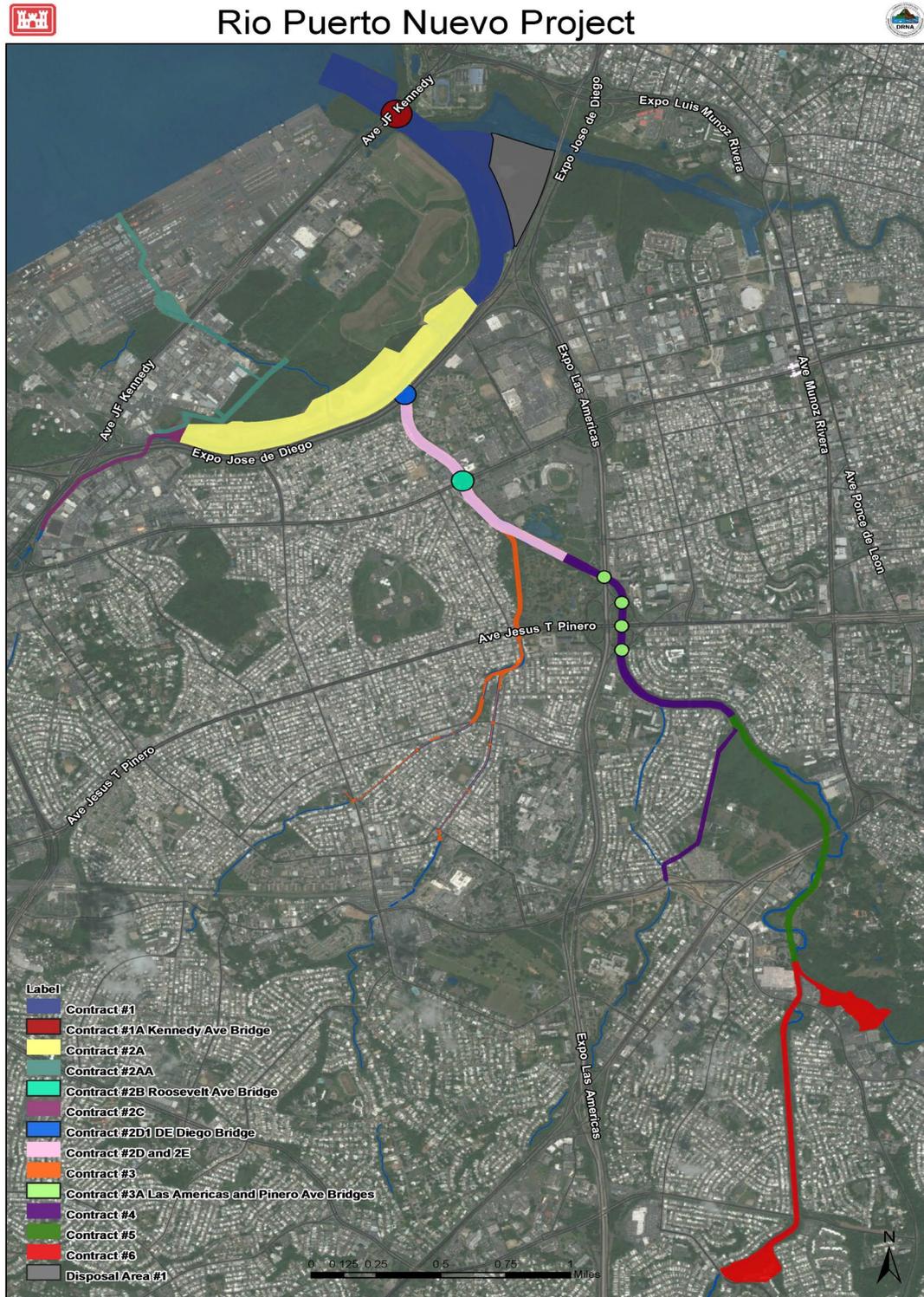


Figure 2 – Rio Puerto Nuevo Construction Contracts

Problem Statement:

The project is authorized, and construction is ongoing. After project authorization in WRDA 1986, a General Design Memorandum (GDM) was approved by HQUSACE in October 1992 to refine the design of the project and clarify some implementation details. Due to the complex nature of the project (dozens of individual contracts, large scale land acquisition, relocation, etc.) and its location in a highly urbanized area, the construction schedule was divided into multiple contracts. Construction on the project began in 1995 and is ongoing. Contract 1, which significantly widened and armored the mouth area of the RPN channel, and Contract 1A, which replaced the Kennedy Avenue Bridge were completed in 2005. Contract 2A is completed, which widened and armored a slightly more upstream section of the main RPN channel. Construction of the remaining features of the Rio Puerto Nuevo Flood Control Project hasn't been executed due to lack of funding. See Figure 2 for the Project contracts.

The scope of the Validation Report is not expected to require any project reformulation and focuses 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 needs.

Federal Interest:

This project is an authorized Federal Flood Risk Management (FRM) Project that established the 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 includes potential implementation risks (cost and schedule), outcome risks and residual risks. There are two broad outcome risks 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 (very low probability as there are no levees in the RPN project), and 2) increased development in the floodplain, while this is certainly not the intent of this project, it is always a risk of any FRM project. The team is not aware of any other outcome risks specific to this project. The project will utilize the same design and construction techniques that were authorized in the original project report. The project will not be justified by life safety nor does it involve significant threat to human life/safety assurance. Failure of the project would not pose a significant threat to human life. The project will reduce the existing potential for life/safety issues during flood events. However, the project is justified primarily by the reduction in damages associated with recurring flooding of structures within the project impact footprint.

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 project 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 and shall

consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

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 bridge failure. Therefore, during PED, a SAR will be performed for each of the contracts and a SAR will be performed during construction.

1. FACTORS AFFECTING THE LEVELS OF REVIEW

Scope of Review. Due to the fact that the RPN 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 focuses on the validation of the unconstructed elements of the authorized project. There is no reformulation, no new engineering, or no new environmental compliance and therefore does not require a Type 1 IEPR. The study is currently under construction and this report only focuses on implementation strategies to complete construction based on the funding allocated under the BBA. 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). It is important to note 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 even to of a bridge failure. Therefore, during PED, a SAR will be

performed for each of the contracts. Products that will undergo a 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 based on novel methods, involve the use of innovative materials of 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 design does not require any additional redundancy, resilience, or robustness.
- Is the estimated total cost of the project greater than \$200 million?
Yes, the estimated project costs of this project exceeds \$200 M.
- Will an Environmental Impact Statement be prepared as part of the study?
An Environmental Impact Statement was prepared in 1984 and Environmental Assessments were completed in 1993 and 2002 addressing changes in project design, mitigation, and environmental requirements. The proposed actions remain within the scope of the Water Quality Certification issued by the Puerto Rico Environmental Quality Board on June 1993 and subsequent modifications issued on April 2001 and February 2011. Compensatory wetland mitigation for the overall project was completed with construction of Contract 2 AR and deemed successful in the third quarterly monitoring report dated 21 April 2015.

The Environmental compliance status and verification will be included 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 Puerto Nuevo Flood Control Project has been 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 preconstruction engineering and design (PED) and based on final designs or modifications of project features. The Corps has previously coordinated a determination of no effect on historic properties with the Puerto Rico State Historic Preservation Office (SHPO) for the completed construction contracts; however, cultural resources surveys and coordination with the 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 did not identify any adverse impacts to threatened or endangered listed species nor critical habitat within the project area. 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 fulfils 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 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 analyses 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

Product(s) to undergo Review	Review Level	Start Date	End Date	Cost	Complete
<i>Validation Report</i>	<i>DQC</i>	<i>14 DEC 2018</i>	<i>10 JAN 2019</i>	<i>\$15,000</i>	<i>No</i>
<i>Validation Report</i>	<i>ATR with concurrent Policy Review</i>	<i>19 FEB 2019</i>	<i>19 MAR 2019</i>	<i>\$25,000</i>	<i>No</i>

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
<i>DQC Lead</i>	<i>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.).</i>
<i>Economics</i>	<i>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.</i>
<i>Environmental Resources/NEPA Compliance</i>	<i>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.</i>
<i>Civil Engineering</i>	<i>The team member should be a registered professional engineer with experience in civil/site work.</i>
<i>Cost Engineering</i>	<i>The team member should be a registered professional with experience in cost engineering.</i>

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
<i>ATR Lead</i>	<i>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.</i>
<i>Economics</i>	<i>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 and water supply) is required.</i>
<i>Environmental Resources/NEPA Compliance</i>	<i>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.</i>
<i>Civil Engineering</i>	<i>A senior civil engineer with specialized experience in civil/site work and construction</i>
<i>Geotechnical Engineering</i>	<i>A geologist with specialized experience in geotechnical engineering is preferred.</i>

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 draft and final reports, 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 Validation Report effort is 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 Validation Report is being developed only to verify that construction of the remaining features of the project are 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 the Validation Report. A risk 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 to reassess the need for a Type II IEPR Safety Assurance Review during the project implementation phase.

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).

(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 PUERTO NUEVO FLOOD CONTROL PROJECT DELIVERY TEAM			
Name	Office	Position	Phone Number
	CESAJ-PM-WN	Project Manager	904.232.1454
	CESAJ-PD-D	Planning, PTL	904.232.1061
	CESAJ-EN-DS	Engineering, ETL	904.232.2112
	CESAJ-EN-TC	Engineering Cost	904.232.2408
	CESAJ-EN-WH	Engineering Hydraulic Design	904.232.2298
	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 of Counsel	904.232.1164

RIO PUERTO NUEVO 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-EN-DL	Chief, Civil Section	904.232.2415
	CESAJ-EN-WH	Engineering Hydraulic Design	904.232.1197
	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 PUERTO NUEVO ATR TEAM			
Name	Office	Position	Phone Number
	CESPK	ATR Lead	916 557 6695
	CEMVK-EC-DL	Engineering	601 631 5593
	CELRH-DSPC-GS	Geotechnical engineer	303 963 4570
	CESPK-PD-RA	Environmental	916 557 6717
	CEMVN-PDE	Socio- Economics	309 794 5006

Rio Puerto Nuevo Flood Control Project Validation Report Review Plan

RIO PUERTO NUEVO 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