US Army Corps of Engineers®

Buffalo District

Great Lakes and Ohio River Division

Scajaquada Creek, Cheektowaga, New York

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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District Commander
USACE, Buffalo District

ENDORSED BY: [redacted]
Chief, Planning and Policy Division
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Review Management Organization (RMO)

APPROVED BY: [redacted]
Regional Program Director
USACE, Great Lakes and Ohio River Division

DOCUMENT HISTORY:

Document	Description & location of Revision	Date Approved
Original RP		DD MMM YYYY
Revision #		

MSC APPROVAL DATE: DD MON YYY

1. PURPOSE, AUTHORITY, STUDY DESCRIPTION, AND PRODUCTS

a. Purpose. This review plan defines levels and scopes of review required for the feasibility phase products.

b. Authority. Continuing Authorities Program (CAP), Section 1135 (Project Modifications for the Improvement of the Environment).

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). 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.

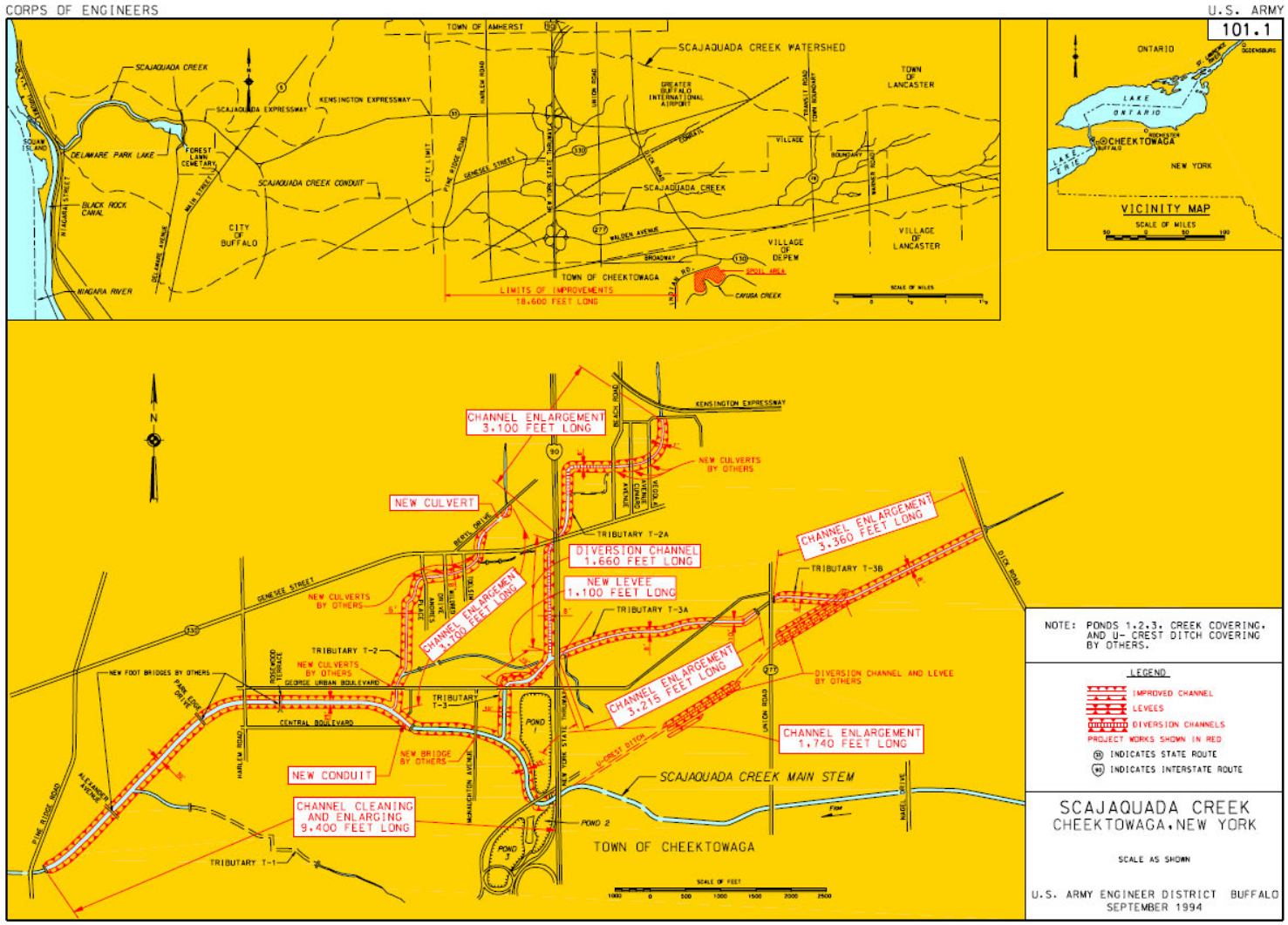

Figure 1. USACE Scajaquada Creek Flood Risk Management Federal Project Map (Source: USACE).

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 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. 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) and the stakeholder support of feasible sites identified within the Town of Cheektowaga. On-going communication and coordination with the non-federal sponsor and Town of Cheektowaga is intended to continue in order to mitigate this risk.

d. Products.

Table 1. List of Products to Be Prepared and Reviewed

Product / Document	Prepared By	Type of Review to be Performed			
		DQC	ATR	Type I IEPR	Policy / Legal
Detailed Project Report (DPR) and Environmental Assessment (Main Report / Integrated DPR/EA)	In-house Resources	X	X		X
Environmental Appendix • Habitat Outputs • Planting Plan (potential WIK) • Monitoring Plan (Potential WIK)	In-house Resources	X	X		X
Real Estate Plan Appendix	In-house Resources	X			X
Hydrology and Hydraulic Engineering Appendix	In-house Resources	X	X		X
Cost Appendix	In-house Resources	X	X		X
HTRW Assessment (Phase 1 ESA)	In-house resources	X			X
NEPA Environmental Coordination Appendix Including: • Summary of Comments & Responses from Public and Agency Review • FONSI • Cultural Resources Report	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 ER 1165-2-217.

(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:

Table 2a. DQC Team Technical Disciplines and Expertise		
Technical Discipline	Peer DQC Reviewer	Chief Level DQC Reviewer
Plan Formulation	[redacted]	CELRB-PML-P Chief
Environmental Analysis	[redacted]	CELRB-PML-E Chief
Ecosystem Restoration		
Climate Preparedness and Resiliency (CPR)		
Cost Engineering	[redacted]	CELRB-TDD-E Chief
Operations	[redacted]	CELRB-TDO-T
Real Estate Specialist	[redacted]	CELRE-RET
Geotechnical/Coastal Engineer	[redacted]	CELRB-TDD-C Chief
HTRW	[redacted]	CELRB-TDE-H Chief
Hydrology and Hydraulic Engineering	[redacted]	CELRB-TDD-WH Lead
GIS	[redacted]	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
- ATR reviewers in the Plan Formulation, Environmental, Economic, and Cultural Resources must be certified by their respective Planning sub-CoP
- ATR reviewers in the Engineering & Construction discipline must be certified by the Certification and Access Program (CERCAP).
- 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. This reviewer will be responsible for reviewing all plan formulation and ecosystem restoration components of the feasibility study. The lead must be familiar stream and wetland restoration and with conducting evaluation of ecosystem restoration outputs and CE/ICA. 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.	Coordinate all ATR activities. This project is anticipated to be primarily justified based on NER benefits
Flood Risk Management/ Hydrology and Hydraulic Engineering/ Climate Preparedness and Resiliency	At least one member of the ATR Team must have expertise in Flood Risk Management and inland hydrology and hydraulics. This member must also be certified by the Climate Preparedness and Resilience CoP in CERCAP.	Discipline involved in project. Required by ER 1165-2-17; alternatives can be affected by future climate conditions; a climate analysis will be used to determine resiliency.
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 cost estimates. Must be Certification and Access Program (CERCAP) certified.	Required by ER 1165-2-17
Disciplines not anticipated to be needed on ATR team		
Environmental (NEPA)	Expertise not anticipated to be required on ATR Team	This project is anticipated to be an ecosystem restoration project with ecological benefits. It is not anticipated that the project will have negative impacts on the physical, social, or cultural environments. The Environmental Evaluation is anticipated to result in a FONSI.
HTRW	HTRW not anticipated to be needed on ATR team.	Risks of HTRW impact to project low. HTRW not anticipated.
Real Estate Reviewer	Expertise not anticipated to be required on ATR Team	Low risk and complexity may be more appropriately accomplished in-house via DQC) Great Lakes Real Estate.

(3) Type I Independent External Peer Review (IEPR):

All CAP projects are excluded from Type I IEPR except those conducted under Section 205 and Section 103, or those projects that include an EIS or meet the mandatory triggers for Type I IEPR.

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) Type II Independent External Peer Review (IEPR): Type II IEPR, or Safety Assurance Review (SAR), are managed outside the USACE and are 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 document does not involve life safety concerns, as confirmed by the LRC Chief of Engineering and Construction in the District Chief of Engineering Assessment of Life-Safety Risk, a Type II IEPR would not be considered.

(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

(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 will provide the ATR team copies of public and agency comments and responses.

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

The following models may be used to develop the decision document:

Table 3a. Planning Models

Model Name and Version	Model Description and How It Will Be Used	Certification / Approval Status & Date
IWR Planning Suite Version 2.0.9	Cost Effectiveness, Incremental Cost Analysis. 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. 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.	Certified
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 https://neiwpcc.org/our-programs/wetlands-aquatic-species/nebawwg/fqa/	
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. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_042678.pdf	

Table 3b. Engineering Models		
Model Name and Version	Model Description and How It Will Be Used	Approval Status
MII	MII will be utilized for project cost estimation. 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	Approved

	generate detailed cost estimates for each alternative	
HEC-RAS	HEC-RAS will be utilized to test and evaluate project alternatives. 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.	

4. REVIEW SCHEDULE AND BUDGET. The schedule and budgets for reviews are shown in below table.

Table 4. Product and Review Schedule				
Product(s) to undergo Review	Review Level	Start Date	Finish Date	Budget ($)
TSP Draft Detailed Project Report and Integrated Environmental Assessment (DPR & EA)	District Quality Control	[redacted]	[redacted]	[redacted]
TSP Draft DPR & EA	Agency Technical Review	[redacted]	[redacted]	[redacted]
TSP Draft DPR & EA	LRB Policy and Legal Review	[redacted]	[redacted]	[redacted]
TSP Draft DPR & EA	Public and Agency Review	[redacted]	[redacted]	[redacted]
Final DPR & EA	Final District Quality Control & Agency Technical Review	[redacted]	[redacted]	[redacted]
Final DPR & EA	Final LRB Policy and Legal Review	[redacted]	[redacted]	[redacted]

ATTACHMENT 1 – Contacts

REVIEW MANAGEMENT ORGANIZATION (RMO) - LRD			
Function	**Name (Last, First)**	**Phone**	**Office**
RMO Lead	[redacted]	[redacted]	CELRD-PDP

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	[redacted]	[redacted]	CELRB-PML-E
Outreach Specialist	[redacted]	[redacted]	CELRB-PML-E
Civil Engineer (Operations)	[redacted]	[redacted]	CELRB-TDO-T
Cost Engineer	[redacted]	[redacted]	CELRB-TDD-E
Project Management Specialist	[redacted]	[redacted]	CELRB-PM-PO
Hydraulics & Hydrology Engineer	[redacted]	[redacted]	CELRB-TDD-WH
Real Estate	[redacted]	[redacted]	CELRE-REP
* 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.			

DISTRICT QUALITY CONTRAL (DQC) TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
DQC Lead, Plan Formulation	[redacted]	[redacted]	CELRB-PML-P
Env. Analysis & Cultural Resources*	[redacted]	[redacted]	CELRB-PML-E
Project Management	[redacted]	[redacted]	CELRB-PM-M
Cost Engineer	[redacted]	[redacted]	CELRB-TDD-E
Civil Engineer (Operations)	[redacted]	[redacted]	CELRB-TDO-T
Hydrology and Hydraulic Engineering	[redacted]	[redacted]	CELRB-TDD-WH
Environmental Engineer	[redacted]	[redacted]	CELRB-TDE-E
Real Estate	[redacted]	[redacted]	CELRE-RE

AGENCY TECHNICAL REVIEW (ATR) TEAM*			
Function/Discipline	Name (Last, First)	Phone	Office
ATR Lead/Plan Formulation/Ecosystem Restoration	[redacted]	[redacted]	CENAE-PDP
Flood Risk Management/ Hydrology and Hydraulic Engineering/ Climate Preparedness and Resiliency	[redacted]	[redacted]	CELRE
Cost Engineering	TBD - Cost Engineering Center of Expertise (MCX)	TBD	TBD

POLICY AND LEGAL COMPLIANCE REVIEW TEAM			
Function	**Name (Last, First)**	**Phone**	**Office**
P3M CAP Program Advocate, Planning and Policy Review	[redacted]	[redacted]	CELRB-PML
TSD CAP Program Advocate Review:	[redacted]	[redacted]	CELRB-TDD
Legal Compliance	[redacted]	[redacted]	CELRB-OC

MSC / HQ Policy and Legal Compliance Review Team			
Function/Discipline	Name (Last, First)	Phone	Office
Review Manager	TBD		
Planning Reviewer	TBD		
Economics Reviewer	TBD		
Technical Design Reviewer	TBD		
Environmental Reviewer	TBD		
Hydrology and Hydraulic Engineering/Climate Reviewer	TBD		
Cost Engineering Reviewer	TBD		
Real Estate Reviewer	TBD		
Legal Reviewer	[redacted]	[redacted]	CECC-LRD