



US Army Corps
of Engineers®

Buffalo District
Great Lakes and Ohio River Division

Mentor Harbor, Lake County, Ohio

Continuing Authorities Program, Section 107

Navigation Improvement Project Study

P2/Project Number: 331955

Review Plan – Decision Document

PREPARED
BY:

[REDACTED]
[REDACTED]
Project Manager
USACE, Buffalo District

RECOMMENDED
BY:

[REDACTED]
[REDACTED]
District Engineer
USACE, Buffalo District

ENDORSED
BY:

[REDACTED]
[REDACTED]
Chief, Planning and Policy Division USACE,
Great Lakes and Ohio River Division
Review Management Organization (RMO)

APPROVED
BY:

[REDACTED]
Regional Programs Director
USACE, Great Lakes and Ohio River Division

MSC APPROVAL DATE:

This information is distributed solely for the purpose of pre-dissemination review under applicable information quality guidelines. It has not been formally disseminated by USACE. It does not represent and should not be construed to represent any agency determination or policy.

1. PURPOSE, AUTHORITY, STUDY DESCRIPTION, AND PRODUCTS

- a. Purpose. This review plan defines levels and scopes of review required for the feasibility phase products/deliverables for the Section 107 of the Continuing Authorities Program (CAP), to improve navigation at the Mentor Harbor, Mentor, Ohio.
- b. Authority. Continuing Authorities Program (CAP). The study is authorized by Section 107 of the Rivers & Harbors Act of 1960 (P.L. 86-645), as amended (33 U.S.C. 577) for navigation. This authority authorizes the U.S. Army Corps of Engineers to develop and construct small navigation projects. Each project is limited to a federal cost of \$10,000,000, and must be economically justified, environmentally sound, and technically feasible.
- c. Study Description. The purpose of this study is to investigate wave energy and shoaling problems at Mentor Harbor. The harbor's configuration does not provide any dissipation for waves entering the harbor and the harbor's steel sheet pile (SSP) walls further reflect this energy within the harbor and its entrance channel. This a non-federal harbor that currently serves: two marinas; a number of private docks; and a Coast Guard repair and refueling station. At one time, the harbor supported commercial charter fishing craft (up to 10 vessels) but these operations relocated due to navigation hazards.

As mentioned above, the current harbor's design does not adequately protect the harbor from dangerous wave conditions and allows for significant shoaling to accumulate at the harbor's entrance channel. These conditions require: annual dredging of at least 20,000 cubic yards of sediment at a cost of [REDACTED]; annual repairs to harbor vessels of approximately [REDACTED]; and another [REDACTED] in yearly damages to harbor infrastructure.

A Federal Interest Determination (FID) Report was completed and approved by LRD in August 28, 2014. This report identified measures and alternatives to address navigation problems as well as economic and environmental considerations. In addition, several coastal engineering studies have been completed by the Buffalo District to also evaluate and identify ways to address the wave energy and shoaling. The feasibility study will evaluate and build on the information developed in the FID and other studies in order to identify a comprehensive solution for Mentor Harbor. The non-Federal sponsor for this project study is the Lake County Port Authority which will cost-share the study 50/50. The total cost of the study is estimated to be [REDACTED].

Developing solutions designed to protect harbors along the Great Lakes by reducing wave action is one of Buffalo District's core competencies. Potential solutions that will be developed and identified in this study are not likely to be complex, do not pose any significant technical challenges and have been utilized

on past similar projects district-wide. Harbor protection with breakwater structures, wave absorption barriers and other wave attenuation or reduction measures are proven means and are used universally by the Corps throughout the Great Lakes. It is not expected that there will be any significant technical, institutional, or social challenges associated with the study, design or implementation of the recommended plan. Finally, all risks identified for this project are low and the problem is not complex.

- d. Products. The feasibility study products/documents to be prepared and reviewed include the following:

Table 1. List of Products to Be Prepared and Reviewed					
Product/Document	Prepared by	Type of Review to be Performed			
		DQC	ATR	IEPR I	Policy/Legal
Detailed Project Report (DPR) and Environmental Assessment (Main Report/Integrated DPR/EA)	In-House Resources	X	X		X
Economic Appendix	In-House Resources	X	X		X
Real Estate Plan	In-House Resources	X	X		X
Engineering Appendices	In-House Resources				
• Coastal Engineering		X			X
• Cost Engineering		X	X		X
• Geotechnical Engineering		X			X
Environmental Coordination Appendix	In-House Resources				
• Public and Agency Review		X			X
• FONSI		X			X
• Cultural Resources Report		X			X
• Phase 1 HTRW Assessment		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 flood risk management study:

Table 2a. DQC Team Technical Disciplines and Expertise		
Technical Discipline	Peer DQC Reviewer	Chief Level DQC Reviewer
Plan Formulation	Each peer-level DQC reviewer will have no production role in the study/project and will have the necessary expertise/experience to thoroughly review the study products identified in Table (1).	PM-PL Chief
Economist		TS-DS Chief
Structural/Civil Engineer		
Cost Estimator		TSD-TC Chief
Geotechnical Engineer		RE Chief (Regional)
Coastal Engineer		
Real Estate Specialist		PM-EA Chief
Biologist/Cultural Resources		

In following the Risk Informed Decision Making process, projects need to be managed to a level appropriate to the risks associated with the project. Buffalo District has a long history of operating and maintaining navigation projects. In addition, the District has designed and implemented numerous small harbor improvement projects. As part of this feasibility study, the project delivery team (PDT) has completed a site visit and conducted a planning charrette with input from the non-federal sponsor (including harbor users). The District also completed a comprehensive FID and coastal engineering study for the harbor in 2013 and 2003, respectively. Based on this information and level of expertise, the PDT does not expect there to be any risks associated with the coastal, geotechnical or environmental assessment. Consequently, these 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 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 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.
- 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	The ATR lead should be a senior professional preferably with experience in preparing Section 107 decision documents and conducting ATR. Typically, the ATR lead will also serve as a reviewer for a specific discipline (s) (such as planning, economics, environmental resources, etc).	Individual should act as the technical lead/expert for at least one discipline in order to ensure accuracy and efficiency.
Plan Formulation	The Planning Reviewer should be a senior water resources planner with experience in Section 107 CAP studies.	Ensuring that the proposed project plan policy complaint and the formulation of plans were sufficiently developed.
Economics	An economist should have experience estimating economic costs and benefits for small navigation projects. Ideally, the Plan Formulator could also complete the economic review in an effort to reduce redundancies and to operate more efficiently.	Ensure that economic benefits and costs have been accurately quantified.
Cost Engineering	Cost MCX Staff or Cost MCX Pre-Certified Professional as assigned by the Walla Walla Cost Engineering Mandatory Center of Expertise should have experience preparing cost estimates for Section 107 cost estimates.	As required by EC 1165-2-217
Real Estate Reviewer	Real Estate expert with experience preparing Real Estate Plans in Section 107 projects or similar studies that require a submerged lands lease from the State of Ohio.	Real Estate review is required to achieve vertical alignment and eventual division/HQ approval for a non-standard estate with the State of Ohio.
Coastal Engineering Reviewer	None – Review to be accomplished through DQC	Low risks associated with this discipline. Potential solutions are not complex and are routine work. District has technical expertise in this area and designs these types of projects on a routine basis.

Geotechnical Engineering Reviewer	None – Review to be accomplished through DQC	Low risks associated with this discipline. Potential solutions are not complex and are routine work. District has technical expertise in this area and designs these types of projects on a routine basis.
Environmental (NEPA)	None – Review to be accomplished through DQC	Low risks associated with this discipline. No threatened and endangered species, HTRW or historic preservation impacts are anticipated.

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. Furthermore, this request is informed by LRB's understanding of assuming reasonable risk in order to "Move Dirt," as discussed by Mr. R.D. James, ASA (CW), during his June 2019 visit to Buffalo District. The District has noted that another Public Review may be required if significant changes are required as a result of ATR or legal/policy compliance review.

(3) Type I Independent External Peer Review (IEPR): A Type I IEPR is not required based on the mandatory triggers outlined in the Memorandum for Major Subordinate Command (MSC) and District Commanders dated April 05, 2019; the memorandum provides interim guidance on streamlining IEPR for improved civil works product delivery. Paragraph 4 states a project study may be excluded Type I IEPR if the project does not meet any of the three mandatory IEPR triggers. This feasibility study does not meet any of the three mandatory IEPR triggers for the following reasons:

- a. The estimated total cost of the project, including mitigation costs, is not greater than \$200 million.
- b. The Governor of Ohio has not requested a peer review by independent experts.
- c. 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 LRB 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:

Planning Models		
Model Name and Version	Model Description and How It Will Be Used	Certification / Approval
Great Lakes Systems Analysis of Navigation Depths (GL-SAND)	The GL-SAND model will be used in the calculation of benefits of continued harbor maintenance. GL-SAND is certified for regional use for harbor channel depth studies on the Great Lakes.	Regional Certification 04 February 2014

Engineering Models		
Model Name and Version	Model Description and How It Will Be Used	Approval Status
MII Version 4.4.2	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	Enterprise Model

4. REVIEW SCHEDULE AND BUDGET. The schedule and budgets for reviews are shown in below table. The total estimated cost to conduct DQC, ATR, policy and legal, and public review activities is \$70,000. Below is the timeline for review activities.

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 Mar 21	13 Apr 21	██████
<u>Draft Feasibility Report and EA/FONSI</u>	<u>Agency Technical Review</u>	06 May 21	01 Jul 2021	██████
<u>Draft Feasibility Report and EA/FONSI</u>	<u>Policy and Legal Review</u>	10 Aug 21	11 Feb 22	██████
<u>Final Feasibility Report and EA/FONSI</u>	<u>District Quality Control</u>	12 Feb 22	06 Mar 22	██████
<u>Final Feasibility Report and EA/FONSI</u>	<u>Agency Technical Review</u>	07 Mar 22	23 May 22	██████
<u>Final Feasibility Report and EA/FONSI</u>	<u>Policy and Legal Review</u>	24 May 22	22 Aug 22	██████

ATTACHMENT 1 – Contacts

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

PROJECT DELIVERY TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
Sponsor, Director of Coastal Development			Lake County Ohio Port & Economic Development Authority
Project Manager (Lead)			CELRB-PM-PM
Planner			CELRB-PM-PL
Geotechnical Engineer			CELRB-TD-DC
Economist			CELRB-PM-PL
Coastal Engineer			CELRB-TD-DC
Cost Engineer			CELRB-TD-DE
Real Estate			CELRB-RE
Environmental			CELRB-PM-EA
Civil/Structural Engineer			CELRB-TD-DS
Programs Specialist			CELRB-PM-PO
Programs Analyst			CELRB-PM-PO

DQC TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
DQC Lead			CELRB-PM-PL
Planning			CELRB-PM-PL
Economics			CELRB-PM-PL
Environmental Analysis			CELRB-PM-EA
Civil/Structural			CELRB-TD-DS
Operations			CELRB-TD-O
Coastal Geotechnical			CELRB-TD-DC
Cost Engineering			CELRB-TD-DE
Project Management			CELRB-PM-PM
Real Estate			CELRB-RE

ATR TEAM			
Function/Discipline	Name (Last, First)	Phone	Office
ATR Lead		TBD	CEPOD
Planning Reviewer	TBD		
Economics Reviewer	TBD		
Cost Engineering Reviewer	TBD		

MSC / 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		
Risk Analysis			