US Army Corps of Engineers ®

DECISION DOCUMENT REVIEW PLAN

ASHTABULA, OHIO
CONTINUING AUTHORTIES PROGRAM, SECTION 204
REGIONAL SEDIMENT MANAGEMENT - DREDGED MATERIAL
Buffalo District

P2# 154395

LRD Commander Approval Date: 07 May 2018

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER
CORPS OF ENGINEERS
550 MAIN STREET
CINCINNATI, OH 45202-3222

CELRD-PD-S

3 May 2018

MEMORANDUM FOR Commander, U.S. Army Engineer District, Buffalo, (ATTN: CELRB-PM-PL/David Schulenberg), 1776 Niagara Street, Buffalo, NY 14207-3199

SUBJECT: Decision Document Review Plan for Ashtabula, OH CAP Section 204 Regional Sediment Management Project (154395) – LRD Approval

1. Reference CELRC-PMB-DE Memorandum, dated 14 March 2018, Subject: District Transmittal Letter – Review Plan for Ashtabula, OH, Section 204 Regional Sediment Management Project (154395)

2. The subject Decision Document Review Plan (RP) was presented to the Great Lakes and Ohio River Division for approval in accordance with Engineering Circular (EC) 1164-2-217 "Civil Works Review" dated 20 February 2018. LRD received the review plan on 14 March 2018. The RP addresses the technical and policy review requirements for the feasibility study, which will investigate flood risk management measures to address concerns of overtopping or failure of a non-Federal levee system along the Des Plaines River.

3. The USACE LRD Review Management Organization (RMO) has reviewed the attached RP and concurs it does describe an appropriate scope and level of review. The RP satisfies peer review policy requirements described in EC 1165-2-217, and adequately defines the scope and level of peer review for the activities to be performed for the subject project phase. The size of the review team has been appropriately scaled based upon consideration of relative risk of the respective disciplines.

4. I concur with the recommendations of the RMO and approve the enclosed RP. The District is requested to post the RP to its website. Prior to posting, the names of all individuals identified in the RP and the dollar values of all project costs should be removed.

5. The LRD POC for this action is Mr. Gary Mosteller, CELRD-PD-S, who can be reached at (513) 684-6502, or email at Gary.A.Mosteller@usace.army.mil.

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Encl

R. MARK TOY
Brigadier General, USA
Commanding

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I. PURPOSE AND REQUIREMENTS

A. Purpose

This U.S. Army Corps of Engineers (USACE) Review Plan defines the scope and level of peer review for the Ashtabula Continuing Authority Program (CAP), Section 204 Project decision document. The Project is located in the City of Ashtabula, Ashtabula County, State of Ohio.

Section 204 of the Water Resources Development Act of 1992, Public Law 102-580, provides; the authority to carry out projects to reduce storm damage to property, to protect, restore and create aquatic and ecologically related habitats including wetlands and to transport and place suitable sediment, in connection with dredging for construction, operation, or maintenance by the Secretary of an authorized federal water resources project. It is a CAP project, which focuses on water resource related projects of relatively smaller scope, cost and complexity. Traditional USACE civil works projects are of wider scope and complexity and are specifically authorized by Congress. The CAP is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization.

B. Applicability

This review plan is based on the USACE Lakes and Rivers Division (LRD) CAP Programmatic Review Plan Model, which includes the Great Lakes Fisheries and Ecosystem Restoration (GLFER) Section 506 and Lake Michigan Waterfront Section 125 programs. It also accounts for CAP Section 103 and Section 205 projects, which require case-by-case determination on the appropriateness of Type I Independent External Peer Review (IEPR). The LRD CAP Programmatic Review Plan Model **is not approved** for use on any CAP, GLFER or Lake Michigan Waterfront projects where:

- A significant threat to human life/safety assurance exists;
- Total Project Cost is likely to exceed the limits established for the applicable Section in law.
- The Governor of an affected state has requested a peer review by independent experts;
- An Environmental Impact Statement (EIS) is required;
- Significant public dispute is likely due to the size, nature, or effects of the project;
- Significant public dispute is likely due to the economic or environmental cost or benefit of the project;
- Complex challenges will likely require use of novel methods, innovative materials, new techniques, precedent-setting methods or models, or result in conclusions that are likely to change prevailing practices;
- Redundancy, resiliency, and/or robustness are required or unique construction sequencing, or a reduced or overlapping design construction schedule will likely be required; or The Chief of Engineers or Director of Civil Works is likely to determine Type I IEPR is warranted.

If any of the circumstances above exist on the subject project, the LRD CAP Programmatic Review Plan Model is not applicable and a study specific review plan must be prepared by the

home district, coordinated with the appropriate Planning Center of Expertise (PCX) and approved by LRD in accordance with EC 1165-2-214.

Applicability of the LRD CAP Programmatic Review Plan Model for a specific project is initially determined by the Buffalo District and subsequently reviewed and approved by the LRD Commander. If the LRD determines that the model plan is applicable for a specific study, the LRD Commander may approve the plan (including exclusion from IEPR) without additional coordination with a PCX or Headquarters, USACE. The initial decision as to the applicability of the model plan shall be made no later than the Federal Interest Determination (FID) milestone (as defined in Appendix F of ER 1105-2-100, F-10.e.1) during the feasibility phase of the project. A review plan for the project will subsequently be developed and approved prior to execution of the Feasibility Cost Sharing Agreement (FCSA) for the study. In addition, per EC 1165-2-214, the home district and LRD shall assess at the MSC Decision Meeting (MDM) whether the initial decision on Type I IEPR is still valid based on new information. If the decision on Type I IEPR has changed, the District and LRD shall promptly begin coordination with the appropriate PCX. After approval of the project decision document and prior to execution of a Project Partnership Agreement with the non-federal sponsor to implement the Ashtabula 204 project, this review plan shall be updated and revised for the Implementation Phase by the Buffalo District, and subsequently reviewed by the LRD staff and approved by the LRD Commander. The revised and approved review plan shall specify the Design and Implementation phase products to be reviewed and the associated level of peer review of each, including the appropriateness of a Type II IEPR (Safety Assurance Review).

C. References

(1) Engineering Circular (EC) 1165-2-214, Civil Works Review, 15 Dec 2012
(2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2010
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 Jan 2007
(5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(6) LRD Continuing Authority Program Management Plan and Standard Operation Procedures, 1 Oct 2015.
(7) MSC and District Quality Management System (QMS) Procedures
(8) PMP for study; and
(9) Any other relevant quality control/quality assurance guidance

D. Requirements

This review plan was developed from the LRD CAP Programmatic Review Plan Model. It was developed in accordance with EC 1165-2-214 and establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R).
The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and

Major Subordinate Command (MSC) Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-214). Additionally, it ensures that planning models and analysis are compliant with Corps policy, theoretically sound, computationally accurate, transparent, described to address any limitations of the model or its use, and documented in study reports (per EC 1105-2-412).

II. REVIEW MANAGEMENT ORGANIZATION (RMO)

The Review Management Organization (RMO) is responsible for managing the overall peer review effort described in this review plan. The RMO for CAP Section 204 decision documents is typically LRD, because the LRD Commander is responsible for approving the Review Plan and the decision to implement projects under this authority. However, an appropriate National Planning Center of Expertise (PCX) may also serve as the RMO. Because of the potential for CAP Section 103 and Section 205 projects to have significant life safety implications, determination of the RMO for the decision document for those type projects is made on a case-by-case basis at the FID approval stage. Also, during the FID review and approval process, the home District may request LRD to delegate its RMO responsibility to the most appropriate PCX for any CAP project. The information presented in Section 3 below provides the basis for the determination that LRD will serve as the RMO for the Feasibility Phase of the Ashtabula 204 Project.

III. STUDY INFORMATION

A. Decision Document

The Ashtabula, OH CAP Section 204 decision document will be prepared in accordance with ER 1105-2-100, Appendix F. The preferred decision document format is contained in the Detailed Project Report (DPR) template in the LRD CAP Program M**a**nagement Plan/Standard Operating Procedures, which integrates the environmental documentation required under NEPA and other relevant environmental statutes into the project decision document.

The purpose of a DPR is to document the basis for a recommendation to invest federal and non-federal resources to address a local water resource problem or opportunity of significance to the Nation. The approval level of the decision document is the LRD Commander.

B. Study/Project Description.

Section 204 of the Water Resources Development Act of 1992, as amended, authorizes the USACE to develop regional sediment management (RSM) plans, in cooperation with appropriate federal, state, regional and local agencies, for sediment obtained through construction, operation, or maintenance of an authorized federal water resources project.

This study will identify projects for transportation and placement of sediment to protect, restore and create aquatic and ecologically related aquatic habitats including wetlands in areas within the harbor outside of navigation channels and in areas along the Ashtabula River. Potential dredged material placement areas include retention areas within breakwater structures and

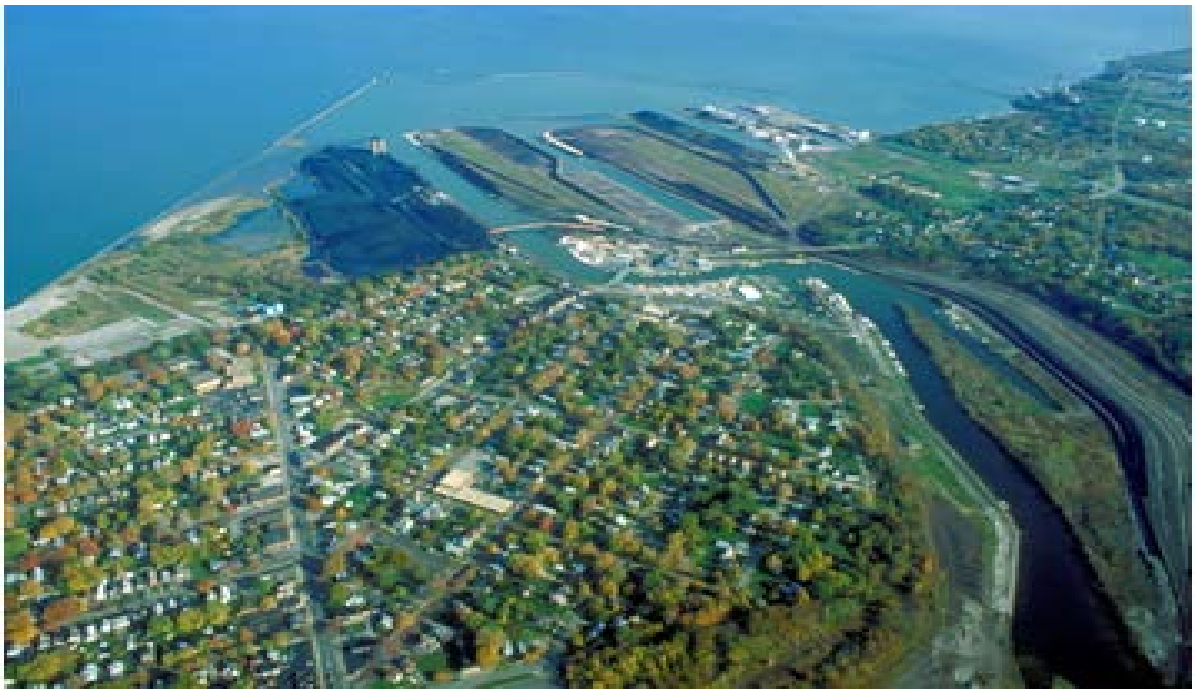
riverine placement areas. Harbor placement measures would raise subsurface elevations to a point where sunlight penetration will be sufficient for submerged aquatic vegetation (SAV) and emergent vegetation (EV) to establish and create high-quality fish spawning and nursery habitat. Riverine placement measures would create riverbank "shelf" emergent wetland habitat zones for both fish and wildlife. Dredged material would be placed to varying depths creating diverse wetland topography.

The study is authorized by Section 204 of the 1992 Water Resources and Development Act (33 USC 2326), as amended. Section 204 allows the Corps to carry out projects for the protection, restoration & creation of aquatic & ecologically related habitats, including wetlands, and to reduce storm property damage, in connection with dredging for construction, operation, or maintenance of an authorized navigation project. The federal expenditure limit for construction at any one site is $10,000,000. **While the authority allows for consideration of using dredged material for storm damage reduction projects, the non-federal sponsor is only interested in using material under the Section 204 program for ecosystem restoration projects. Consequently, mandatory IEPR for storm damage reduction projects is not required for this project.**

Under WRDA 2007, the Regional Sediment Management (RSM) study for a Section 204 project is 100% federal financed. Construction of any proposed alternative is financed based on the incremental cost increase of the proposed project over the cost of the current dredging/disposal plan. This incremental increase is cost shared on a 65% federal, 35% non-federal basis. The Ohio Environmental Protection Agency (OEPA) is the non-federal sponsor for the project.
Ashtabula Harbor, which provides a potential source of dredged material for this Section 204 project is located on the southern shore of Lake Erie, at the mouth of the Ashtabula River, in the City of Ashtabula, Ashtabula County, Ohio, 59 miles east of Cleveland, Ohio and 44 miles west of Erie, Pennsylvania. The harbor lies in the U.S. Congressional Districts of Representative David Joyce (OH-14), U.S. Senator Sherrod Brown and U.S. Senator Robert Portman.

This Detailed Project Report/Environmental Assessment (DPR/EA) will present the findings of the Ashtabula Section 204 Beneficial Use of Dredged Material for Ecosystem Restoration Project. The feasibility study will document the plan formulation process and potential environmental effects associated with the implementation of restoration alternatives for the proposed site. This DPR/EA summarizes baseline existing conditions in the study area. It also develops and discusses potential solutions as a guide to potential federal and non-federal involvement in the restoration project and serves as a resource to assist in the decision-making of local government and others.

This report will provide a description and discussion of the likely array of alternative plans, including their benefits, costs, and environmental effects and outputs. This report also identifies, evaluates, and recommends a solution (the Preferred Action Alternative) that best meets the planning objectives of comprehensive habitat restoration through the study area. There are no existing or anticipated policy waiver requests. The purpose of this study is to determine beneficial use of dredge material from the Ashtabula Harbor and River channels for the purpose of ecosystem restoration.



Aerial View of Ashtabula Harbor

C. Factors Affecting the Scope and Level of Review

Challenges: The sediment being used must meet specific standards, but other than that the measures involved in the project are not expected to generate significant technical, institutional or social challenges. The Buffalo District has in-house expertise constructing measures such as those that will be used for this project.

Project Risks: The major risk is that environmental outputs may not be achieved to the extent desired. In addition, unfavorable weather or physical conditions may cause the project to not perform as expected. An adaptive management plan will be developed and implemented as a method to mitigate these ecological challenges. Another risk is that sediment in the federal Navigation channels may contain pollutants at unacceptable levels for in-lake aquatic ecosystem restoration. This risk will be managed through early feasibility study coordination and collaboration with the sponsor (Ohio EPA) and other relevant stakeholder agencies on sampling and analyses and other appropriate measures during design and implementation to minimize potential negative impacts and optimize benefits to the aquatic environment from project implementation.

Life Safety: The project will neither be justified by life safety nor will it involve significant threat to human life/safety assurance. There is no reason to believe that any measures involved in the project are associated with a significant threat to human life. Project will be composed of submerged habitat placement that may be of risk to vessels.
Governor Request for Peer Review: The Governor **has not** requested peer review by independent experts. The risk of vessels impacting the submerged habitat has been

reviewed by the district Chief of Engineering. It was determined that there is no impact on life safety. This determination was based upon the Buffalo District's review of the proposed parameters of the project. The proposed project is not located within the Ashtabula navigation channel; thus the majority of harbor activity will take place away from the proposed project. The current proposed project is located approximately 150' – 200' from the navigation channel. Additionally, during the feasibility phase, we will coordinate with the non-federal sponsor to ensure all proper marking are considered. This will allow the proper notification for any vessels outside the navigation channels. Lastly, we are aware there are uncertainties, during feasibility we will identify the range of depths below water surface to the top of placed dredge material, relative to range of vessel drafts in the harbor. During the feasibility study, we will also identify existing controls in the harbor that would prevent a vessel from grounding on the placement area.

Public Dispute: The project/study is not anticipated to be controversial nor result in significant public dispute as to the size, nature, or effects of the project or to the economic or environmental costs or benefits of the project.

Project Design/Construction: The anticipated project design will take advantage of prevailing practices and methodologies. It is not expected to be based on novel methods or involve the use of innovative techniques, or present complex challenges for interpretation. It also is not anticipated that the project will require unique construction sequencing or redundancy. Preliminary cost estimates are in the $1,000,000 - $3,000,000 range, well below the $200 million threshold requiring IEPR.

D. In-Kind Contributions

Products and analyses provided by non-federal sponsors as in-kind services are subject to DQC and ATR, similar to any products developed by USACE. Products and analyses provided by non-federal sponsors as in-kind services are subject to DQC and ATR, similar to any products developed by USACE. No in-kind contributions are anticipated.

IV. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. 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. Attachment 1 lists the DQC team members according to each significant area of expertise needed to accomplish the feasibility study objectives.

A. Products to Undergo DQC

1. Review Plan
2. Alternative Formulation Briefing Documentation
3. Draft Feasibility Study Report and Draft Environmental Assessment Documentation
4. Final Feasibility Study Report and Final Environmental Assessment Documentation

B. Required DQC Expertise.

1. Planning
2. Programs and Project Management
3. Project Management
4. Coastal Engineering
5. Design
6. Operations
7. Environmental
8. Office of Counsel
9. Real Estate
10. Operations

C. Documentation of DQC

District Quality Control will be completed following the guidelines set forth in Section 7.2 District Quality Control (DQC) and Agency Technical Review (ATR) of the 14 February 2011 CELRD Quality Management System (QMS) Document ID: 4921: QC / QA Procedures for Civil Works. Following the completion of the DQC review by the PDT members and their respective counterparts as necessary, the PDT will sign a certification sheet documenting DQC. The Chief of Planning will also sign a certification sheet documenting that District Quality Control has been completed.

V. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. 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 and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside LRD. At a minimum, the name of the ATR lead will be provided at the time of initial decision document review plan submission. Remaining ATR team members will be selected and identified in a revised review plan once the study funds are obtained. As indicated in the Director of Civil Works' Policy Memorandum #1, Jan 19, 2011, the ATR lead is to be outside the home MSC unless the CAP review plan justifies an exclusion and the exclusion is explicitly approved by the MSC Commander.

A. Products to Undergo ATR

ATR will be performed throughout the study in accordance with the regional QMS as found in Qualtrax. The ATR shall be documented and discussed at the MDM milestone. Certification of the ATR will be provided prior to the District Commander signing the final report. Products to undergo ATR include supporting analysis and documents, including, but not limited to, the following will also be subject to Agency Technical Review:

(1) Detailed Project Report and appendices
(2) Cost estimates
(3) Geotechnical analysis
(4) Environmental outputs
(5) Supporting environmental analysis (cultural resources, resource inventories, etc.)

Supporting Analysis and Documents provided as work in-kind will also be subject to Agency Technical Review.

B. Required ATR Team Expertise

The Table below lists the technical disciplines and requisite expertise deemed appropriate to successful accomplishment of the subject feasibility study objectives. The selected ATR members are listed according to discipline in Attachment 1.

ATR Team Members Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional preferably with experience in preparing Section 204 decision documents and conducting ATR. The lead should also 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, environmental resources, etc). The ATR Lead MUST be from outside the Buffalo District.
Planning	The Planning reviewer should be a senior water resources planner with experience in planning evaluation. Familiar with ecosystem restoration and cost effectiveness /incremental cost analysis using IWR Planning Suite.
Economics	Team member experienced in economic evaluation. Familiar with ecosystem restoration and cost effectiveness /incremental cost analysis using IWR Planning Suite.

Environmental Analysis	Team member will be experienced in the NEPA process and analysis, and 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 and climate preparedness and resiliency expertise. Should also be familiar with models (IWR) used for assessing ecological outputs.
Coastal Engineering	Team member will be experienced in design and construction of coastal or inland habitat restoration projects.
Real Estate	The real estate reviewer will be familiar with the Corps of Engineers ER on Real Estate.
Cost Engineering	Team member will be experienced in design and construction of Ecosystem Restoration projects. In addition the Team member will be familiar with cost estimating for similar civil works projects using MCACES.

C. Documentation of ATR

DrChecks[SM] review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

(1) The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;

(2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;

(3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, federal interest, or public acceptability; and

(4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist. The ATR documentation in DrChecks[SM] will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical

team coordination (the vertical team includes the district, RMO, LRD, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either EC 1165-2-214 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks[SM] with a notation in the ATR Summary Report and the DrChecks comment evaluation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare an ATR Summary Report, which will be an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team).

A Statement of Technical Review should be completed prior to the District Commander signing the final report. A sample Statement of Technical Review is included in Attachment 2.

VI. Independent External Peer Review

While CAP projects are generally smaller and less technically complicated than specifically authorized feasibility studies, IEPR may be required for CAP decision documents under certain circumstances. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. Where designated, IEPR panels will consist of independent, recognized technical experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for planning, design and construction of a Civil Works project. There are two types of IEPR:

- Type I IEPR. Type I IEPR reviews are managed outside the USACE and are conducted on project feasibility studies, which upon approval, serve as a federal decision document. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR covers the entire decision document, including key component actions taken to address the underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.

  Section 506, 125, and CAP project decision documents are generally excluded from Type I Independent External Peer Review (IEPR) except those under Section 103 and Section 205. The exceptions are any project that requires an EIS or any project that meets the mandatory triggers stated in Appendix D of EC 1165-2-214. Due to the nature of flood risks, Section 103 and Section 205 decision documents require a case-by-case risk informed decision to conduct a Type I IEPR, which may be prepared using the LRD CAP Programmatic Review Plan Model or prepared as a project specific Review Plan that meets the requirements of EC 1165-2-214. Section VI.A below specifies the project specific circumstances and rationale for adopting or excluding Type I IEPR of the Ashtabula 204 decision document.

- Type II IEPR. Type II IEPR, or Safety Assurance Review (SAR), considers the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare, and in some cases may include decision document reviews during the Feasibility Phase.

  Type II IEPR 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. Type II IEPR panels conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The risk informed decision on whether Type I and/or II IEPR will be required is documented below.

A. Decision on IEPR.

EC 1165-2-214 exempts CAP Section 204 projects from Type I IEPR, and based on the consideration of project specific factors presented in Section III.C relative to the criteria in Paragraph I.B above, the level of risk of the Ashtabula 204 project does not warrant a Type I IEPR of the project decision documents.

B. Products to Undergo Type I IEPR.

Not-Applicable

C. Required Type I IEPR Panel Expertise.

Not-Applicable

D. Documentation of Type I IEPR.

Not-Applicable

VII. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval by the MSC Commander, or warrant a recommendation by the MSC Commander to higher authority for approval. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

VIII. COST ENGINEERING MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION

The home District, in conjunction with the RMO, is responsible for coordinating with the Cost Engineering MCX located in the Walla Walla District for review of the cost estimate for all CAP decision documents. For decision documents prepared under the LRD CAP Programmatic Review Plan Model, regional cost personnel that are pre-certified by the MCX, and assigned by the Cost Engineering MCX, will conduct the cost engineering ATR. The MCX will provide the Cost Engineering MCX certification. Either the designated ATR Lead or the Cost Engineering MCX shall make the selection of the cost engineering ATR team member.

IX. MODEL CERTIFICATION AND APPROVAL

The approval of planning models under EC 1105-2-412 is not required for CAP projects. MSC Commanders are responsible for assuring models for all planning activities are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Therefore, the use of a certified/approved planning model is highly recommended and should be used whenever appropriate. Planning models are defined as any models and analytical tools that planners use 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 selection and application of the model and the input and output data is the responsibility of the users and is subject to DQC and ATR.

The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever 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 and ATR.

A. Planning Models

The following table notes the suite of planning models that available to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification Approval Status
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**
Lake Erie Qualitative Habitat Evaluation Index (L-QHEI) Version 2.1	The Lake Erie Qualitative Habitat Evaluation Index (L-QHEI) developed by the Ohio Environmental Protection Agency is designed to provide a measure of Lake Erie shoreline habitat quality that generally corresponds to those physical and biological factors that affect fish communities and which are generally important to other aquatic life (e.g. invertebrates). The LQHEI consists of five metrics based on shoreline habitat quality: (1) substrate type/quality; (2) cover type; (3) shoreline morphology; (4) riparian zone and bank erosion; and (5) aquatic vegetation quality. Scores could theoretically range between zero and 100 (low scores represented low habitat quality/high human disturbance and high scores indicated high habitat quality/little human disturbance). This index will be one of the metrics used to characterize existing conditions and evaluate ecosystem restoration plans. The index is under review by the ECO-PCX. It is anticipated that it will be approved for use in its appropriate range (i.e. Ohio, New York) however final Headquarters approval has not been granted at this time. The study area for this project is included in the range of this model. Therefore, a specific model approval plan is not required. Agency Technical Reviews (ATR) of the study should include the review the model's application on this study."	**Regional Approval under review by HQ**

B. Engineering Models

The following engineering models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
MCACES	Microcomputer-Aided Cost Estimation System; Used to generate detailed cost estimates for each alternatives.	**Approved**
CMS Wave/Flow Coastal Model	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 bed load, suspended load, and total load, and morphology change.	**Classified as CoP Preferred**

X. REVIEW SCHEDULES AND COSTS

A. ATR Schedule and Cost

Item to Undergo ATR	Schedule	Estimated Cost (by PDT) for ATR
Draft DPR and Appendices	30 days for review of 75% DPR 30 days for response to ATR comments and ATR certification	$25,000

B. Type I IEPR Schedule and Cost

Not-Applicable

C. Model Review Schedule and Cost

For decision documents prepared under the model Programmatic Review Plan, use of existing certified or approved planning models is encouraged. Where uncertified or unapproved models are used, review of the model for use will be accomplished through the ATR process. The ATR team should apply the principles of EC 1105-2-412 during the ATR to ensure the model is theoretically and computationally sound, consistent with USACE policies, and adequately documented. If specific uncertified models are identified for repetitive use within a specific district or region, the appropriate PCX, MSC(s), and home District(s) will identify a unified approach to seek certification of these models.

XI. PUBLIC PARTICIPATION

State and federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments.

The public involvement process will include public meetings throughout the study period, and study briefings for interested and affected parties and agencies. There will be multiple opportunities for public review and comment during the NEPA process. Several agency coordination meetings are also anticipated. Detailed information on the study will be posted on the public webpage. This information will include public meeting presentation, technical information and reports, study schedule, and other pertinent information about the study. Additional project information will be posted to an internal project webpage (Sharepoint) for USACE use. Outreach will be coordinated with individuals and groups concerned.

XII. REVIEW PLAN APPROVAL AND UPDATES

The LRD Commander is responsible for approving this review plan and ensuring that use of the LRD CAP Programmatic Review Plan Model is appropriate for the specific project covered by the plan. The review plan is a living document and may change as the study progresses. The home district is responsible for keeping the review plan up to date. Minor changes to the review plan since the last LRD Commander approval are documented in Attachment 3.

Significant changes to the review plan (such as changes to the scope and/or level of review) should be re-approved by the LRD Commander following the process used for initially approving the plan.
Significant changes may result in the MSC Commander determining that use of the LRD CAP Programmatic Review Plan Model is no longer appropriate. In these cases, a project specific review plan will be prepared and approved in accordance with EC 1165-2-214 and Director of Civil Works' Policy Memorandum #1. The Commander Approved Review Plan, along with the Commanders' approval memorandum, will be posted on the home district's webpage.

XIII. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following point of contact:

USACE Buffalo District (LRB) Point of Contact
Mr. Russell Brandenburg, Project Manager
216-685-1218

ATTACHMENT 1: TEAM ROSTERS.

Project Development Team

Name	Function	Organization	Phone	Email
Russell Brandenburg	Project Manager	USACE-Buffalo		
Wayne Awald	Plan Formulator	USACE-Buffalo		
Andrew Hannes	Environmental Analysis	USACE-Buffalo		
Gerlyn Hinds	Coastal Engineering	USACE-Buffalo		
Gene Lenhardt	Geotech Engineering	USACE-Buffalo		
Steve Stalikas	Economics	USACE-Buffalo		
Robert Christie	Real Estate	USACE-Buffalo		
Lauren Turner	Legal Counsel	USACE-Buffalo		
Jim Wryk	Cost Engineering	USACE-Buffalo		
Paul Heist	Value Engineering Officer	USACE-Buffalo		
Andrew Kornacki	Public Affairs Office	USACE-Buffalo		
TBD	Risk Assessor	USACE – ERDC		

ATR TEAM

Name,	Discipline	Organization	Phone	Email
TBD	ATR Lead			
TBD	Environmental/NEPA			
TBD	Economics			
TBD	Coastal Engineer			
TBD	Real Estate			
TBD	Cost Engineer			

VERTICAL TEAM

Name	Location	Phone	Email
Jodi Creswell	ECO-PCX		
Gary Mosteller	LRD		
Hank Jarboe	LRDOR		
Janet Cote	CECW-LRD		

ATTACHMENT 2: STATEMENT OF TECHNICAL REVIEW, DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the CAP Section 204 for Ashtabula 204 Project. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks[SM].

SIGNATURE

_____ _____

Date

ATR Team Leader

Office Symbol/Company

SIGNATURE

_____ _____

Russell Brandenburg Date

Project Manager (Buffalo district)

Office Symbol

SIGNATURE

_____ _____

Name Date

Architect Engineer Project Manager[1]

Company, location

SIGNATURE

_____ _____

Name Date

Review Management Office Representative

Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE

Name Date

Chief, Engineering Division (home district)

Office Symbol

SIGNATURE

Name Date

Chief, Planning Division (home district)

Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS LOG

<All revisions after the initial LRD Commander approved review Plan shall be documented here, including major revisions (i.e. at initiation of Design and Implementation Phase) where LRD Commander is required and the cover page updated to reflect the latest Commander approval date. >

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
ASA(CW)	Assistant Secretary of the Army for Civil Works	NED	National Economic Development
ATR	Agency Technical Review	NER	National Ecosystem Restoration
CAP	Continuing Authorities Program	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DPR	Detailed Project Report	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMS	Quality Management System
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RED	Regional Economic Development
IEPR	Independent External Peer Review	RMC	Risk Management Center
		RMO	Review Management Organization
LERRDs	Lands, Easements, Rights-of-Way, Relocations, Disposal/borrow areas	RTS	Regional Technical Specialist
MCX	Mandatory Center of Expertise	SAR	Safety Assurance Review
MDM	MSC Decision Meeting	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act