

REVIEW PLAN

**Mississippi River Between the Ohio and Missouri Rivers (Regulating Works)
Supplemental Environmental Impact Statement (SEIS)**

St. Louis 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 Supplemental Environmental Impact Statement (SEIS) for the Mississippi River Between the Ohio and Missouri Rivers (Regulating Works) Project.

b. References.

- (1) Engineering Circular (EC) 1165-2-214, Civil Works Review, 15 Dec 12
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 11
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 06
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 07
- (5) PMP Project Management Plan, Regulating Works Supplemental Environmental Impact Statement, December 2013
- (6) MVD Regional Quality Management Plan, June 2014
- (7) MVS Quality Management Plan October 1999

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.

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 the peer review effort described in this Review Plan is the Planning Center of Expertise for Inland Navigation Risk-informed Economics Division (PCXIN-RED), located in the Huntington District (CELRH).

3. STUDY INFORMATION

a. Decision Document. The Congress of the United States, through a series of Rivers and Harbors Acts beginning in 1824, authorized the U.S. Army Corps of Engineers to provide a safe and dependable navigation channel on the Middle Mississippi River (MMR), that portion of the Mississippi River between the confluences of the Ohio River and the Missouri River. The most recent authorization stipulates a channel that is 9 feet deep and not less than 300 feet wide, with additional width in bends as required. The purpose of the SEIS is to update the 1976 EIS with new information and evaluate impacts of the current Regulating Works Project. At this time, it is not anticipated that additional Congressional

authorization will be required.

b. Study/Project Description. The ongoing project to maintain navigation on this stretch of river is also commonly referred to as the ‘Regulating Works Project’. For the purposes of the SEIS, the Regulating Works Project includes both construction and operation & maintenance (O&M) activities on the MMR.

The Regulating Works Project utilizes bank stabilization and sediment management to maintain bank stability and ensure adequate navigation depth and width. Construction components of the Regulating Works Project include revetments, river training structures, and rock removal. O&M components of the Regulating Works Project include maintenance dredging, operation of Locks 27, and any needed maintenance to already constructed features.

The long-term goal of the Regulating Works Project, as authorized by Congress, is to provide a sustainable and safe navigation channel and reduce federal expenditures by alleviating the amount of annual maintenance dredging and the occurrence of vessel accidents through the construction component of regulating works. Therefore, pursuant to the Congressionally authorized purpose of the Regulating Works Project, the District continually monitors areas of the MMR that require frequent and costly dredging to determine if a long-term sustainable solution through the construction of river training structures is reasonable. The decision to build a new river training structure is determined by internal engineering analysis and supported by the appropriation of construction funds.

Several years ago the Government Accountability Office (GAO) made a decision to perform an audit of the Regulating Works Project. The report from the GAO audit of the Regulating Works Project was released in December, 2011. Pursuant to the recommendations in the GAO Report, this agency voluntarily decided that we would take a hard look at the overall Regulating Works Project EIS completed in 1976 to determine if it needed to be supplemented pursuant to the CEQ Regulations. After completion of this hard look by a multi-disciplinary district PDT, concurrence of the PDT's hard look report by the PCXIN, and vertical discussions and concurrence, the St. Louis District decided in 2013 that an SEIS for the entire 1976 EIS should be prepared. This decision was made solely because there was a significant amount of new information and circumstances that had developed since 1976 relevant to the Regulating Works Project, and other than major rehabilitation or repairs to Locks 27, no further NEPA documents (EAs or EISs) had been prepared for the Regulating Works Project since 1976. It is important to note that through the hard look of the 1976 EIS, the PDT determined, with concurrence from the PCXIN, that there had not been a substantial change to the Regulating Works Project since 1976, which would require supplementing the 1976 EIS. Therefore, the pending SEIS is not to address the viability of or a change to the Regulating Works Project itself, but the SEIS is solely meant to update the 1976 EIS and evaluate the Regulating Works Project's current impacts through analyzing the new information and circumstances since 1976.



Figure 1. The Middle Mississippi River (MMR)

c. Factors Affecting the Scope and Level of Review. While the passage of time alone is not a cause for supplementing an EIS, the extensive volume of information relating to the environmental impacts of the Regulating Works Project that has been produced since the original 1976 EIS has prompted the St. Louis District to produce a SEIS (as discussed in the previous section). There is a large volume of information to consider in the SEIS. The PDT will be challenged to appropriately categorize and analyze the new information to produce a comprehensive description of the human environment on the MMR and a full and fair discussion of reasonable alternatives.

There is a limited amount of precedent to guide the process for producing the Regulating Works Project SEIS. Almost all NEPA documents are prepared during the planning stage of project development. In this case, the supplement is being prepared well after the planning phase but the project is still under construction. The reason the project is still “under construction” is that new river training structures are still being built to improve the safety and reliability of the MMR while reducing annual maintenance dredging needs. The District will submit the draft SEIS for internal and external reviews.

The SEIS will include a discussion of an ongoing issue relating the construction of river training structures to increases in flood heights. The Corps of Engineers considers public safety to be of paramount importance when designing and evaluating projects. The agency believes strongly that the best available science shows that the Regulating Works Project will not increase flood heights, and consequently the project does not pose a significant risk to public safety. However, the public has raised this as a key issue in their scoping comments for the SEIS. Analysis of river training structures' impact on flood heights has been completed and will be included in the SEIS.

Because of the unique nature of this endeavor, it is anticipated that the SEIS will draw a higher level of public scrutiny and comment than might otherwise be expected. Currently, the PDT anticipates that the SEIS will be limited to the MMR, which is the geographic boundary of the Regulating Works Project. The MMR has separate authorities and project purposes for the remainder of the Mississippi River navigation channel and other non-navigation Corps activities on the Mississippi River. During the scoping phase of this effort, this agency received nearly 20,000 comments on the geographic scope of the effort, many of which requested that the scope be expanded to include all of the Corps' operation and maintenance activities in the Upper Mississippi River-Illinois Waterway navigation system. This area would include all navigable portions of the Mississippi River and major tributaries (except for the Missouri River) upstream of the Ohio River confluence. This issue will continue to be a major topic of discussion as planning on the SEIS progresses.

Also during scoping for the SEIS, the Corps received feedback from state natural resource agencies that mitigation for all negative environmental impacts resulting from activities performed to provide a navigation channel since the production of the 1976 EIS for the Regulating Works project be included in the SEIS. The PDT will continue to ascertain the nature and degree of any adverse environmental effects resulting from the Regulating Works Project, and the amount of mitigation that may be legally required and authorized by law.

To determine the potential need for and quantity of mitigation, a 3D numeric hydraulic model is being used to assess changes in river velocity and depths in response to the construction of training structures. Analysis of velocity and depth data from this model will be used evaluate habitat changes and the ecological value of potential mitigation. However, the exact methodology that will be used is still being developed.

4. DISTRICT QUALITY CONTROL (DQC)

All environmental compliance documents 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. DrCheckssm is the official system for the continuity of the review record and is mandatory for documenting Agency Technical Review (ATR) activities. No such requirement is mandatory for DQC activities. MVS does not mandate its use for DQC purposes, nor is its use prohibited. Given the scope of this project and the high visibility, the use of DrCheckssm is appropriate and necessary.

b. Review Comments. Review Comments shall contain these principal elements:

- (1) A clear statement of the concern,
- (2) The basis for the concern, such as law, policy, or guidance,
- (3) Significance of the concern, and
- (4) Specific actions needed to resolve the comment.

c. Products to Undergo DQC. DQC will be performed on the Draft SEIS and the Final SEIS. In addition, targeted DQC of the H&H modeling will be performed and included in the DQC documentation of the Draft SEIS.

d. Required DQC Expertise. DQC efforts will include the necessary expertise to address compliance with published Corps policy as well as the National Environmental Policy Act (NEPA). The DQC is managed in the District and may be conducted by in-house staff as long as the reviewers are not doing the work involved with the product, including contracted work that is being reviewed. During the DQC review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, should be verified. This includes review of assumptions, methods, procedures, and material used in analysis, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the result, including whether the product meets the customer's needs consistent with law and existing Corps policy. In addition to technical reviews, products will be reviewed for legal sufficiency and policy compliance. Grammatical and editorial comments do not need to be retained for future use (made available to the ATR team) provided the comments are addressed and/or incorporated in a timely manner. These types of comments should be submitted to the DQC Leader via electronic mail using the tracked changes feature in the MS Office compatible document or as a hard copy mark-up. Documentation of DQC activities will be done via DrCheckssm.

- (1) Project Managers: Project Managers shall review the draft report to confirm that work was completed in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Project Managers shall pay particular attention to their disciplines but may also comment on other aspects as appropriate. If Project Managers have no significant comments they shall provide a comment stating this.
- (2) DQC Leader: The DQC Leader is the Technical Lead for Environmental. The DQC Leader shall provide the compiled grammatical and editorial comments to the Project Manager. The DQC Leader will ensure that all substantive comments have been addressed.
- (3) Division Chiefs: Division Chiefs shall review the draft document to confirm that work was completed in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Division Chiefs shall pay particular attention to their disciplines but may also comment on other aspects as appropriate. If Division Chiefs have no significant comments they shall provide a comment stating this.
- (4) Branch Chiefs: Branch Chiefs shall review the draft document to confirm that work was completed in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Branch Chiefs shall pay particular attention to their disciplines but may also comment on other aspects as appropriate. If Branch Chiefs have no significant comments they shall provide a comment stating this.
- (5) Product Delivery Team Members: PDT Members shall review the draft document to confirm that work was completed in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. PDT Members shall pay particular

attention to their disciplines but may also comment on other aspects as appropriate. If PDT Members have no significant comments they shall provide a comment stating this. Regional DQC team members will conduct their duties in accordance with this published process.

e. Procedures.

- (1) Project Manager (PM): The PM will prepare a DQC Compliance Checklist and the DQC Memorandum for Record.
- (2) DQC Leader: The DQC Leader will distribute the documents to the reviewers. The DQC Leader will collect the comments from the other reviewers including editorial, grammatical, and substantive comments. The DQC Leader will compile comments and prepare the DQC Substantive Comment Summary sheet and provide them to the Project Manager.
- (3) PDT: The PDT will provide review throughout preparation of all documents, and will provide all responses to Senior Leader comments to the DQC Leader.
- (4) Senior Leaders: The Senior Leaders, including Branch Chiefs and Section Chiefs, will review the documents distributed and will provide all comments to the DQC Leader. The Senior Leaders will review the DQC Compliance Checklist and fill it out as appropriate. The Senior Leaders will sign the DQC Memorandum for Record.
- (5) The Chief of E&C, Chief of OD, and Chief of PM will review the DQC Substantive Comment Summary sheet and will sign the DQC Memorandum for Record.

The PM will gather all DQC activity documentation and will place into the project files. Hard copies of documentation will be electronically scanned and placed into ProjectWise. All other electronic documents will be placed into ProjectWise.

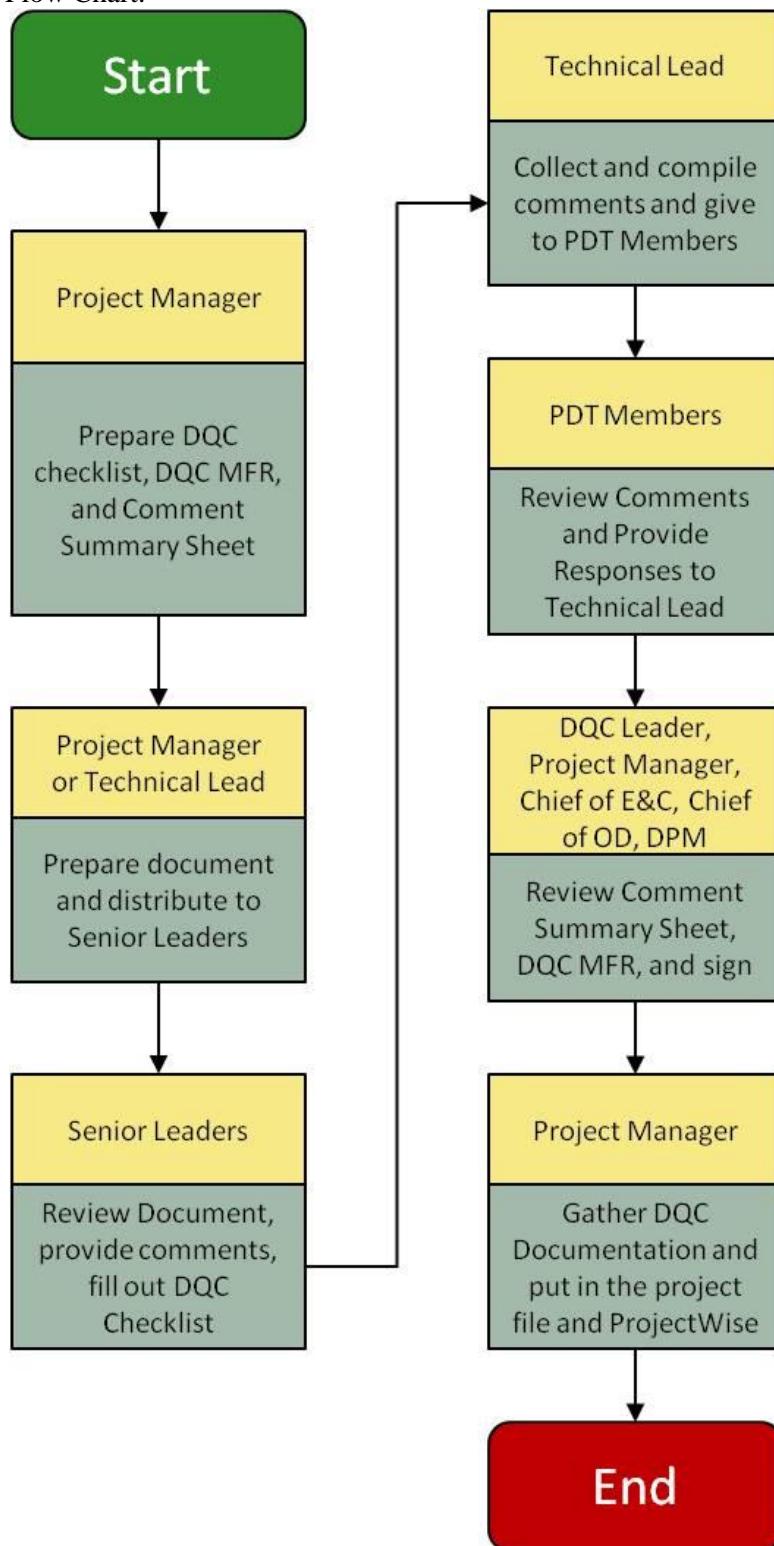
- (6) Records and Measurements. All records will be filed in the central project files in accordance with ES-QMS140, Records Management. Required records are listed in the following table; there are no specific measurement requirements associated with this procedure.

Type	Description	Location and/or Responsible Office	Record Media	Retention	Disposition
R	All DQC Activity Documentation	PM	E and P kept with project files and on ProjectWise	LR	LR
R	Completed Checklist	PM	E and P kept with project files and on ProjectWise	LR	LR
R	Signed DQC Memorandum for Record	PM	E and P kept with project files and on ProjectWise	LR	LR
M	Not Applicable (N/A)	N/A	N/A	N/A	N/A

Description of Terms

Type:	Location/Retention/Disposition	Record Media
R Record	LR Local Requirement	E Electronic
M Measurement		P Paper

Flow Chart.



5. AGENCY TECHNICAL REVIEW (ATR)

The SEIS is an environmental compliance document, and is subject to ATR. The objective of ATR is to ensure consistency with NEPA and the Corps regulations / policies regarding NEPA. 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.

a. Products to Undergo ATR. ATR will be performed for the Draft SEIS. If significant changes result from the IEPR or public review, another limited ATR with the appropriate disciplines may be performed. Technical products that support subsequent analyses should be reviewed prior to being used in the study and may include: surveys & mapping, hydrology & hydraulics, economic, environmental, cultural, and social inventories, annual damage and benefit estimates, cost estimates, etc.

b. Required ATR Team Expertise. The ATRT will be comprised of individuals that have not been involved in the development of the SEIS and will be chosen based on expertise, experience, and/or skills. The members will roughly mirror the composition of the PDT and wherever possible, reside outside of the MSC. In general, the review team members will each have a minimum of 10 years experience and education in their respective discipline. A statement of qualifications is required for each discipline prior to acceptance as a review team member and for any subsequent changes. It is anticipated that the team will consist of about 6 reviewers.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision and NEPA documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Environmental	Team member will be experienced in National Environmental Policy Act (NEPA) process and analysis, and have a background in fisheries biology and environmental issues associated with open river habitat.
Cultural Resources	Team member will be experienced in cultural resources and tribal issues, regulations, and laws.
River Engineering	Team member will be experienced in the field of River Engineering on navigable waterways, with specific expertise in navigation channel design through the use of regulating works (river training structures and revetments) and dredging. Team member will have a thorough understanding of: <ol style="list-style-type: none">Physical effects of river training structures on river bathymetry, velocities, and water surfaces.River data collectionRiver Geomorphology

	River Engineering Modeling Methodologies, both physical and numeric
Operations	Team member will be experienced in the Operation and Maintenance (O&M), specifically channel maintenance dredging, of navigable channels on the inland waterway.

c. **Documentation of ATR.** DrCheckssm 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 DrCheckssm 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 DrCheckssm 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 for the draft report and final report.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

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 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, 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. The SEIS will provide a full and fair discussion of significant environmental impacts associated with the Regulating Works Project and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment on the MMR. EC 1165-2-214 states that IEPR is generally divided into two types, Type I is generally for decision documents and Type II is generally for implementation documents. Since significant controversy or disagreement may arise during the production and/or review of the SEIS, a Type I IEPR will be performed for the SEIS, scoped accordingly for an environmental compliance document.

Type II IEPR, generally for implementation documents, is triggered by potential hazards that pose a significant threat to human life (public safety) that are associated with the project. This is not the case for the SEIS; therefore Type II IEPR is not required and will not be performed.

b. Products to Undergo Type I IEPR. IEPR will be conducted on the Draft SEIS.

c. Required Type 1 IEPR Panel Expertise.

IEPR Team Members/Disciplines	Expertise Required
Environmental	Team member will be experienced in National Environmental Policy Act (NEPA) process and analysis, and have a background in biological or environmental issues associated with regulating works on navigable waterways.
River Engineering	Team member will be experienced in the field of River Engineering on navigable waterways, with specific expertise in navigation channel design through the use of regulating works (river training structures and revetments) and dredging. Team member will have a thorough understanding of: <ul style="list-style-type: none"> a. Physical effects of river training structures on river bathymetry, velocities, and water surfaces. b. River data collection c. River Geomorphology d. River Engineering Modeling Methodologies, both physical and numeric
Operations	Team member will be experienced in the Operation and Maintenance (O&M), specifically channel maintenance dredging, of navigable channels on the inland waterway.
Cultural Resources	Team member will be experienced in cultural resources and tribal issues, regulations, and laws.

d. Documentation of Type I IEPR. The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-214, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the information discussed and how that information was utilized to draw conclusions about the environmental impacts of the actions covered in the SEIS. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The OEO will prepare a final Review Report that will accompany the publication of the final document and shall:

- 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; 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.

The final Review Report will be submitted by the OEO no later than 42 days following the Kickoff Meeting for the IEPR. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

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. 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 is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

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 SEIS: None have been identified yet; if a model is either developed or selected to help determine mitigation requirements, potential review needs will be coordinated with the RMO and the Ecosystem Restoration PCX.

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
Model TBD		

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
CCHE3D Hydrodynamic Model	The CCHE3D model resolves three dimensional flows throughout an eighteen mile study reach for three in-bank flows on the Middle Mississippi River. The model output will be used to quantify aquatic habitat through depth and velocity fields around numerous river training structures	Seeking CoP Approval

	configurations at different flows. The data for each structure configuration and study area within the eighteen mile model reach will be compared to each other to evaluate changes in different habitat types resulting from future and past river training construction.	

9. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost.

The timing and schedule for the ATR shall be as follows:

- (1) The ATR will be conducted on the Draft Final SEIS.
- (2) The PDT will hold a “page-turn” session to review the draft report to ensure consistency across the disciplines and resolve any issues prior to the start of ATR. Writer/editor services will be performed on the draft prior to ATR as well.
- (3) The ATR process for this document will follow the following timeline. Actual dates will be scheduled once the period draws closer. All products produced for these milestones will be reviewed.

ATR Timeline

Task	Date
Start ATR for Draft SEIS	9/17/16
Complete ATR for Draft SEIS	11/15/16

The funding plan for the ATR is as follows:

- The PDT district shall provide labor funding by cross charge labor codes. Funding for travel, if needed, will be provided. The project manager will work with the ATR Leader to ensure that adequate funding is available and is commensurate with the level of review needed. The current cost estimate for review of the draft SEIS is [REDACTED]. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring.
- The ATR Leader shall provide organization codes for each team member and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes.
- Reviewers shall monitor individual labor code balances and alert the ATR Lead to any possible funding shortages.

b. Type I IEPR Schedule and Cost.

The timing and schedule for the IEPR shall be as follows:

- (1) The Type I IEPR will be conducted on the Draft SEIS.
- (2) The PDT will hold a “page-turn” session to review the draft report to ensure consistency across the disciplines and resolve any issues prior to the start of the Type I IEPR. Writer/editor services will be performed on the draft prior to IEPR as well.
- (3) The IEPR process for this document will follow the following timeline. Actual dates will be scheduled once the period draws closer. All products produced for these milestones will be reviewed.

Type I IEPR Timeline

Task ²	Dates ¹
PDT (Project Delivery Team) contacts PCX-IN RED to request IEPR support; PCX assigns an IEPR Lead; PDT provides funds for the IEPR Lead	6/6/16
IEPR Lead develops the IEPR Scope of Work (SOW)/ Government Estimate in collaboration with PDT and submits to IWR (Institute for Water Resources) or ARO ³ (Army Research Office); PDT provides funds to IWR or ARO for the contract	6/6/16 – 7/1/16
IWR or ARO awards IEPR contract to OEO (Outside Eligible Organization) and issues Notice to Proceed (NTP)	7/4/16 – 8/5/16
OEO identifies panel members and completes panel member subcontracts	8/8/16 – 9/16/16
Kickoff meeting with PDT, IEPR Lead, OEO, and IEPR Panel; IEPR Panel initiates its review	9/19/16 or 9/20/16
OEO completes Final IEPR Report documenting the final Panel comments	9/21/16 – 11/4/16
PDT coordinates responses to the IEPR Panel comments with OEO and Panel	11/7/16 – 12/16/16
PDT prepares the written proposed USACE response to IEPR comments for processing through the MVD RIT (Regional Integration Team)	12/19/16 – 1/13/17

¹These durations reflect the most recent experiences of the PCXs and, while generally consistent with the Type I IEPR SOP, may not exactly match the durations shown in the SOP.

²These action descriptions are intended to illustrate the general timeline for completing a Type I IEPR and do not account for all the required actions. See the SOP for more information on the specific actions required.

³ARO may be the appropriate contracting office for Type I IEPR in specific cases. The responsible PCX can work with the PDT to determine if ARO is the appropriate contracting office for a given study.

The funding plan for the Type I IEPR is as follows:

- The PDT district shall provide labor funding by cross charge labor codes and contractual PR&Cs. Funding for travel, if needed, will be provided. The project manager will work with the IEPR Leader to ensure that adequate funding is available and is commensurate with the level of review needed. The current cost estimate for Type I IEPR of the draft SEIS is [REDACTED] (including the cost of PDT participation). Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring.
- The IEPR Leader shall provide organization codes for each team member and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes and contractual PR&Cs.

10. PUBLIC PARTICIPATION

The public and any agencies having jurisdiction by law will have the opportunity to participate in the SEIS as part of the NEPA process. Public/Agency input will be sought during the Scoping process. The Draft SEIS will also be available for public review after all internal reviews have been completed. DQC, ATR, and IEPR results will be included in the Draft SEIS and will be subject to Public/Agency reviews. CEQ Regulation 1503, Commenting, states that after preparing a draft EIS (or SEIS, in this case), and before

preparing a final EIS (SEIS, in this case) the agency shall:

- (1) Obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce environmental standards.
- (2) Request the comments of:
 - i. Appropriate State and local agencies which are authorized to develop and enforce environmental standards;
 - ii. Indian tribes, when the effects may be on a reservation; and
 - iii. Any agency which has requested that it receive statements on actions of the kind proposed.

ATR certification is required for the draft report; ATR certification may be required on the final report, if there are significant changes from the draft. The certification document is developed by the PDT District. See Attachment 2 for ATR certification statement. The review report prepared by the ATRT Lead is the basis for the District's certification of ATR.

11. REVIEW PLAN APPROVAL AND UPDATES

The Mississippi Valley 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 decision document. 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, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

12. REVIEW PLAN POINTS OF CONTACT

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

- a. **District POC:** Project Manager – 314-331-8169
- b. **MSC (MVD) POC:** St. Louis District Support Team – 601-634-5293
- c. **RMO (PCXIN-RED) POC:** Review Manager – 304-399-5848

ATTACHMENT 1: TEAM ROSTERS**PROJECT DELIVERY TEAM**

Name	Discipline	Phone	Email
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

AGENCY TECHNICAL REVIEW TEAM

Name	Discipline	Phone	Email
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
TBD	Environmental		
TBD	River Engineering		
TBD	Cultural Resources		
TBD	Construction/Operations		

VERTICAL TEAM

Name	Discipline	Phone	Email
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

**PLANNING CENTER OF EXPERTISE
INLAND NAVIGATION**

Name	Discipline	Phone	Email
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

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 SEIS for the Mississippi River Between the Ohio and Missouri Rivers (Regulating Works) 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 DrCheckssm.

SIGNATURE _____ Date _____

Name
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ Date _____

Name
Project Manager
Office Symbol

SIGNATURE _____ Date _____

Name
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 _____ Date _____

Name
Chief, Engineering Division
Office Symbol

SIGNATURE _____ Date _____

Name
Chief, Operations Division
Office Symbol

SIGNATURE _____ Date _____

Name
Chief, Planning Division
Office Symbol

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>
ASA	Assistant Secretary of the Army
ATR	Agency Technical Review
ATRT	Agency Technical Review Team
CEFMS	Corps of Engineers Financial Management System
DQC	District Quality Control/Quality Assurance
DST	District Support Team
DX	Directory of Expertise
EC	Engineer Circular
EIS	Environmental Impact Statement
ER	Engineering Regulation
Home District/MSC	The District or MSC responsible for the preparation of the decision document
HQUSACE	Headquarters, U.S. Army Corps of Engineers
IEPR	Independent External Peer Review
ITR	Independent Technical Review
MCACES	Micro-Computer Aided Cost Estimating System
MMR	Middle Mississippi River
MSC	Major Subordinate Command
MS	Microsoft
MVD	Mississippi Valley Division
NAS	National Academy of Sciences
NEPA	National Environmental Policy Act
O&M	Operation and maintenance
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
PCoP	Planning Community of Practice
PCX	Planning Center of Expertise
PCXIN	Planning Center of Expertise for Inland Navigation
PDT	Project Delivery Team
PL	Public Law
PM	Project Manager
PMP	Project Management Plan
PR&C	Purchase Request and Commitment
QA	Quality Assurance
QASP	Quality Assurance Surveillance Plan
QC	Quality Control
QMP	Quality Management Plan
QMS	Quality Management System
RIT	Regional Integration Team
RMC	Risk Management Center
RMO	Review Management Organization
RTS	Regional Technical Specialist
SAR	Safety Assurance Review
SEIS	Supplemental Environmental Impact Statement
USACE	U.S. Army Corps of Engineers