



Scajaquada Creek Continuing Authority Program Section 1135

P2/Project Number: 152179

Review Plan – Decision Document

PREPARED BY: [Redacted]
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USACE, Buffalo District

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USACE, Buffalo District

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Acting Chief, Planning and Policy Division
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Review Management Organizations (RMO)

APPROVED BY: [Redacted]
Regional Programs Director
USACE, Great Lakes and Ohio River Division

MSC APPROVAL DATE: [Redacted]

DOCUMENT HISTORY:

Document	Description & location of Revision	Date Approved
Original RP	N/A	[Redacted]
Revision #1	Comprehensive update, including PDT members, review schedule, and work-in-kind deliverables	[Redacted]

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1. PURPOSE, AUTHORITY, STUDY DESCRIPTION, AND PRODUCTS

a. Purpose. This review plan defines levels and scopes of review required for the feasibility phase products. The review plan is a component of the Project Management Plan for the Scajaquada Creek Section 1135, Project Modifications for Improvements to the Environment project.

b. Authority. Continuing Authorities Program (CAP) Section 1135 (Project Modifications for Improvements to the Environment) of the Water Resources Development Act (WRDA) of 1986, as amended (33 U.S.C. §2309a).

c. Study Description. This study was initiated to determine feasibility for project modifications for improvements to the environment at the existing federal Flood Risk Management (FRM) project within Scajaquada Creek watershed in the Town of Cheektowaga, Erie County, New York (Figure 1). Authorized by the Flood Control Act of 1965 (P.L. 89-298), the Scajaquada Creek FRM project is located in the Town of Cheektowaga, NY. The project includes approximately 6 miles of improved channel (1.8 miles on the main stem and 4.3 miles on the tributaries) upstream of Pine Ridge Road in Cheektowaga. Features of the FRM project include culvert removals and replacements, bridge removals and replacements, sanitary sewer manhole floodproofing, channel enlargement, low embankments and levees, miscellaneous drainage structures, diversion channels, channel protection, and vegetative covers. Construction of the Scajaquada Creek FRM project was completed by USACE in 1981, and the project was subsequently turned over to the nonfederal sponsor, the Town of Cheektowaga, for operation and maintenance (O&M).

The Scajaquada Creek FRM project was designed to increase the hydraulic capacity of Scajaquada Creek and six tributaries and to prevent stormwater runoff from entering the sanitary sewer system. The FRM project provides protection from floods with an average recurrence interval of 100 years, which equates to flows of 3,260 cubic feet per second (cfs) at the Pine Ridge Road gage. This design provides for a completely developed watershed, includes the New York State Department of Transportation (NYSDOT) diversion channel know as both U-Crest Diversion Ditch and Tributary T-3BD, and assumes that all sanitary sewer manholes, lower than 1 foot above the design water elevation, have been floodproofed.

The non-federal sponsor (NFS) for this project is Buffalo Niagara Waterkeeper. The primary objectives of this feasibility study include: (1) evaluating project alternatives for improvements to the ecosystem within the Scajaquada Creek watershed to help off-set adverse effects that have occurred as a result of the Scajaquada Creek FRM project; and (2) to identify a Tentatively Selected Plan (TSP), for the purpose of specifying a feasible engineering solution to help restore ecosystem functions to the Scajaquada Creek watershed impacted by the FRM project. This project is considered a single-purpose ecosystem restoration project.

Based on the investigations conducted to support the Federal Interest Determination (FID) Report, approved by LRD on 21 July 2020, as well as a planning charrette with the stakeholders (NFS and Town of Cheektowaga), the feasibility study currently includes several conceptual alternatives that will be evaluated in the project Detailed Project Report/Environmental Assessment (DPR/EA). The alternatives include a No Action Alternative (NAA), which expects that no construction activities under the CAP Section 1135 Program will occur and none of the project related benefits will accrue. The with-project alternatives involve various levels of ecosystem restoration improvement at separate individual sites adjacent/nearby the Scajaquada Creek watershed FRM in the Town of Cheektowaga. Preliminary investigations suggest that a DPR/EA is the appropriate decision document, and an Environmental Impact Statement (EIS) is not needed based on the significance of environmental impacts anticipated to result from this project. The Buffalo Niagara Waterkeeper has expressed interest in a CAP 1135 project with USACE through a formal letter of intent (LOI), dated 4 April 2020. Buffalo Niagara Waterkeeper expressed a desire to complete a cost-shared feasibility study evaluating ecosystem restoration improvements within or near the Scajaquada Creek watershed project.

Risks for this project range from high to low. The most significant risks include uncertainty regarding funding challenges from the non-federal sponsor (Buffalo Niagara Waterkeeper), the stakeholder support of feasible sites identified within the Town of Cheektowaga, and limited availability of suitable sites for ecosystem restoration and real estate acquisition. On-going communication and coordination with the non-federal sponsor and Town of Cheektowaga is intended to continue in order to mitigate this risk.

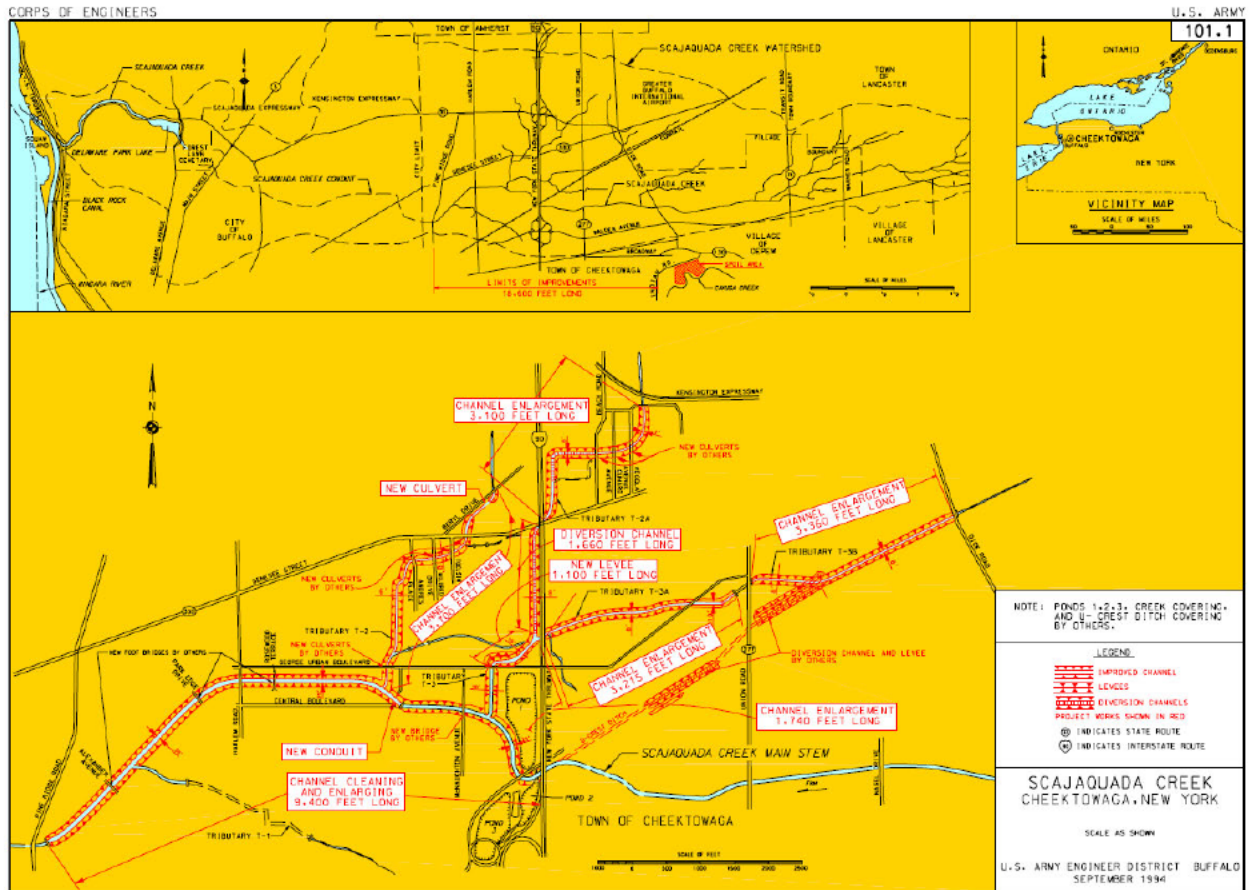


Figure 1. USACE Scajaquada Creek Flood Risk Management Federal Project Map (Source: USACE).

d. Products.

Table 1. List of Products to Be Prepared and Reviewed					
Product / Document	Prepared By	Type of Review to be Performed			
		DQC	ATR	IEPR	Policy / Legal
Detailed Project Report (DPR) and Environmental Assessment (Main Report / Integrated DPR/EA)	In-house Resources	X	X		X
Environmental Appendix <ul style="list-style-type: none"> Habitat Outputs Planting Plan Monitoring and Adaptive Management Plan Public Involvement (includes Work-in-Kind) Cultural Resources Coordination/Reports 	In-house Resources & Nonfederal Sponsor	X	X		X

Real Estate Plan Appendix	In-house Resources	X			X
Hydrology & Hydraulic Engineering Appendix	In-house Resources	X	X		X
Cost Engineering Appendix	In-house Resources	X	X		X
HTRW Appendix (Phase I ESA & Assessment)	In-house Resources	X			X
Civil/Structural Engineering Appendix	In-house Resources	X			X
Geotechnical Engineering Appendix	In-house Resources	X			X

2. REVIEW REQUIREMENTS

a. Types of Review. The feasibility phase activities and documents are required to be reviewed in accordance with ER 1110-1-12 and EC 1165-2-217. Based upon the factors under each heading, this study will undergo the reviews identified and described below.

(1) District Quality Control (DQC): DQC procedures will be performed and formally documented for all study products, including supporting documents.

- The District will perform and manage DQC procedures in accordance with the District DQC process.
- DQC will be documented with a summary report / certification.
- Supervisors within each area of responsibility will assign appropriate, qualified staff to perform QC on their respective products. Personnel performing QC shall have the necessary expertise to address compliance with Corps policy.
- The following disciplines will be playing a critical role in the DQC for this ecosystem restoration study:

Technical Discipline	Peer DQC Reviewer	Chief Level DQC Reviewer
Project Management	Each peer-level DQC reviewer will have no production role in the study/project and will have the necessary expertise/experience	CELRB-PMP-M Chief
Plan Formulation		CELRB PML-P Chief
Environmental Analysis		CELRB-PML-E Chief
Cultural Resources		

Climate Preparedness and Resiliency	to thoroughly review the study products identified in Table (1).	
Economics		CELRB-PML-P Chief
Cost Engineering		CELRB-TDD-T Chief
Real Estate		CELRE-RET Chief
Operations		CELRB-TDO-T Chief
Geotechnical Engineering		CELRB-TDD-C Chief
Environmental Engineering (HTRW)		CELRB-TDE-H Chief
Hydrology & Hydraulic Engineering		CELRB-TDD-WH Lead
Geospatial Information Science (GIS)		CELRB-TDE-S

(2) Agency Technical Review (ATR): ATR will be scaled to a level commensurate with the risk and complexity of the products to be reviewed. 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 mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.).

- ATR is managed within USACE by the designated RMO and 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.
- All ATR reviewers must be certified to perform ATR by USACE. Multiple disciplines may be covered by a single reviewer based on appropriate experience, expertise, and certification.
- The team lead will be from outside LRD.
- The ATR review will be documented using DrChecks, and an ATR Summary Report and certification will be completed.

Table 2b. ATR Technical Disciplines and Expertise Required		
ATR Disciplines	Expertise Required	Justification / Rationale
ATR Lead – Plan Formulation/Ecosystem Restoration	The ATR lead should be a senior professional preferably with experience in preparing CAP Section 1135 decision documents and conducting ATR. The lead must be familiar with stream and wetland restoration techniques. This reviewer will be responsible for reviewing all plan formulation components of the feasibility study, including the benefits analysis that will focus on ecological outputs associated with the identified project alternatives and use cost effectiveness/incremental cost analysis (CE/ICA) to help identify the tentatively selected plan.	Coordinate all ATR activities. This project is anticipated to be justified primarily based on NER benefits.

	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.	
Hydrology and Hydraulic Engineering	The Hydrology and Hydraulic Engineering Reviewer should be an expert in the field of hydraulics and have a thorough understanding of open channel one-dimensional and two-dimensional unsteady flow hydraulic models. The Hydrology and Hydraulic Engineering Reviewer must have expertise in flood risk management and inland hydrology and hydraulics.	The primary purpose of the Scajaquada Creek Flood Risk Management Federal Project is to reduce flood risk to the Town of Cheektowaga associated with floods with a 100-year recurrence interval. Hydrology and Hydraulic Engineering support will be required to ensure ecosystem restoration measures do not conflict with the flood risk management benefits of the Federal Project, to ensure ecosystem restoration measures do not transfer flood risk outside of the existing boundaries of the Federal Project, and to ensure adequate understanding of the proposed hydraulic features to allow for accurate benefits determinations and analysis of potential impacts.
Climate Preparedness and Resiliency	At least one member of the ATR team for inland hydrology, designs, and projects must be certified by the Climate Preparedness and Resiliency CoP in CERCAP. This reviewer may also review this project for another discipline.	This is required by ER 1165-2-217. Alternatives can be affected by future climate conditions, and a climate analysis will be used to determine resiliency.
Environmental (NEPA)	The Environmental reviewer should be experienced in analysis of impacts as required by the National Environmental Policy Act (NEPA) and other applicable laws, regulations, and executive orders.	Team member will be experienced in the NEPA process and analysis and will have a biological or environmental background that is familiar with the project area and ecosystem restoration. Team member should be familiar with cultural/historic resources.
Cost Engineering Reviewer	Cost MCX Staff or Cost MCX Pre-Certified Professional as assigned by the Walla Walla Cost Engineering Mandatory Center of Expertise with experience preparing cost estimates for Section 1135 projects. Must be Certification and Access Program (CERCAP) certified.	Required by ER 1165-2-17.
Disciplines not anticipated to be needed on ATR Team		
HTRW	Expertise not anticipated to be needed on ATR Team.	Risks of HTRW impact to project are low. HTRW is not anticipated.

Economics	Expertise not anticipated to be needed on ATR Team.	The Project Delivery Team (PDT) will consider the four accounts (NED, RED, OSE, and EQ) in the formulation of the recommended plan, but because the objective of this project is ecosystem restoration, an in-depth, separate economics ATR is not required. The ecological benefits analyses will be reviewed by the plan formulation/ecosystem restoration reviewer.
Real Estate Reviewer	Expertise not anticipated to be needed on ATR Team.	Real estate is considered to be of low risk and complexity. Real Estate review requirements can be appropriately accomplished in-house (via DQC) by Great Lakes Real Estate.
Mechanical Design	Expertise not anticipated to be needed on ATR Team.	Mechanical Design is not incorporated into the PDT or study scope.
Civil/Structural Design Engineering	Expertise not anticipated to be needed on ATR Team.	There are no significant civil or structural engineering risks on this project. There is sufficient in-house expertise in this discipline to satisfy review requirements through DQC.
Geotechnical Engineering	Expertise not anticipated to be needed on ATR Team.	There are no significant geotechnical engineering risks on this project. There is sufficient in-house expertise in this discipline to satisfy review requirements through DQC.

(3) Independent External Peer Review (IEPR): An IEPR is not required based on the mandatory triggers outlined in ER 1165-2-217. Project studies may be excluded from IPER if the project does not meet any of the mandatory IEPR triggers. This feasibility study does not meet any of the three mandatory IEPR triggers for the following reasons:

- The estimated total cost of the project, including mitigation costs, is not greater than [REDACTED].
- The Governor of New York has not requested a peer review by independent experts.
- The study is not controversial due to significant public dispute over size, nature, or effects of the project or the economic or environmental costs or benefits of the project.

When none of the three mandatory triggers for IEPR are met, MSC Commanders have the discretion to conduct IEPR on a risk-informed assessment of the expected contribution of IEPR to the project. An IEPR would not provide additional benefit to the study for the following reasons:

- a. This study does not include the development or use of any novel methods.
- b. This project does not pose likely threats to health and public safety.
- c. There is no anticipated inter-agency interest.
- d. Buffalo District has not received a request from the head of any Federal or State agency for an IEPR.
- e. The proposed project is not anticipated to have unique construction sequencing or a reduced or overlapping design construction schedule.

(4) Safety Assurance Review: Safety Assurance Review (SAR) is managed outside the USACE and is conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Since this review plan pertains to the feasibility phase of the project, an SAR is not applicable.

(5) Policy and Legal Review: All decision documents will be reviewed for compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. The Policy Review will be conducted by the District Planning Branch Chief, and the Legal Review will be conducted by the District Office of Counsel.

- (6) Public Participation.
 - a. A public involvement program will be included to satisfy NEPA requirements and solicit public and government agency input.
 - b. The District shall contact agencies with regulatory review for coordination as required by applicable laws and procedures.
 - c. The District will review comments resulting from public and agency review, and the District will provide the ATR team copies of public and agency comments and responses.

3. MODEL CERTIFICATION OR APPROVAL. The models may be used to develop the decision documents:

Table 3a. Planning Models		
Model Name and Version	Model Description and How It Will Be Used	Certification / Approval Status
IWR Planning Suite Version 2.0.9	Cost Effectiveness, Incremental Cost Analysis (CE/ICA) The Institute for Water Resources Planning Suite (IWR-PLAN) is a decision support software package that is designed to assist with the formulation and comparison of alternative plans. While IWR-PLAN was initially developed to assist with environmental restoration and watershed planning studies, the program can be useful in planning studies addressing a wide variety of problems.	Certified

	IWR-PLAN can assist with plan formulation by combining solutions to planning problems and calculating the additive effects of each combination, or "plan." IWR-PLAN can assist with plan comparison by conducting cost effectiveness and incremental cost analyses, identifying the plans which are the best financial investments and displaying the effects of each on a range of decision variables. The ecological habitat units calculated using the Habitat Evaluation Process will be used as inputs in IWR-PLAN to evaluate the benefits associated with each project alternative.	
Northeast Regional Floristic Quality Assessment	The Floristic Quality Assessment (FQA) is a robust, botanically based method for assessing the quality of species composition of ecological community occurrences and natural areas. The FQA will be used to determine the quality of existing wetlands or riparian areas and the ecological uplift potential for each alternative. https://neiwpc.org/our-programs/wetlands-aquatic-species/nebawwg/fqa/	Approved
Stream Visual Assessment Protocol (SVAP) v.2	The Stream Visual Assessment Protocol (SVAP) is a national protocol that provides an evaluation of the overall condition of wadable streams, their riparian zones, and their instream habitats. The SVAP is a peer reviewed and rigorous method to assess stream habitat that has been used widely across the nation. Stream habitat scores calculated using the SVAP are similar to those calculated using the QHEI, which is an approved model. The SVAP will be used to determine the quality of existing stream habitat and the ecological uplift potential for each alternative in which in-stream habitat is proposed. The limited in-stream habitat quality data available for Scajaquada Creek watershed was collected using the SVAP, and therefore, the PDT will leverage the existing dataset in accordance with risk-informed planning principles. Use of the SVAP to calculate habitat units will provide watershed context for habitat improvements achieved by the proposed project. The PDT coordinated use of the SVAP model with the MSC in detail on 29 January 2024. The MSC approved of the PDT's use of the SVAP and requested that data sheets and other pertinent information be shared with the MSC upon completion of the first iteration of data collection. https://www.nrcs.usda.gov/conservation-basics/conservation-by-state/north-dakota/stream-visual-assessment-protocol-svap	Not Approved

Table 3b. Engineering Models		
Model Name and Version	Model Description and How It Will Be Used	Approval Status

HEC-RAS 5.0 (River Analysis System)	HEC-RAS may be utilized to test and evaluate project alternatives, as required by the scope and proposed modifications to the FRM project. Developed by the Hydrologic Engineering Center (HEC) in Davis, CA, the River Analysis System (RAS) performs one-dimensional and two-dimensional hydraulic calculations for a full network of natural and constructed channels and overbank/floodplain areas. HEC-RAS is often applied in floodplain management and flood insurance studies to evaluate floodway encroachments as well as for the design and analysis of bridges and culverts, levee, and channel modification projects. The basic computational procedure of HEC-RAS for steady flow is based on the solution of the one-dimensional energy equation. Energy losses are evaluated by friction and contraction / expansion. The momentum equation may be used in situations where the water surface profile is rapidly varied. These situations include hydraulic jumps, hydraulics of bridges, and evaluating profiles at river confluences. For unsteady flow, HEC-RAS solves the full, dynamic, 1-D Saint Venant Equation using an implicit, finite difference method. It is capable of modeling subcritical, supercritical, and mixed flow regime flow along with the effects of bridges, culverts, weirs, and structures.	HH&C CoP Preferred Model
MII	MII is the second generation of the Micro-Computer Aided Cost Estimating System (MCACES). It is a detailed cost estimating software application that was developed in conjunction with Project Time & Cost LLC. MII provides an integrated cost estimating system (software and databases) that meets the U.S. Army Corps of Engineers (USACE) requirements for preparing cost estimates.	Enterprise Model

4. REVIEW SCHEDULE AND BUDGET. The schedule and budgets for reviews are shown in below table. Total project costs will be developed and refined during the feasibility phase but are anticipated to be below [REDACTED], with the maximum federal expenditure under the Continuing Authorities Program (CAP) limited to \$10 million.

Product(s) to undergo Review	Review Level	Start Date	Finish Date	Budget (\$)
Draft Detailed Project Report and Integrated Environmental Assessment (DPR/EA)	District Quality Control	[REDACTED]	[REDACTED]	[REDACTED]
Draft DPR/EA	LRB Policy and Legal Review	[REDACTED]	[REDACTED]	[REDACTED]
Draft DPR/EA	Agency Technical Review	[REDACTED]	[REDACTED]	[REDACTED]
Draft DPR/EA	LRD Policy and Legal Review	[REDACTED]	[REDACTED]	[REDACTED]

Draft DPR/EA	Public and Agency Review	██████████	██████████	█
Final DPR/EA	Final District Quality Control	██████████	██████████	█
Final DPR/EA	Final Agency Technical Review	██████████	██████████	█
Final DPR/EA	Final LRB Policy and Legal Review	██████████	██████████	█
Final DPR/EA	Final LRD Policy and Legal Review	██████████	██████████	█

*Scheduled Dates will be revised with Actual Dates

ATTACHMENT 1 – Contacts

Function	Name (Last, First)	Phone	Office
RMO Contact	[REDACTED]	[REDACTED]	CELRD-PDP
RMO Contact (Acting)	[REDACTED]	[REDACTED]	CELRD-PDP
MSC Contact – District Support Program Manager	[REDACTED]	[REDACTED]	CELRD-PDS

PROJECT DELIVERY TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
Project Manager (Lead)	[REDACTED]	[REDACTED]	CELRB-PMP-M
Planner	[REDACTED]	[REDACTED]	CELRB-PML-P
Biologist & Cult. Resources*	[REDACTED]	[REDACTED]	CELRB-PML-E
Economist	TBD	TBD	CELRB-PML-P
Outreach Specialist	[REDACTED]	[REDACTED]	CELRB-PML-E
Civil Engineer (Operations)	[REDACTED]	[REDACTED]	CELRB-TDO-O
Cost Engineer	[REDACTED]	[REDACTED]	CELRB-TDD-T
Project Management Specialist	[REDACTED]	[REDACTED]	CELRB-PMP-M
Hydrology & Hydraulic Engineer	[REDACTED]	[REDACTED]	CELRB-TDD-WH
Real Estate	[REDACTED]	[REDACTED]	CELRE-REP
Civil Engineer	[REDACTED]	[REDACTED]	CELRB-TDD-S
Geotechnical Engineer	TBD	TBD	CELRB-TDD-C

* LRB can support basic cultural resources coordination tasks. If significant cultural resources concerns are identified during the feasibility phase, LRB will coordinate with an Archeologist from another District to support the study, as needed.

DISTRICT QUALITY CONTRAL (DQC) TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
DQC Lead, P3M Program Advocate	[REDACTED]	[REDACTED]	CELRB-PML
Design Branch Chief, TSD Program Advocate	[REDACTED]	[REDACTED]	CELRB-TDO
Plan Formulation/Climate Preparedness and Resiliency/Economics	[REDACTED]	[REDACTED]	CELRB-PML-P
Environmental Analysis and Cultural Resources	[REDACTED]	[REDACTED]	CELRB-PML-E
Chief, Project Management	[REDACTED]	[REDACTED]	CELRB-PMP-M
Chief, Operations and Technical Support	[REDACTED]	[REDACTED]	CELRB-TDO-T
Chief, Cost Engineering	[REDACTED]	[REDACTED]	CELRB-TDD-T
Real Estate	[REDACTED]	[REDACTED]	CELRE-RE
Team Leader, Hydrology and Hydraulic Engineering	[REDACTED]	[REDACTED]	CELRB-TDD-WH
Chief, Environmental Engineering	[REDACTED]	[REDACTED]	CELRB-TDE-E
Chief, Civil/Structural Design	[REDACTED]	[REDACTED]	CELRB-TDD-S
Chief, Coastal/Geotech Design	[REDACTED]	[REDACTED]	CELRB-TDD-C

POLICY AND LEGAL REVIEW TEAM

Function/Discipline	Name (Last, First)	Phone	Office
DQC Lead, P3M Program Advocate	[REDACTED]	[REDACTED]	CELRB-PML
District Counsel	[REDACTED]	[REDACTED]	CELRB-OC

AGENCY TECHNICAL REVIEW (ATR) TEAM*

Function/Discipline	Name (Last, First)	Phone	Office
ATR Lead/Plan Formulation/Ecosystem Restoration	[REDACTED]	[REDACTED]	CENAE-PDP
Hydrology and Hydraulic Engineering	[REDACTED]	[REDACTED]	CELRE-EHE
Climate Preparedness and Resiliency	[REDACTED]	[REDACTED]	CELRE-EHE
Environmental (NEPA)	TBD	TBD	TBD
Cost Engineering Reviewer	TBD	TBD	TBD

MSC / Policy and Legal Compliance Review Team

Function/Discipline	Name (Last, First)	Phone	Office
Review Manager	[REDACTED]	[REDACTED]	CELRD-PDS
Planning Reviewer	TBD	TBD	CELRD-PDP
Environmental Reviewer	[REDACTED]	[REDACTED]	CELRD-PDP
RIDM Reviewer	[REDACTED]	[REDACTED]	CELRD-PDP
Economics Reviewer	[REDACTED]	[REDACTED]	CELRD-PDP
Technical Design Reviewer	[REDACTED]	[REDACTED]	CELRD-RBT
Hydrology and Hydraulic Engineering/Climate Reviewer	[REDACTED]	[REDACTED]	CELRD-RB-W
Office of Counsel	[REDACTED]	[REDACTED]	CECC-LRD