REVIEW PLAN

Upper Monongahela River Disposition Study
Pittsburgh District

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US Army Corps
of Engineers ®

REVIEW PLAN

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Upper Monongahela River Disposition Study

b. References

(1) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 31 Jan 2010
(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 H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) CECW-P Memo: *"Interim Guidance on the Conduct of Disposition Studies" dated 22 August 2016*
(6) Real Estate Policy Guidance Letter No. 33: "*Interim Guidance on Disposition Studies" dated 28 Sept 2016*

c. Requirements. This review plan was developed in accordance with EC 1165-2-214, which 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 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) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for this study report will be either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the document. The RMO for the peer review effort described in this Review Plan is the PCX for Inland Navigation (PCXIN).

3. STUDY INFORMATION

***Study* Document.** The Upper Monongahela River Disposition Study covers three lock and dam locations, Morgantown, Hildebrand and Opekiska, along the Monongahela River from Morgantown, WV to Fairmont, WV. Section 216 of the Flood Control Act of 1970 authorizes the Secretary of the Army to review operations of completed projects, when found advisable due to changed physical, economic, or environmental conditions. Disposition studies are a specific type of 216 study with the intent to determine whether a water resources development project operated and maintained by the Corps of Engineers should be deauthorized and the associated real property and Government-owned improvements disposed of. The study's focus is on whether federal interest exists to retain the project for its authorized purpose(s), based on an evaluation and comparison of the benefits, costs, and impacts (positive and negative) of continued operation, maintenance, repair, replacement, and rehabilitation, or the lack thereof, on the one hand and of deauthorization and disposal of the associated real property and Government-owned improvements on the other. The disposition study ends when the MSC Commander transmits the final report to HQUSACE for review and processing.

a. **Study/Project Description.** The study will evaluate the costs and benefits of alternatives for continued operations or disposal of these facilities. This study is needed to respond to changes in usage of these facilities which have occurred since the construction of these projects and which are forecasted to occur over the next 50 years. The purpose of this study is to evaluate the continued Federal Interest in maintaining and operating Morgantown, Hildebrand and Opekiska Locks and Dams for commercial navigation. The study will follow planning guidance from a memorandum titled "Interim Guidance on the Conduct of Disposition Studies" dated 22 August 2016 as well as the draft Real Estate Policy Guidance Letter No. 33 – Interim Guidance on Disposition Studies.

b. **Factors Affecting the Scope and Level of Review.**

- This study is one of five nationally to be conducted under new guidance (identified in Section 3b). It is anticipated that there will be some institutional decisions that will need to be made throughout the study process as to the appropriate content for a disposition study report from an agency wide perspective.
- The study will be considered a negative report, and not a decision document. A recommendation will not be made as a part of this study.
- This Review Plan seeks an exclusion from IEPR (see Section 6 for more information).
- Cost Engineering Mandatory Center of Expertise (MCX) certification is not required (see Section 8 for more information).
- Public controversy has been high regarding this study.
- An EA was set as the preferred level of environmental analysis for this study, however a recommended alternative other than 'No Action' would likely require an EIS prior to it being an actionable recommendation.

4. DISTRICT QUALITY CONTROL (DQC)

All 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 Quality Manual of the District and the home MSC.

a. **Documentation of DQC.** DQC will be documented by signature sheets with senior-level checkers, Subject Matter Experts, and Supervisors, and will be provided to the ATR team at review. District Quality Control documentation will also include review comments, responses and associated resolutions.

b. **Products to Undergo DQC.** DQC will be performed on interim reports and milestone documentation (i.e. Tentatively Selected Plan Milestone, Final Disposition Report) prior to ATR.

c. **Required DQC Expertise.** DQC Expertise shall include:
   (1) Planning
   (2) Cultural Resources / NEPA compliance
   (3) Economics
   (4) Structural Engineering

   (5) H&H Engineering

(6) Geotechnical Engineering
(7) Dam Safety
(8) Real Estate

5. AGENCY TECHNICAL REVIEW (ATR)

This disposition study will terminate in a negative report, an ATR is recommended to ensure the quality of information presented, and prepared for public release. 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 the home MSC. The review process to assign a DSAC will be completed outside of the disposition study and engineering reviewers will not be required for the ATR of the disposition study. All engineering reviewers will be CERCAP certified.

a. Products to Undergo ATR.

(1) Final Disposition Study and supporting appendices (Engineering, Environmental, Operations, and Real Estate)

b. Required ATR Team Expertise.

ATR Team Members/Disciplines	Expertise Required
ATR Lead / Planning	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The lead will also serve as the Planning reviewer and should be a senior water resources planner with experience in Civil Works Plan Formulation and risk-informed decision making. Familiarity with new disposition study guidance is required.
Environmental Compliance/Cultural Resources	The reviewer should be familiar with NEPA documentation requirements and Section 106 requirements relative to expectations of USACE disposition studies.
Economics	The reviewer should be familiar with standard USACE monetary cost and benefit calculations including economic effects, life cycle costs, etc.
Structural Engineering/Dam Safety	The reviewer should be familiar with Dam Safety and structural considerations for inland navigation projects.
H&H Engineering	The reviewer should be familiar with dam failure and removal modelling and modelling of inland navigation systems.
Geotechnical Engineering	The reviewer should be familiar with inland navigation design issues.

Real Estate	The reviewer should be familiar with real property accounting and market analysis associated with disposing of Federal property.

c. **Documentation of ATR.** DrChecks 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 be 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 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, MSC, 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 ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered 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, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is

included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for 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. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- Type I IEPR. Type I IEPR reviews are managed outside the USACE and are conducted on project studies. 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 will cover the entire decision document or action and will address all 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.

- Type II 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. Type II IEPR panels will 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 reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

a. ***Decision on IEPR.*** IEPR will not be performed on this study. The factors informing this decision are outlined below:

(a) Federal action is not justified by life safety, failure of the project would not pose a significant threat to human life, and life safety consequences and risks of non-performance of the project are not greater than under existing conditions;

b) The estimated project cost is below the $200 million threshold;

c) There is no request from the Governor of West Virginia for a peer review by independent experts;

d) The study does not require an EIS;

e) The information in the study or anticipated project design is not likely to be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices;

f) The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule; and,

g) There are no other circumstances where the Chief of Engineers or Director of Civil Works determines Type I IEPR is warranted.

h) The District is submitting a Request for Exclusion from IEPR. Once a determination has been made on the Exclusion Request, the review plan will be revised accordingly.

7. 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 or further recommendation to higher authority by the home MSC Commander. 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.

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

Since it is expected that the recommended plan will only include rough order of magnitude costs, and, based on HQUSACE guidance, Cost Engineering MCX certification will not be required for the federal action recommended in this disposition study.

9. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, 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 use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data are still the responsibility of the users and are subject to DQC, ATR, and IEPR (if required).

Interim Guidance on the Conduct of Disposition Studies (IG) 22 August 2016, Section11b indicates that planning model certification is not required for disposition studies; however, the decision document must include documentation of any planning models used.

EC 1105-2-412 does not cover engineering models used in planning. 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, ATR, and IEPR (if required).

a. Planning Models. The following planning models are anticipated to be used in the development of

the decision document: No models are anticipated to be used during this study.

b. Engineering Models. The following engineering models are anticipated to be used in the development of the decision document: No models are anticipated to be used during this study.

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost.

Item to Undergo ATR	Schedule	Estimated Cost (by PDT)
Draft Integrated Study Report and Appendices	15 days for review of draft final study report, 15 days for response to ATR comments and ATR certification. Start Date: July 2017	$30,000

11. 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.

Agency coordination letters were sent as a part of this study's scoping efforts. No formal public comment period has been outlined. Detailed information on the study will be posted on the public webpage. This information will include technical information and reports, study schedule, and other pertinent information about the study. Additional project information will be posted to an internal project sites for USACE use.

12. REVIEW PLAN APPROVAL AND UPDATES

The Great Lakes and Ohio River Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the study report. Like the PMP, 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 MSC 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 MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, will be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

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

- Elliott Porter
  Study Lead, Pittsburgh District
  412-395-7479

- Roscoe Bright
  LRP District Liaison, Great Lakes and Ohio River Division
  513-684-3159

- Beth Cade
  PCXIN, Huntington District
  304-399-5848

ATTACHMENT 1: TEAM ROSTERS

Project Delivery Team*

Name	Role	Office	Telephone	Email
Elliott Porter	Study Lead	CELRL-PMC-P	412-395-7479	Elliott.porter@usace.army.mil
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Diane Czelusta	Dam Safety	CELRL-ED-TG	412-395-7232	Diane.L.Czelusta@usace.army.mil
Richard Schutte	Geotechnical	CELRP-EC-GG		Richard.W.Schutte@usace.army.mil
Josh Nickel	PE / Structural	CELRP-EC-NS	412-395-7134	Joshua.Nickel@usace.army.mil
Susie Byrd	Economics	CELRP-PME-F	412-395-7164	Susannah.E.Byrd@usace.army.mil
Ken Lieu	Real Estate	CELRP-RE	412-395-7535	Ken.L.Lieu@usace.army.mil
John Dilla	Operations	CELRP-OP-L	412-395-7651	John.P.Dilla@usace.army.mil
Leslie Williams	Real Estate	CELRH-E-Q	502-315-6946	Leslie.R.Williams@usace.army.mil
Dana Adipietro	Legal Counsel	CELRP-OC	412-395-7493	Dana.M.Adipietro@usace.army.mil
Jeff Hawk	Public Affairs	CELRP-PA	412-395-7501	Jeffrey.S.Hawk2@usace.army.mil

*Team member name subject to change based on availability.

Agency Technical Review Team*

Name	Role	Office	Telephone	Email
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Mark Haab	Economics	MVN	504-862-2497	Mark.E.Haab@usace.army.mil
Joe Jordan	Environmental	MVP	309-794-5791	Joseph.W.Jordan@usace.army.mil
Randy Roberts	Real Estate	SWD	469-487-7041	Randy.L.Roberts@usace.army.mil
Cory Williams	Geotech	MVM	901-544-0667	Cory.H.Williams@usace.army.mil
Larry Dalton	Structural/Dam Safety	MVR	502-315-6279	Larry.L.Dalton@usace.army.mil

*Team member name subject to change based on availability.

Agency Technical Review Team*

Name	Role	Office	Telephone	Email
Andrew MacInnes	ATR Lead / Plan Form	CEMVN-PD-P	504-862-1062	Andrew.D.MacInnes@usace.army.mil
Chip Hall	Environmental Compliance /Cultural Resources	CELRN-PM-P	615-736-7666	Charles.W.Hall@usace.army.mil
Gary Walker	Real Estate	CELRH-RE-P	304-399-6034	Gary.M.Walker@usace.army.mil
	Economics			
	Structural Engineering/Dam			
	H&H Engineering			
	Geotechnical Engineering			

*Team member name subject to change based on availability.

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the *<type of product>* for *<project name and location>*. 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 _____ _____

Name Date
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ _____

Name Date
Project Manager
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
Office Symbol

SIGNATURE _____ _____

Name Date
Chief, Planning Division
Office Symbol

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

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	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	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
Home District/MSC	The District or MSC responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MCX	Mandatory Center of Expertise	WRDA	Water Resources Development Act
MSC	Major Subordinate Command		