DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, MISSISSIPPI VALLEY DIVISION
P.O. BOX 80
VICKSBURG, MISSISSIPPI 39181-0080

CEMVD-PD

16 MAR 2020

MEMORANDUM FOR Commander, Rock Island District

SUBJECT: Approval of the Review Plan for the Upper Mississippi River Restoration Program, Green Island Habitat Rehabilitation and Enhancement Project, Jackson County, Iowa, Mississippi River Pool 13, River 548.5

1. References:

a. Memorandum, Rock Island District, 11 February 2020, subject: Upper Mississippi River Restoration Program, Green Island Habitat Rehabilitation and Enhancement Project, Jackson County, Iowa, Mississippi River Pool 13, River Mile 548.5-546.0, Review Plan (RP).

b. EC 1165-2-217, Review Policy for Civil Works, 20 February 2018.

2. The enclosed Review Plan (RP) for the Green Island Habitat Rehabilitation and Enhancement Project has been prepared in accordance with EC 1165-2-217 and has been coordinated with MVD Staff who concurred with the RP.

3. The MVD hereby approves this RP, which is subject to change as circumstances require, consistent with project development under the Project Delivery Business Process. Non-substantive changes to this RP do not require further approval. Substantive revisions to this RP or its execution will require new written approval from this office. The district should post the approved RP to its public website, with sensitive information removed.

4. The MVD point of contact for this action is Mr. Jim Cole, CEMVD-PDM, at telephone number (601) 634-5293.

BUILDING STRONG and Taking Care of People!

Renee N. Turner

Encl

RENEE N. TURNER
Interim, Programs Director
Mississippi Valley Division

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ROCK ISLAND DISTRICT
PO BOX 2004 CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61204-2004

CEMVR-PD-F

FEB 11 2020

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Mississippi Valley Division (CEMVD-PD-SP/Riggs), PO Box 80, 1400 Walnut Street, Vicksburg, Mississippi 39181-0080

SUBJECT: Upper Mississippi River Restoration, Green Island Habitat Rehabilitation and Enhancement Project, Jackson County, Iowa, Mississippi River Pool 13, River Mile 548.5-546.0, Review Plan (RP)

1. Enclosed for MVD's review and approval is the Subject RP. The Rock Island District prepared the RP in accordance with EC-1165-2-217 using the MVD Model Review Plan for UMRR and referencing the UMRR Programmatic Review Plan.

2. The project is in the Plan Formulation phase of the Feasibility Study. The enclosed RP is for the decision document titled *Green Island Feasibility Report with Integrated Environmental Assessment*. A separate RP will be developed for implementation documents during the implementation phase of the project.

3. The points of contact for this action are Mr. Nicholas Thorson, Study Manager, (309) 794-5349, or email: nicholas.c.thorson@usace.army.mil, and Mrs. Julie Millhollin, Project Manager, (309) 794-5214, or email: julie.l.millhollin@usace.army.mil.

ENCL

STEVEN M. SATTINGER
COL, EN
Commanding

# GREEN ISLAND HABITAT REHABILITATION AND ENHANCEMENT PROJECT

# REVIEW PLAN

**P2 #472045**

**07 FEBRUARY 2020**

**Document History**

| VERSION | DATE | REVISION DESCRIPTION | DATE APPROVED | APPROVED BY |
|---|---|---|---|---|
| Original | 07FEB2020 | Draft Review Plan | | |
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US Army Corps of Engineers ®
Rock Island District

# MVD DECISION DOCUMENT REVIEW PLAN
# FEBRUARY 2020

**Project Name:** Green Island Habitat Rehabilitation and Enhancement Project (HREP), Upper Mississippi River Restoration (UMRR) Jackson County, Iowa

**P2 Number: 472045**

**Decision Document Type:** Integrated Feasibility Report

**Project Type:** Ecosystem Restoration

**District:** Rock Island District
**District Contact:** Nicholas Thorson Regional Planner (309) 794-5349
Julie Millhollin MVR Project Manager (309) 794-5214

**Major Subordinate Command (MSC):** Mississippi Valley Division
**MSC Contact:** Mary LeAnn Riggs (601) 634-5075

**Review Management Organization (RMO):** Mississippi Valley Division
**RMO Contact:** Matthew Mallard (601) 634-5869

**Key Review Plan Dates**

**Date of RMO Endorsement of Review Plan:** *(Pending)*
**Date of MSC Approval of Review Plan:** *(Pending)*
**Date of IEPR Exclusion Approval:** *(N/A)*
**Has the Review Plan changed since RMO Endorsement?** *(No)*
**Date of Last Review Plan Revision:** *(None)*
**Date of Review Plan Web Posting:** *(Pending)*
**Date of Congressional Notifications:** *(N/A)*

**Milestone Schedule**

| | Scheduled | Actual | Complete |
|---|---|---|---|
| **Alternatives Milestone:** | *(06/16/20)* | *(enter date)* | *(No)* |
| **Tentatively Selected Plan:** | *(12/16/20)* | *(enter date)* | *(No)* |
| **Release Draft Report to Public:** | *(05/30/21)* | *(enter date)* | *(No)* |
| **Agency Decision Milestone:** | *(08/30/21)* | *(enter date)* | *(No)* |
| **Final Report Transmittal:** | *(10/24/21)* | *(enter date)* | *(No)* |
| **Senior Leaders Briefing:** | *(12/20/21)* | *(enter date)* | *(No)* |

# PROJECT FACT SHEET
# FEBRUARY 2020

**Project Name:** Green Island Habitat Rehabilitation and Enhancement Project (HREP), Upper Mississippi River Restoration (UMRR)

**Location:** Jackson County, Iowa, Pool 13 - Mississippi River Mile 548.5 - 546.0

**Authority:** Section 1103 of the Water Resource Development Act of 1986 (Public Law 99-662)

**Sponsor:** Iowa Department of Natural Resources

**Type of Study:** Ecosystem Restoration Feasibility Study

**SMART Planning Status:** N/A

**Project Area:** The project area is located within Green Island Wildlife Management Area (Figure 1) at the confluence of the Maquoketa and Mississippi Rivers. The project area consists of a managed wetland complex that includes shallow lakes, emergent vegetation, managed moist soil units, and braided channels surrounded by degrading riparian timber. Five degraded 1950s-era drainage ditches, which are remnants of the area's farming history, are present and provide for some water control within the project area.

**Problem Statement:** Limited water level management ability has resulted in prolonged high water within the Green Island Wildlife Management Area, detrimentally impacting both terrestrial and aquatic vegetation communities and reducing the quality and quantity of available habitat. Sedimentation has resulted in the loss of depth diversity, further contributing to the detrimental effects associated with high water. In addition, the Green Island Wildlife Management Area lacks the topographic and depth diversity required to support a sustainable habitat for native waterfowl, fish and other species.

**Federal Interest:** UMRR Habitat Restoration and Enhancement Project

**Project Objectives:** Project objectives were initially derived from the Environmental Pool Plans, Pools 11 through 22, the Habitat Needs Assessment II, and Reach Planning efforts. These project objectives are consistent with the systemic objectives adopted in January of 2008 by the UMRRU, now referred to as the UMRR Coordinating Committee, and the Navigation Environmental Coordination Committee. Project objectives were further refined during the Project's initial planning charrette in coordination with the U.S. Fish and Wildlife Service and the local sponsor, the Iowa DNR. Project objectives include:

- restoring the quality, quantity and diversity of vegetation within the Green Island project area, including emergent, submerged aquatic and forest vegetation;
- improving sediment management across the Green Island project area and reduce the impacts of sedimentation to existing habitat and restored habitats;
- restoring Green Island aquatic ecosystems for fish and other aquatic organisms by increasing the quality and quantity of aquatic habitat available;
- developing a sustainable water level management plan, which would allow for improved management of existing habitat and associated plant and wildlife resources within Green Island; and
- restoring bathymetric and topographic diversity within the Green Island project area.

**Potential Project Features:** Opportunities for improved water level management will be assessed for the purposes of vegetation restoration and regeneration, which would contribute to improved habitat for waterfowl, fish, and other native species. Restoration of aquatic habitat quality through increased depth diversity, and the restoration and regeneration of floodplain forest habitat will also be evaluated.

**Risk Identification:** There are no significant risks to life or environment in completing this project.

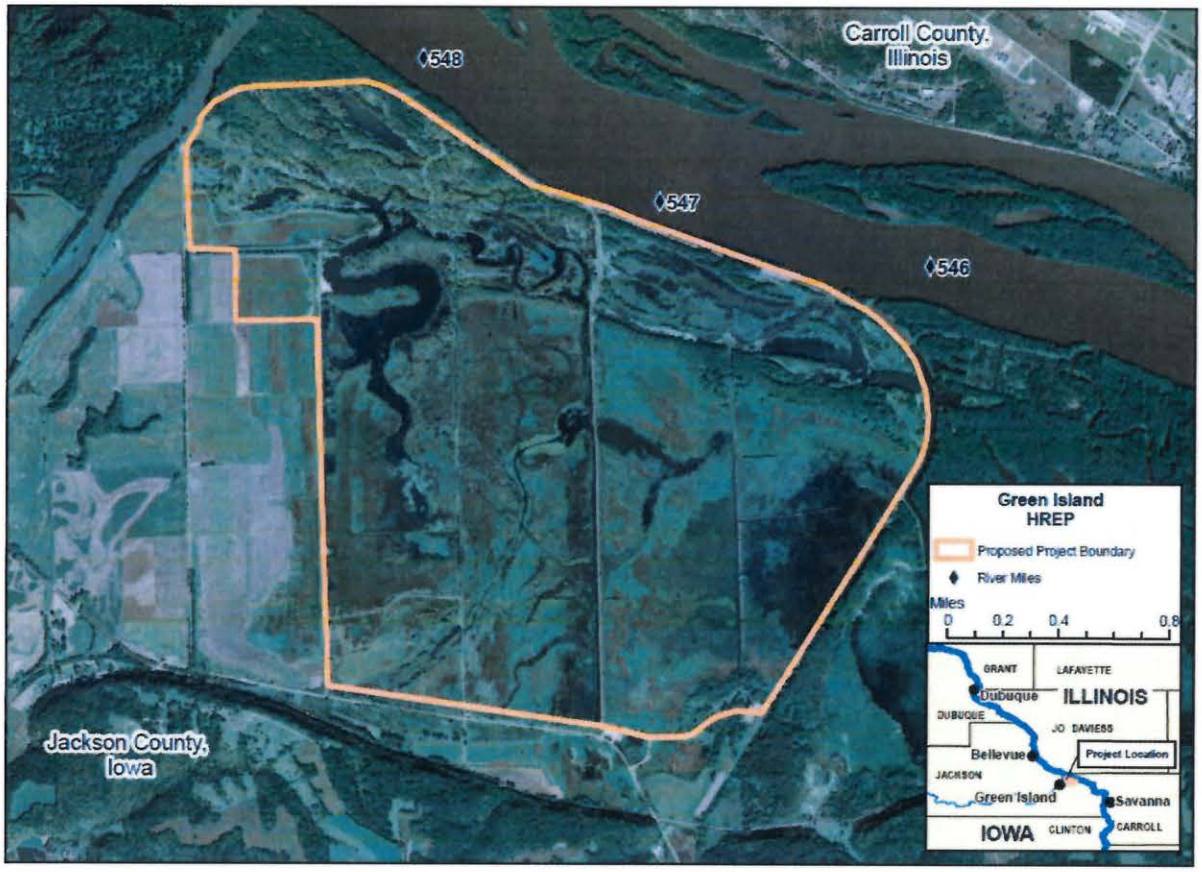


**Figure 1.** Project Area Map

## 1. FACTORS AFFECTING THE LEVELS AND SCOPE OF REVIEWS

### Mandatory IEPR Triggers

- Is the estimated total project cost, including mitigation, greater than $200 million? No
- Has the Governor of an affected state requested a peer review by independent experts? No
- Will an Environmental Impact Statement be prepared as part of the study? No
- Will the project likely involve significant public dispute as to the project's size, nature, or effects? No
- Is the project/study likely to involve significant public dispute as to the economic or environmental cost or benefit of the project? No

### Scope of Review

- Will the study likely be challenging? No
- Provide a preliminary assessment of where the project risks are likely to occur and assess the magnitude of those risks. Real estate, not to induce flooding. Both are being mitigated by extensive review of data.
- Is the project likely to be justified by life safety or is the study or project likely to involve significant life safety issues? No
- Is the information in the decision document or anticipated project design likely to be based on novel methods, involve 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? No
- Does the project design require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design/construction schedule? No
- Is the project expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources? No
- Is the project expected to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures? No
- Is the project expected to have, before mitigation measures, more than a negligible adverse impact on an endangered or threatened species or their designated critical habitat? No

## 2. REVIEW EXECUTION PLAN

This section describes each level of review to be conducted. Based upon the factors discussed in Section 1, this study will undergo the following types of reviews:

**District Quality Control.** All decision documents (including data, analyses, environmental compliance documents, etc.) undergo DQC. This internal review process covers basic science and engineering work products. It fulfils the project quality requirements of the Project Management Plan.

**Agency Technical Review.** ATR is performed by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. These teams will be comprised of certified USACE personnel. The ATR team lead will be from outside the home MSC. If significant life safety issues are involved in a study or project, a Safety Assurance Review should be conducted during ATR.

**Cost Engineering Review.** All decision documents shall be coordinated with the Cost Engineering Mandatory of Expertise (MCX). The MCX will assist in determining the expertise needed on the ATR and IEPR teams. The MCX will provide the Cost Engineering certification. The RMO is responsible for coordinating with the MCX for the reviews. These reviews typically occur as part of ATR.

**Policy and Legal Review.** All decision documents will be reviewed for compliance with law and policy. ER 1105-2-100, Appendix H, and Director's Policy Memorandum 2019-01, both provide guidance on policy and legal compliance reviews. These reviews culminate in determinations that report recommendations 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.

Table 1 provides the schedules and costs for reviews. The specific expertise required for the teams are identified in later subsections covering each review. These subsections also identify requirements, special reporting provisions, and sources of more information.

**Table 1:** Schedule and Costs of Review

| Product(s) To Undergo Review | Review Level | Start Date | End Date | Cost | Complete |
|---|---|---|---|---|---|
| Planning Model Review | Model Review (see EC 1105-2-412) | N/A | N/A | $0 | NA |
| Draft Feasibility Report/EA or EIS | District Quality Control | 02/01/21 | 04/01/21 | $38,000 | No |
| Draft Feasibility Report/EA or EIS | Agency Technical Review | 04/30/21 | 06/15/21 | $56,000 | No |
| Draft Feasibility Report/EA or EIS | Type I IEPR, Scoping (Corps costs) | N/A | N/A | $0 | NA |
| Draft Feasibility Report/EA or EIS | Type I IEPR, Contractor Review | N/A | N/A | $0 | NA |
| Final Feasibility Report/EA or EIS | Policy and Legal Review | 09/14/21 | 10/24/21 | $0 | No |

## A. DISTRICT QUALITY CONTROL

The home district shall manage DQC and will appoint a DQC Lead to manage the local review (see EC 1165-2-217, section 8.a.1). The DQC Lead should prepare a DQC Plan and provide it to the RMO and MSC prior to starting DQC reviews. Table 2 identifies the required expertise for the DQC team.

**Table 2:** Required DQC Expertise

| DQC Team Disciplines | Expertise Required |
|---|---|
| DQC Lead | A senior professional with extensive experience preparing Civil Works decision documents and conducting DQC. The lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc). |
| Planning | A senior water resources planner with experience in large river ecosystem restoration projects |
| Economics | A senior Economist with experience in non-structural cost projection. |
| Environmental Resources | A senior Environmental Specialist with experience in large river ecosystem and wetland complex restoration projects. |
| Cultural Resources | A senior Cultural Resource Specialist (this review may be combined under Environmental Resources) |
| Hydrology | A senior Hydrologist with experience in large river ecosystem and wetland complex restoration. |
| Hydraulic Engineering | A senior H&H Engineer with experience with 2-dimensional models. Senior Water Quality Specialist with experience in large river ecosystem and wetland complex restoration projects. |
| Geotechnical Engineering | A senior Geotechnical Engineer with experience in backwater dredging and berm/island construction. |
| Cost Engineering | A senior Cost Engineer with experience in large river ecosystem and wetland complex restoration projects. |
| Real Estate | A senior Realty Specialist with experience in Federal lands and MOUs. |
| HTRW | May not be needed depending on Recommended Plan; environmental engineer should be able to serve this role. |
| Office of Counsel | An Assistant District Counsel member as determined by District Counsel |
| Program Management | Upper Mississippi River Restoration Regional Program Manager |
| Structural Engineering | A senior Structural Engineer with experience in pump house design and construction. |

**Documentation of DQC.** Quality Control should be performed continuously. A specific certification of DQC completion is required at the draft and final report stages. Documentation of DQC should follow the District Quality Manual and the MSC Quality Management Plan. An example DQC Certification statement is provided in EC 1165-2-217, on page 19 (see Figure F).

Documentation of completed DQC should be provided to the MSC, RMO and ATR Team leader prior to initiating an ATR. The ATR team will examine DQC records and comment in the ATR report on the adequacy of the DQC effort. Missing or inadequate DQC documentation can result in delays to the start of other reviews (see EC 1165-2-217, section 9).

## B. AGENCY TECHNICAL REVIEW

The ATR will assess whether the analyses are technically correct and comply with guidance, and that documents explain the analyses and results in a clear manner. The RMO manages ATR. The review is conducted by an ATR Team whose members are certified to perform reviews. Lists of certified reviewers are maintained by the various technical Communities of Practice (see EC 1165-2-217, section 9(h)(1)). Table 3 identifies the disciplines and required expertise for this ATR Team.

**Table 3:** Required ATR Team Expertise

| ATR Team Disciplines | Expertise Required |
|---|---|
| ATR Lead<br>(the ATR Lead should be from outside of the home MSC) | A senior professional with extensive experience preparing Civil Works decision documents and conducting ATR. The lead should have the skills to manage a virtual team through an ATR. The lead may serve as a reviewer for a specific discipline (such as planning). |
| Planning | A senior water resources planner with experience in wetland complex restoration projects |
| Economics | A senior Economist with experience in… |
| Environmental Resources | A senior Environmental Specialist with experience in wetland complex ecosystem restoration projects, NEPA compliance, ecological modeling, and Certified Reviewer with IWR-Plan Experience. |
| Cultural Resources | A senior Cultural Resource Specialist (this review may be combined under Environmental Resources) |
| Hydrology | A senior Hydrologist with experience in large river ecosystem and wetland complex restoration. |
| Hydraulic Engineering | A senior Hydraulic Engineer with a thorough understanding of non-structural solutions. |
| Geotechnical Engineering | A senior Geotechnical Engineer with experience in backwater dredging and berm/island construction. |
| Cost Engineering | Nominated by Cost MCX. |
| Real Estate | A senior Realty Specialist with experience in Federal lands and MOUs. |
| Climate Preparedness and Resilience CoP Reviewer | A member of the Climate Preparedness and Resiliency Community of Practice will participate in the ATR review. |
| Structural Engineer | A senior Structural Engineer with experience in pump house design and construction. |

**Documentation of ATR.** DrChecks will be used to document all ATR comments, responses and resolutions. Comments should be limited to those needed to ensure product adequacy. If a concern cannot be resolved by the ATR team and PDT, it will be elevated to the vertical team to resolve using the EC 1165-2-217 issue resolution process. Concerns can be closed in DrChecks by noting the concern has been elevated. The ATR Lead will prepare a Statement of Technical Review (see EC 1165-2-217, Section 9), for the draft and final reports, certifying that review issues have been resolved or elevated. ATR may be certified when all concerns are resolved or referred to the vertical team and the ATR documentation is complete.

## C. INDEPENDENT EXTERNAL PEER REVIEW

A programmatic exclusion for the UMRR Program was approved February 22, 2012.

**Decision on Safety Assurance Review.** A Safety Assurance Review is not needed.

## D. MODEL CERTIFICATION OR 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 are any models and analytical tools used 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 a planning product. The selection and application of the model and the input and

output data is the responsibility of the users and is subject to DQC, ATR, and IEPR. The models listed in Table 4 may be used to develop the decision document:

**Table 4:** Planning Models

| Model Name and Version | Brief Model Description and How It Will Be Used in the Study | Certification / Approval |
|---|---|---|
| IWR-Plan | The Institute of Water Resources developed the IWR-Plan as accounting software to compare habitat benefits among alternatives.<br><br>This model will be used to determine best buy alternatives and incremental cost analysis of alternatives. | Certified |
| Habitat Evaluation Procedures (HEP) – Habitat Suitability Index (HSI) Models | HEP is a species-habitat approach to assessing the quality of habitat for selected evaluation species serving as proxies for the considered habitat type. The Habitat quality is documented with a HSI score on a scale of 0-1. This value is derived from an evaluation of key habitat components necessary for the reproduction, growth, and survival of the species support by the habitat.<br><br>HSI models being considered include Bluegill, Northern Pike, Yellow Perch, Black Capped Chickadee, and dabbling duck, although other HSI models may be considered, as appropriate, as plan formulation progresses. | All listed HSI models are approved for regional use within described geographic regions. |

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. The professional practice of documenting the application of the software and modeling results will be followed. The USACE Scientific and Engineering Technology Initiative has identified many engineering models as preferred or acceptable for use in studies. These models should be used when 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. The models listed in Table 5 may be used to develop the decision document.

**Table 5:** Engineering Models

| Model Name and Version | Brief Model Description and How It Will Be Used in the Study | Approval Status |
|---|---|---|
| HEC-RAS Version 5 | The HEC-RAS program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program will be used to compute downstream water surface profiles associated with pool drawdown. | CoP Preferred |
| HEC-SSP Version 2.1.1 | The HEC-SSP will be used to perform statistical analyses of hydrologic data to produce duration curves along the Mississippi River. | CoP Preferred |
| Micro-Computer Aided Cost Engineering System (MCACES) MII Version 3.0 | MCACES is a cost estimation model used to estimate costs for the HREP. | Certified |

## E. POLICY AND LEGAL REVIEW

Policy and legal compliance reviews for draft and final planning decision documents are delegated to the MSC (see Director's Policy Memorandum 2018-05, paragraph 9).

**(i) Policy Review.** The policy review team is identified through the collaboration of the MSC Chief of Planning and Policy and the HQUSACE Chief of the Office of Water Project Review. The team is identified in Attachment 1 of this Review Plan. The makeup of the Policy Review team will be drawn from Headquarters (HQUSACE), the MSC, the Planning Centers of Expertise, and other review resources as needed.

- The Policy Review Team will be invited to participate in key meetings during the development of decision documents as well as SMART Planning Milestone meetings. These engagements may include In-Progress Reviews, Issue Resolution Conferences or other vertical team meetings plus the milestone events.

- The input from the Policy Review team should be documented in a Memorandum for the Record (MFR) produced for each engagement with the team. The MFR should be distributed to all meeting participants.

- In addition, teams may choose to capture some of the policy review input in a risk register if appropriate. These items should be highlighted at future meetings until the issues are resolved. Any key decisions on how to address risk or other considerations should be documented in an MFR.

**(ii) Legal Review.** Representatives from the Office of Counsel will be assigned to participate in reviews. Members may participate from the District, MSC and HQUSACE. The MSC Chief of Planning and Policy will coordinate membership and participation with the office chiefs.

- In some cases legal review input may be captured in the MFR for the particular meeting or milestone. In other cases, a separate legal memorandum may be used to document the input from the Office of Counsel.

- Each participating Office of Counsel will determine how to document legal review input.

## ATTACHMENT 1: TEAM ROSTERS

### PROJECT DELIVERY TEAM

| Name | Office | Position |
|---|---|---|
| Nick Thorson | PD-F | Planner |
| Jesse Ray | PD-C | Biologist |
| Kelsey Myers | PD-P | Archeologist |
| Jordan Lucas | PD-E | Economist |
| Julie Millhollin | PM-M | Project Manager |
| Amanda Ross | PM-M | Geographic Information Systems Mapping |
| Dedric Bland | EC-DN | Environmental Engineer - Lead |
| Steve Gustafson | EC-DN | HTRW |
| Dan Black | EC-G | Geologist |
| Felix Castro | EC-G | Geotechnical |
| Lucie Sawyer | EC-HQ | Hydraulic Engineer |
| Leo Keller | EC-HQ | Water Quality |
| Rebecca Elliot | OC | Assistant District Counsel |
| Ben Vandermyde | OD-MN | Forester |
| Micki Meier | RE-A | Reality Specialist |
| Kirk Hansen | IDNR | River Habitat Coordinator |
| Curt Kemmer | IDNR | Natural Resource Biologist |
| Scott Gritters | IDNR | Fisheries Biologist |
| Kyle Bales | IDNR | Vegetation Specialist-LTRM |
| Tyler Porter | FWS | Fish and Wildlife Biologist |
| Nathan Williams | FWS | Fish and Wildlife Biologist |

## DISTRICT QUALITY CONTROL

| Name | Position | Experience |
|---|---|---|
| Karla Sparks | Plan Formulation Section Chief | Karla has 10 years of professional expertise planning large river ecosystem and wetland complex restoration projects. |
| Anthony Heddlesten | Civil/Environmental Engineering Section Chief | Anthony has 12 years of experience as a civil and environmental engineer designing habitat restoration projects along with other general civil engineering work. |
| Jim Ross | Environmental Compliance Section Chief | Jim is a senior Archeologist with over 25 years of experience in large river ecosystem restoration projects, NEPA compliance, ecological modeling, and is a Certified Reviewer with IWR-Plan Experience. |
| Nicole Manasco | Water Quality and Sedimentation Section Chief | Nicole is a senior Water Quality Specialist with 20 years of combined biologist/hydrologist experience monitoring and evaluating potential effects of large river navigation and ecosystem restoration projects. |
| Matt Stewart | Geotechnical Branch Chief | Matt is a senior Geotechnical Engineer with experience in backwater dredging and berm/island construction. |
| TBD | Assistant District Counsel | Team member will be determined by District Counsel. |
| Marshall Plumley | Regional Program Manager | Marshall has extensive experience in Corps planning and serves as the Upper Mississippi River Restoration Regional Program Manager. |
| Charles Van Laarhoven | Supervisory Engineer – Cost | Charles is a senior Cost Engineer with experience in large river ecosystem and wetland complex restoration projects. |
| Matt Quinn | Acquisition Branch Chief | Matt is a Realty Specialist with experience in Federal lands and MOUs. |

## AGENCY TECHNICAL REVIEW

| Name | Position | Experience |
|---|---|---|
| TBD | ATR Lead (the ATR Lead should be from outside of the home MSC) | A senior professional with extensive experience preparing Civil Works decision documents and conducting ATR. The lead should have the skills to manage a virtual team through an ATR. The lead may serve as a reviewer for a specific discipline (such as planning). |
| TBD | Planning | A senior water resources planner with experience in wetland complex restoration projects |
| TBD | Economics | A senior Economist with experience in… |
| TBD | Environmental Resources | A senior Environmental Specialist with experience in wetland complex ecosystem restoration projects, NEPA compliance, ecological modeling, and Certified Reviewer with IWR-Plan Experience. |
| TBD | Cultural Resources | A senior Cultural Resource Specialist (this review may be combined under Environmental Resources) |
| TBD | Hydrology | A senior Hydrologist with experience in large river ecosystem and wetland complex ecosystem restoration. |
| TBD | Hydraulic Engineering | A senior Hydraulic Engineer with a thorough understanding of non-structural solutions. |
| TBD | Geotechnical Engineering | A senior Geotechnical Engineer with experience in backwater dredging and berm/island construction. |
| TBD | Cost Engineering | Nominated by Cost MCX. |
| TBD | Real Estate | A senior Realty Specialist with experience in Federal lands and MOUs. |
| TBD | Climate Preparedness and Resilience CoP Reviewer | A member of the Climate Preparedness and Resiliency Community of Practice will participate in the ATR review. |
| TBD | Structural Engineer | A senior Structural Engineer with experience in pump house design and construction. |

## POLICY AND LEGAL COMPLIANCE REVIEW TEAM

| Name | Office | Position |
|---|---|---|
| Gary Young | PD-L | Chief, Planning Division & Ecosystem PCX |
| Matt Mallard | PD-P | Deputy, Planning |
| Sean Mickal | PD-P | Senior Environmental Planner |
| Crorey Lawton | PD-P | Planning Specialist |
| James Briggs | PD-R | Acquisition & Planning SME |