



**US Army Corps
of Engineers®**

Buffalo District

Great Lakes and Ohio River Division

Old Fort Niagara, Village of Youngstown, Niagara County, NY
Continuing Authorities Program Section 14, Emergency Shoreline
Protection Project

Feasibility Study

P2/Project Number: 468121

Decision Document Review Plan

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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1. PURPOSE, STUDY DESCRIPTION, AND PRODUCTS

- a. Purpose. This review plan defines levels and scopes of review required for the feasibility phase products for the Section 14 of the Continuing Authorities Program (CAP), emergency shoreline protection project at Old Fort Niagara, Village of Youngstown, Niagara County, NY.
- b. Study Description. The study investigates a shoreline erosion problem at Old Fort Niagara within the Fort Niagara State Park. Erosion is threatening the seawall along the north shoreline where the Niagara River flows into Lake Ontario. This wall protects the “French Castle” built in 1726 and the North Redoubt, built in 1771. Both the seawall and the building that sits above it are threatened by continued erosion. Previous USACE studies analyzing the erosion problem date back to 1968. Erosion and other problems at the Old Fort Niagara site have escalated due to high water levels and storms along Lake Ontario in 2017.

From an engineering feasibility standpoint, the expected requirements of the project are not complex and present few technical challenges (i.e., a rubblemound revetment placed immediately offshore of the eroding earthen bluffs would likely provide a suitable alternative). Despite the low technical complexity, however, the project presents challenges associated with the historic nature of the masonry seawall and the presence of an offshore munitions dump used by the U.S. Army from approximately 1900 to 1934. To address the concerns associated with impacts to historic structures, the project will require early and continuous coordination with the New York State Historic Preservation Office. To address the HTRW risks associated with the possible presence of unexploded ordnance (UXO), munitions and explosives of concern (MEC), and/or munitions debris (MD), the project will require early and continuous coordination with the program manager overseeing the DERP-FUDS program encompassing this area of concern. Although a 2009 Site Inspection conducted through this program reported no evidence of MEC or MD, the program recommended a future DERP-FUDS Remedial Investigation/Feasibility Study. During the Section 14 Feasibility Study phase, the project delivery team (PDT) will work with the FUDS program manager and vertical team to determine the appropriate course of action for the recommended project.

Additionally, the impacts of climate preparedness and resiliency on Lake Ontario coastal areas are a consideration of any fully developed study alternative. The PDT evaluation will consider climate preparedness and resiliency to qualitatively assess long-term risks to project performance.

The New York State Office of Parks, Recreation and Historic Preservation – Western District (NYSOPRHP) has expressed their intent to partner with USACE to complete a cost shared Feasibility Study with a letter of intent dated 17 January 2019. The Old Fort Niagara Association, which leases the Old Fort

Niagara site from NYSOPRHP, has also indicated their support for the Feasibility Study in the study area.

- c. Authority. The study is authorized by Section 14 of the 1946 Flood Control Act (P.L. 79-526), as amended. This authority authorizes the U.S. Army Corps of Engineers (USACE) to develop and construct streambank and shoreline protection projects to protect endangered highways, highway bridge approaches, public works facilities such as water and sewer lines, churches, and public and private nonprofit public facilities. Each project is limited to a federal cost of \$5,000,000, and must be economically justified, environmentally sound, and technically feasible.
- d. Feasibility Study Products. The feasibility study products/documents to be prepared and reviewed include the following:
 - (1) Detailed Project Report (DPR) and National Environmental Policy Act (NEPA) Document, including appendices

These products will each require District Quality Control (DQC), Agency Technical Review (ATR), and Policy/Legal review.

2. REVIEW MANAGEMENT ORGANIZATION

The Review Management Organization (RMO) is responsible for managing the overall peer review effort described in this review plan. For CAP projects, the RMO may either be the assigned district's MSC or an appropriate National Planning Center of Expertise (PCX). The RMO for CAP Section 14 decision documents is typically the MSC, because the MSC Commander is responsible for approving the Review Plan and the decision to implement projects under this authority. The RMO for this Review Plan is LRD.

With LRD as RMO, this review plan proposes the following deviation from standard review format: Perform draft Detailed Project Report (DPR) and Environmental Analysis (EA) review concurrent with NEPA Public Review. By performing these reviews concurrently, Buffalo District seeks to reduce the overall duration of reviews by 30 days (i.e., the 30 day Public Review period would occur within the 63 day LRD review period). Furthermore, by performing these reviews concurrently, the Buffalo District also anticipates gaining efficiency by reducing the interval between LRD initial and final review. This request does not seek to impact final LRD review and determination of approval of Final DPR and EA as required by USACE NEPA regulations. [REDACTED]

3. 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 following types of reviews:

- (1) District Quality Control (DQC): DQC procedures will be performed for all study products. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the District and LRD QMS procedures.

In following the Risk Informed Decision Making process, projects need to be managed to a level appropriate to the risks associated with the project. Over the last several years, Buffalo District has designed and implemented numerous emergency streambank and shoreline protection projects. Specifically, the Section 14 Minnick Road project was completed in 2009 and utilized an innovative streambank stabilization technique that has since been duplicated by New York State on other streambank protection projects. Based on this level of expertise, Plan Formulation, Civil/Structural Engineering, Coastal Engineering, Geotechnical Engineering, Environmental Analysis, Cost Engineering and Real Estate Reviews can most efficiently and effectively be accomplished by the DQC Team based on demonstrated experience and knowledge. DQC will also occur as both an ongoing effort as well as an explicit effort during defined timelines during the feasibility phase

- (2) Agency Technical Review (ATR): ATR will be scaled appropriately commensurate with risk and complexity of the products to be reviewed. Project disciplines not represented in the ATR have a level of risk deemed acceptable for control during DQC. Disciplines included in the ATR focus on project components with the most direct correlation to project success and by correlation have the highest levels of overall risk associated with them. The ATR team for this project consists of personnel from outside of the Buffalo District. The ATR will focus on plan formulation and coordination related to the environmental compliance, archaeological and cultural resources, coastal and cost engineering, and the off-shore munitions dump.
- (3) Type I Independent External Peer Review (IEPR): Type I IEPR is not required based the exclusion for CAP Section 14 studies stated in Paragraph 13.b.(2) of EC 1165-2-217. Additionally, in the absence of this exclusion, Type I IEPR would not be required based on the mandatory triggers as specified in EC 1165-2-217.

(4) Policy and Legal Review: All decision documents will be reviewed for compliance with law and policy. The Buffalo District will provide a legal sufficiency review, while final legal review will be at the MSC level.

b. Review Teams and Disciplines. The technical disciplines and expertise required for the levels of review identified in paragraph 1 (b) are shown below. See Attachment 1 for assigned reviewers.

DQC Team Technical Disciplines and Expertise	
Technical Discipline	Expertise Required
DQC Lead	A qualified senior staff member (Supervisor, Regional Technical Specialist, Lead Planner, Engineering Technical Lead, or PM) with extensive experience preparing Civil Works decision documents for Section 14 projects and conducting DQC. The lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Plan Formulator	A senior water resources planner with experience in Section 14 Projects and expertise in Shoreline Protection projects.
Environmental and Cultural Resources	An environmental resource specialist with experience in Section 14 Projects and expertise in NEPA, SHPO, 404b1, and other pertinent environmental reviews and policies.
Coastal / Geotechnical Engineering	A Coastal and Geotechnical Engineer with experience in Section 14 Projects and expertise in Shoreline Protection projects, with a preference for Great Lakes familiarity
Civil Engineering	A Civil Engineer with experience in Shoreline Protection projects.
Cost Engineering	A Cost Engineer with experience in Shoreline Protection projects.
Economist	An economist with experience in CAP studies, ideally with particular experience in Shoreline Protection projects.
HTRW/Environmental Engineering	An environmental engineer with experience in identifying and evaluating HTRW risk; should have experience coordinating with DERP-FUDS program members.
Real Estate	A Real Estate expert with experience preparing Real Estate Plans in Section 14 projects or similar studies.

ATR Team Technical Disciplines and Expertise	
Technical Discipline	Expertise Required
ATR Lead	The ATR lead should be a senior water resources planner with experience in preparing Section 14 decision documents and conducting ATR. The lead should have the necessary skills and experience to lead a virtual team through the ATR process. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, or environmental resources).
Plan Formulation	The plan formulation reviewer should be a senior water resources planner with experience in Section 14 feasibility studies. This reviewer responsibility may be integrated with one of the other disciplines/areas of expertise, ideally the ATR Lead.
Environmental Compliance /	The reviewer should have experience in evaluating environmental compliance in Section 14 Projects, with emphasis on NEPA,

Archaeological & Cultural	404b1, and other pertinent environmental reviews and policies. The reviewer should have experience in archaeological and cultural resources evaluation and compliance.
Coastal Engineering / Climate Preparedness & Resiliency	The reviewer should have experience in costal shoreline erosion and climate preparedness and resiliency guidance. The reviewer should have experience in evaluating the potential effects of climate on project alternatives, ideally with emphasis on coastal areas.
Cost Engineering	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 shoreline erosion and Section 14 cost estimates.

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

Planning Models		
Model Name and Version	Model Description and How It Will Be Used	Certification / Approval
IWR Planning Suite Version 2.0.9	Brief Description of the Model and How It Will Be Applied in the Study 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.	Certified

Engineering Models		
Model Name and Version	Model Description and How It Will Be Used	Approval Status
MCACES	Microcomputer-Aided Cost Estimation System; Used to generate detailed cost estimates for each alternative.	Approved
CMS Wave/Flow	Coastal Modeling System (CMS) SMS Ver.11.1; CMS-WAVE used to simulate 2D wave spectral transformation. CMS-WAVE coupled with CMS-Flow includes capabilities to compute both hydrodynamics and sediment transport as	Classified as CoP Preferred

Coastal Model	bed load, suspended load, and total load, and morphology change.	
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5. REVIEW SCHEDULE AND BUDGET. The schedule and budgets for reviews are shown in below table.

Product and Review Schedule				
Product(s) to undergo Review	Review Level	Start Date	Finish Date	Budget (\$)
<u>Draft Feasibility Report and EA/FONSI</u>	<u>District Quality Control</u>	03 Dec 2019	31 Aug 2020	\$15,000
<u>Draft Feasibility Report and EA/FONSI</u>	<u>Agency Technical Review</u>	09 Sep 2020	20 Oct 2020	\$18,000
<u>Draft Feasibility Report and EA/FONSI</u>	<u>Policy and Legal Review</u>	21 Oct 2020	03 Nov 2020	\$2,500
<u>Final Feasibility Report and EA/FONSI</u>	<u>District Quality Control</u>	24 Mar 2021	30 Mar 2021	\$7,500
<u>Final Feasibility Report and EA/FONSI</u>	<u>Agency Technical Review</u>	15 Apr 2021	12 May 2021	\$6,000
<u>Final Feasibility Report and EA/FONSI</u>	<u>Policy and Legal Review</u>	13 May 2021	26 May 2021	\$2,500

ATTACHMENT 1 – Contacts

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

PROJECT DELIVERY TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
Sponsor; Deputy General Manager	[REDACTED]		Western District, New York State Office of Parks, Recreation, and Historic Preservation
Project Manager (Lead)	[REDACTED]		CELRB-PM-PM
Planner	[REDACTED]		CELRB-TD-EA
Environmental Analysis	[REDACTED]		CELRB-TD-RO
Coastal Engineering	[REDACTED]		CELRB-TD-DC
Civil Engineering	[REDACTED]		CELRB-TD-DS
Geotech Engineering	[REDACTED]		USACE-LRB
HTRW/Environmental Engineering	[REDACTED]		TBD
Real Estate	[REDACTED]		CELRE-RE
Legal Counsel	[REDACTED]		CELRB-OC
Cost Engineering	[REDACTED]		CELRB-TD-DE
Value Engineering	[REDACTED]		CELRB-TD-DE
Public Affairs Office	[REDACTED]		CELRB-PA
Economist	[REDACTED]		CELRB-PM-PA
Safety	[REDACTED]		CELRB-SO
Geospatial Technician	[REDACTED]		CELRB-TD-EE
Programs Analyst	[REDACTED]		CELRB-PM-PO
Programs Specialist	[REDACTED]		CELRB-PM-PO

DQC TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
DQC Lead			CELRB-PM-PL
Project Management			CELRB-PM-PM
Plan Formulation			CELRB-PM-PA
Environmental Analysis			CELRB-PM-EA
Coastal / Geotechnical Engineering			CELRB-TD-DC
Civil Engineering Design			CELRB-TD-DS
Cost Engineering			CELRB-TD-DE
HTRW/Environmental Engineering			CELRB-TD-EE
Economist			CELRB-PM-PB
Real Estate			CELRE-RE

ATR TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
ATR Leader / Plan Formulation			CENAE-PDP
Environmental Compliance / Archaeological & Cultural Resources	TBD	TBD	TBD
Coastal Engineer / Climate Preparedness & Resiliency	TBD	TBD	TBD
Cost Engineer	TBD	TBD	TBD