

Virtual

Upper Mississippi River Restoration Program Coordinating Committee

Quarterly Meeting

February 28, 2024

**Agenda
with
Background
and
Supporting Materials**

Upper Mississippi River Restoration Program Coordinating Committee

February 28, 2024

Agenda

[Note: The states, U.S. Army Corps of Engineers, and the Department of the Interior will arrange their respective pre-meetings via conference call prior to the February 28, 2024 quarterly meeting.]

Wednesday, February 28 UMRR Coordinating Committee Quarterly Meeting

Time	Topic	Presenter
8:00 a.m.	Welcome and Introductions	Thatch Shepard, USACE
8:05	A1-10 Approval of Minutes of October 25, 2023 Meeting	
8:10	B1-13 Regional Management and Partnership Collaboration <ul style="list-style-type: none"> ▪ FY 2024 Fiscal Update and FY 2025 Outlook ▪ HREP Selection ▪ Scoping Strategic Planning ▪ Implementation Issues ▪ UMRR Restoration Workshop 	Marshall Plumley, USACE
9:10	Strategic Planning Exercise	All
10:10	Break	
10:20	Communications <ul style="list-style-type: none"> ▪ UMRR Communications Team ▪ External Communications and Outreach Events 	Rachel Perrine, USACE All
10:50	UMRR Showcase Presentations <ul style="list-style-type: none"> ▪ Piasa and Eagles Nest Islands ▪ What controls water clarity in the Upper Mississippi River? 	Ryan Swearingin, USACE Alicia Carhart, Wisconsin DNR
11:50 a.m.	Lunch	
1:00 p.m.	C1-23 Program Reports <ul style="list-style-type: none"> ▪ Long Term Resource Monitoring and Science <ul style="list-style-type: none"> – LTRM FY 2024 1st Quarter Highlights – FY 2024 Science Meeting – USACE LTRM Update – A-Team Report – LTRM Implementation Planning Update 	Jeff Houser, USGS Davi Michl, USACE Matt O'Hara, Illinois DNR Jeff Houser, USGS

(Continued on next page)

Wednesday, February 28 UMRR Coordinating Committee Quarterly Meeting

(Continued)

Time	Attachment	Topic	Presenter
2:00 p.m.		Program Reports (Continued) <ul style="list-style-type: none">▪ Habitat Restoration District Reports	<i>Angela Deen, Julie Millhollin, Brian Markert, USACE</i>
2:30 p.m.	D1-8	Other Business Future Meeting Schedule	<i>Thatch Shepard, USACE</i>
2:40 p.m.		Adjourn	

ATTACHMENT A

Minutes of the October 25, 2023
UMRR Coordinating Committee Quarterly Meeting
(A-1 to A-10)

**Minutes of the
Upper Mississippi River Restoration Program
Coordinating Committee**

**October 25, 2023
Quarterly Meeting**

Thatch Shepard (on behalf of Brian Chewning) of the U.S. Army Corps of Engineers called the meeting to order at 8:00 a.m. on October 25, 2023. UMRR Coordinating Committee representatives in attendance in-person were Sabrina Chandler (USFWS), Kirk Hansen (IA DNR), Chad Craycraft (IL DNR), Vanessa Perry (MN DNR), Matt Vitello (MO DoC), and Wade Strickland (WI DNR). Brian Chewning (USACE) and Jeff Houser (USGS) attended virtually. A complete list of attendees follows these minutes.

Minutes of the August 9, 2023 Meeting

Wade Strickland moved and Chad Craycraft seconded a motion to approve the draft minutes of the August 9, 2023 UMRR Coordinating Committee meeting as written. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2023 Fiscal Update

Marshall Plumley reported that UMRR achieved an execution rate of 98.2 percent, obligating \$54.65 million of its \$55 million FY 2023 funds. This was the first year UMRR received a \$55 million appropriation.

FY 2024 Fiscal Update

Plumley reported that, on October 2, 2023, Congress enacted a continuing resolution extending current funding levels of the federal government to November 17, 2023. [Note: Subsequent Congressional action extended the continuing resolution to March 1, 2024.] The President's FY 2024 Budget and House and Senate Appropriations Committees' energy and water spending measures include \$55 million for UMRR. The final appropriation is not yet known. Marshall Plumley said that he and USGS UMESC LTRM managers met with state field station leaders regarding impacts to field stations in the event of a shutdown.

The draft FY 2024 plan of work for UMRR at \$55 million is listed below. It is largely consistent with the FY 2023 plan of work with the addition of regional project sequencing.

- Regional Administration and Program Efforts – \$1,675,000
 - Regional management – \$1,260,000
 - Program database – \$100,000
 - Program Support Contract – \$140,000
 - Public Outreach – \$50,000
 - Regional Project Sequencing – \$125,000
- Regional Science and Monitoring – \$15,325,000
 - Long term resource monitoring – \$5,500,000
 - Regional science in support of restoration – \$8,350,000
 - Regional science staff support – \$200,000

- Habitat evaluation (split across three districts) – \$1,275,000
- Habitat Restoration – \$38,000,000
 - Rock Island District – \$11,150,000
 - St. Louis District – \$13,700,000
 - St. Paul District – \$13,050,000
 - Model certification – \$100,000

UMRR Ten-Year Plan

Plumley said the UMRR 10-year implementation plan includes 11 projects in feasibility and 12 projects in design or construction. A new project is scheduled to start feasibility at the end of FY 2024 in both MVR and MVS.

Environmental Justice

Plumley introduced a matrix to illuminate expectations for environmental justice processes in UMRR habitat projects specific to the timeframe between fact sheet development through feasibility. Plumley said the activities outlined in the matrix are the Corps' responsibility and put forward that the Corps would appreciate the ability to leverage existing relationships of UMRR's partners with community leaders. UMRR Coordinating Committee members recommended engaging communities earlier in the process, maintaining a connection between communities and resource managers, sharing LTRM information with communities, and ensuring environmental justice efforts are embedded in projects and not developed in parallel to be implemented later. Sabrina Chandler emphasized the need to communicate the Corps' project-related environmental justice expectations to river teams in advance of the next HREP selection process. Plumley said he will distribute the draft matrix following the meeting with a request for feedback.

HREP Selection Process

Plumley said UMRR issued guidance to the river teams regarding the next HREP selection process. River teams are starting to hold discussions. Upcoming river team meetings are as follows:

- The St. Paul District's FWVG is planning to meet in December or January.
- The Rock Island District's FWIC is scheduled to meet October 25, 2023 virtually followed by an in-person workshop on November 13, 2023.
- The St. Louis District's RRAT-Tech is planning to convene a kick-off meeting in early 2024.

Existing support for the river teams includes recorded webinars on HNA-II and the LTRM status and trends report. Under the current schedule, the UMRR Coordinating Committee would be presented with a set of new projects at the May 2025 quarterly meeting. Plumley said the UMRR Program Planning Team (PPT) will meet following the river teams' initial meetings to address any questions or concerns.

Strategic Plan

Plumley reported that the UMRR Coordinating Committee is scoping a process to develop the next strategic plan for UMRR. A draft one-page overview of a proposed process is included as item B1 in the meeting agenda packet. The strategic planning process is expected to take place over the next 18 months.

Implementation Issues

Plumley reported that, on August 9, 2023, the UMRR Coordinating Committee met to discuss

recommended actions to address UMRR implementation issues. The following updates for each issue paper were provided:

- Federal Easement Lands: Sabrina Chandler is meeting with Illinois NRCS staff on October 26, 2023 to discuss options for restoration on easement lands owned in fee by the Service. Chandler will report back to the Coordinating Committee after the meeting. [Note: Following the meeting, Chandler reported that NRCS staff were very willing to work with USFWS and consider options for restoration on these lands and were receptive to potential UMRR Projects on similar lands as well.]
- Water Level Management: The issue of water level management has fundamentally changed since the implementation issue paper was drafted – i.e., the construction new start and ongoing implementation of NESP and new authorization language in WRDA 2022. UMRR can still consider HREPs that incorporate WLM on a case-by-case basis.
- Project Partnership Agreements: The issue was discussed in depth by the UMRBA Board during its August 8, 2023 quarterly meeting. UMRBA is working with multiple partners to seek PPA reform at a national level. UMRBA confirmed it will advocate for PPA reform through WRDA 2024.
- Watershed Inputs and Climate Change: A webinar or meeting will be held in the future for a discussion on how climate change is currently considered in HREP planning and design. The session would be a useful lead into the 2024 UMRR workshop. The Midwest Climate Adaptation Science Centers or USACE Climate Community of Practice should be invited to lend additional expertise in discussions. USFWS is developing a national policy regarding using the resist-accept-direct (RAD) framework. The Midwest Association of Fish and Wildlife Agencies (MAFWA) is developing a RAD training for state staff in the next year. Stephenson said he will distribute the recently published RAD paper to UMRR Coordinating Committee members.
- Engaging Non-Traditional Sponsors: Simple communication tools for explaining potential projects and pertinent information regarding O&M requirements are needed for distribution to counties, cities, and potential NGO sponsors ahead of the next HREP selection process.
- External Communications: The UMRR Communications and Outreach Team is identifying priorities for 2024.
- Floodplain Regulations: No updates at this time.

UMRR Workshop

Plumley announced that UMRR scheduled a programmatic workshop for May 7-9, 2024. The location has not yet been determined. Potential workshop topics include monitoring and adaptive management, HREP/LTRM integration, the HREP Design Handbook, and HREP lessons learned, among others.

A planning team of the following program partners is planning the agenda and logistics, as follows:

Kara Mitvalsky
Brian Markert
Lane Richter
Elisa Royce
Angela Deen
Kacie Opat
Julie Millhollin
Rachel Perrine

Davi Michl
Sara Schmuecker
Sharonne Baylor
Jeff Houser
Jim Fischer
Kirk Hansen
Ryan Hupfeld

Vanessa Perry
Nicole Ward
Matt Vitello
Molly Sobotka
Jeff Janvrin
Brenda Kelly
Andrew Stephenson

MEGA-ECO Symposium

Plumley reported that, on October 5, 2023, he presented on UMRR at the MEGA-ECO symposium on large-scale landscape projects at the University of Pennsylvania Weitzman School of Design. The symposium featured government and non-government projects dealing with similar issues. Plumley highlighted projects from the Democratic Republic of Congo, Yellowstone to Yukon, Pakistan, and the Amazon that emphasized the cultural memory of a landscape, importance of corridors and connectivity for wildlife, and restoring degraded lands with basic principles and practices. Plumley said there was great interest in LTRM methods and how the work is jointly implemented across federal and state agencies. Plumley said there was also interest from multiple symposia presenters in exploring how to formalize a partnership in the future to continue learning from each other's experiences and expertise.

Report to Congress

Plumley reported that the 2022 UMRR Report to Congress is still in review at the ASA(CW)'s office. The report represents an important communication tool. Coordinating Committee members requested release of the draft final report to allow sharing within their agencies to leadership and in discussions with Congressional offices.

Strategic Planning

Andrew Stephenson put forward a proposed process (outline provided in B1 of the agenda packet) to the UMRR Coordinating Committee for developing the next UMRR strategic plan. A strategic planning leadership team will work with a facilitator(s) to lead the planning process over the next 18 months. A strategic planning team, comprised of approximately 20 individuals representing the various agencies and elements of UMRR, as well as some individuals external to UMRR, will be convened to actively engage in design, discussion, and development of the plan. The process will provide for robust public participation including by using UMRR quarterly meetings for exploration, discussion, review, and feedback on emerging ideas. Coordinating Committee members discussed the merits of a 5-year or 10-year timeframe for the next strategic plan as well as the degree to which the current strategic plan should inform development of the next strategic plan. Houser recalled that, in 2015, explicitly stating aspects that were set in stone made it possible to talk about new ideas. In response to questions from Coordinating Committee members, Brian Stenquist said that, to date, UMRR's strategic plans have focused on budget constraints and integrating HREP and LTRM, respectively. Stenquist offered that climate change, environmental justice, and NESP may be important considerations in developing the next strategic plan. The UMRR Coordinating Committee largely agreed to the proposed process with the following modifications:

- Extend the process across an 18-month schedule using major touch points such as quarterly meetings and the UMRR workshop to get directed input.
- Refine teams' roles and responsibilities and draft a list of potential participants.

The Coordinating Committee will convene meetings virtually on November 27, 2023 and December 11, 2023 to discuss the revised document. Coordinating Committee members were asked to provide names of potential facilitators to Stephenson and Marshall Plumley prior to the November meeting.

Communications

Communication and Outreach Team Update

Rachel Perrine reported that the UMRR Communications and Outreach Team (COT) finalized a framework for the team's operations in August 2023. It is considered a living document and will be

revisited during the next strategic planning effort. Perrine reflected that the COT has supported communications for the LTRM status and trends report snapshot summaries, resulting in over 1000 views and nearly 300 likes across 10 posts and four social media outlets. On August 2, 2023, Matt Jones, USACE, presented on environmental justice. At the September 6, 2023 meeting, Greg Husak, Minnesota DNR, presented Minnesota DNR communication initiatives, success stories, and lessons learned. Brian Stenquist expressed appreciation for the COT's discussion on environmental justice and suggested that the matrix Plumley presented today may help guide future COT efforts.

Perrine said that, on October 18, 2023, she sent a poll to COT members to help prioritize activities for calendar year 2024. Results of the poll will be discussed at the November 1, 2023, meeting. The COT anticipates providing support for the release of the 2022 UMRR Report to Congress, continuing to share lessons learned from partner agency communications efforts, and additional environmental justice discussions. Kirsten Wallace suggested identifying opportunities in the year ahead, such as ribbon cuttings or science products, that the partnership can collectively support through communications actions.

External Communications and Outreach

Communication and outreach activities in the fourth quarter of FY 2023 include the following:

- Vanessa Perry said MN DNR staff responded to media inquiries about water level impacts to habitat and navigation. MN DNR is strengthening the relationship between LTRM staff and the rest of the agency, including by sharing the recent RAD publication via an internal newsletter.
- Wade Strickland said he is working with WI DNR magazine on an LTRM-focused article to raise awareness about work on the river as well.
- Sabrina Chandler said she presented information on Pool 13 to staff from Senator Grassley's and Senator Ernst's offices. Chandler noted that the ability to quickly respond to questions with robust fisheries data from the online query tools and excerpts of the Status and Trends helps demonstrate the value of the program.
- Kirsten Wallace reported that UMRBA is advocating for three changes in the 2024 Water Resources Development Act (WRDA) that will affect UMRR:
 - 1) Allowing projects on General Plan lands to utilize MOAs instead of PPAs;
 - 2) Allowing for the direct transfer of funds to states and improving the efficiency for transferring funds to UMRBA;
 - 3) Increasing the annual authorized appropriation for LTRM to \$25 million. Wallace noted that The Nature Conservancy submitted a request for LTRM to be increased to \$40 million and that UMRBA is vocalizing support for that funding amount.
- Andrew Stephenson said that, on August 20-24, 2023, he presented on the history and success of UMRR and the UMRS partnership in bringing resources to the region at a MICRA Symposium at the American Fisheries Conference in Grand Rapids, Michigan.

Habitat Restoration

Brian Markert reported that MVS executed its largest UMRR funding amount ever in FY 2023. MVS's FY 2023 accomplishments include completing the pump station and nearly completing the berm setback at Clarence Cannon Refuge, initiating stage II construction at Piasa and Eagles nest, completing design work at Oakwood Bottoms, initiating stage II design work at Harlow Island, completing a feasibility report for Yorkinut Slough, and completing the tentatively selected plan at West Alton Islands. Gilead Slough and Reds Landing HREPs were selected to start feasibility in the first quarter of FY 2024 and MVS continues drafting the Spunky Bottoms and Cape Slough fact sheets with partners. The Merodosia Island fact sheet was approved by MVD.

In FY 2023, the District completed a site visit to Batchtown HREP to document construction and operations lessons learned and the Swan Lake flood damage assessment letter report was approved. MVS completed aerial lidar, digital orthophotography, and bathymetry to support multiple projects. A public outreach initiative with schools was conducted to name new islands in the Piasa and Eagles Nest HREP. MVS's FY 2024 planning priorities include West Alton Islands, Gilead Slough, and Reds Landing. MVS's design priorities include Yorkinut Slough, Swan Lake, Harlow Island, Clarence Cannon, and Crains Island HREPs. In FY 2024, MVS will have three projects in construction: Crains Island Stage I, Piasa and Eagles Nest Stage II, and Clarence Cannon.

Julie Millhollin reported that MVR's FY 2023 accomplishments include submitting the Lower Pool 13 Phase I feasibility report to MVD for approval and starting feasibility on Lower Pool 13 Phase II, as well as reaching TSP milestones for Pool 12 Forestry, Green Island, and Quincy Bay HREPs. Construction highlights include completing dredging, grading, and seeding at Beaver Island, tree clearing at Steamboat Island, and aquatic plantings at Huron Island. MVR continued spillway construction at Keithsburg HREP and awarded the forestry services MATOC totaling \$9.5million over 5 years. MVR had many interactions on its social media posts on Facebook and Twitter/X, as well as videos on YouTube. MVR's planning priorities include Pool 12 Forestry, Green Island, Lower Pool 13 Phases I and II, Pool 18 Forestry, and Quincy Bay HREPs. Designs of Steamboat Island Stage II are nearly complete. MVR has four projects in construction: Beaver Island, Steamboat Island Stage I, Keithsburg Division Stages I and II, and Huron Island Stage III. In response to questions from Brian Stenquist and Andrew Stephenson, Millhollin said the focus of most forestry work is to open canopy and plant diverse species to facilitate growth and new age classes to improve resilience. Felled trees at Beaver Island were placed in the dredge channel and may be mulched on site at Steamboat, pending cost analysis and logistics. Marshall Plumley noted that Beaver Island will restore nearly 1700 acres. Kirsten Wallace suggested a coordinated communication effort around Beaver Island as it nears completion. In response to a question from Wade Strickland, Plumley said USACE has done its due diligence in planning to date but is working to broaden the environmental justice process and noted that Quincy Bay HREP is the first project with explicit environmental justice components in the tentatively selected plan.

Angela Deen reported that MVP's FY 2023 accomplishments include turning over and completing O&M manuals for three projects sponsored by the USFWS. Refuge managers provided positive feedback on the updated O&M manual template that better describes the change between feasibility and as-built project specifications. Deen said that MVP selected a TSP for Big Lake Pool 4 HREP, fully awarded construction contracts for McGregor Lake, and developed two web viewers for Robinson and Big Lake HREPs to aid in planning. Refuge staff were able to use water control structures designed to take water off the Bass Ponds HREP to instead bring water onto the area from the Minnesota River during drought conditions. Sabrina Chandler said the last drought released lead into the lakes and that now being able to keep water levels high during drought will protect birds from toxicity. Deen said MVP celebrated the first drone flight of its small unmanned aerial systems program which can collect high resolution video and imagery that will aid planning, monitoring, and public affairs efforts around projects. The District created two videos on the McGregor Lake and Robinson Lake HREPs that reached 1,685 people and organized a tour of three HREPs for new Corps personnel. MVP's planning priorities include Big Lake – Pool 4 and Robinson Lake. MVP's design priorities are Reno Bottoms and Lower Pool 10 HREPs. McGregor Lake HREP Stage I construction is 97 percent complete, and Stage II is 45 percent complete. The project uses innovative techniques and beneficial use of dredge material. Chandler said McGregor Lake has significant public access and that she has heard many public comments regarding the project's benefits. Chandler expressed appreciation for the Corps' efforts to update the O&M manual template noting the ease of using it and how it will improve management of the area.

Long Term Resource Monitoring and Science

FY 2023 4th Quarter Report

Jeff Houser reported that accomplishments of the fourth quarter of FY 2023 include publication of the following manuscripts and completion report:

- *River Geomorphology Affects Biogeochemical Responses to Hydrologic Events in a Large River Ecosystem*
- *Long-Term Changes in Concentration and Yield of Riverine Dissolved Silicon from the Poles to the Tropics*
- *Reimagining large river management using the Resist–Accept–Direct (RAD) framework in the Upper Mississippi River*

Houser reported that UMRR LTRM field station FY 2023 highlights included monitoring activities, novel analyses, presentations by LTRM staff or featuring LTRM data, lab improvements component meetings, outreach efforts, involvement in HREP project development teams, and onboarding new staff. Pool-specific highlights are as follows:

- Pool 4
 - Incorporation of LTRM data into Pool 4 HREP database.
 - Monitoring in Pool 4 detected a major increase in water stargrass from extended low water.
 - LTRM staff contributed to Minnesota's updated invasive carp action plan.
- Pool 8
 - Monitoring detected abundant wild rice in Pool 8.
- Pool 13
 - LTRM staff in Pool 13 collected their one millionth fish, a channel catfish in a hoop net.
 - The third highest crest in history at lock and dam 12 with a slow and steady decline created excellent spawning conditions for many species.
 - Monitoring detected large year classes for both game and non-game fish species.
 - LTRM staff are participating in the planning of the Lower Pool 13 HREP.
- Pool 26
 - Eric Hine served as President of the Mississippi River Research Consortium.
 - Multiple outreach events focused on teaching fish identification skills.
- La Grange
 - Sara Sawicki joined IRBS as a water quality specialist.
 - Lab improvements
 - Continuing drought and low water led to increased airboat usage but still resulted in more than thirty SRS sites being too shallow to sample. Only 1 young-of-the-year silver carp was detected, potentially indicating a low spawning year. Low water conditions led to increased capture of some rare native species. The Chain/Stewart backwater lakes remained mostly dry for the second sampling season in a row.
 - Completion of a summary report for the 2020 Illinois Waterway consolidated lock closure that documented reduced vessel traffic led to reduced turbidity and increase CPUE for sound-sensitive taxa.

- Leading analysis of macroinvertebrate sample contaminants.
- Analysis of burrowing mayfly samples indicate lower than historic means for most sites.
- Vital rates inventory updates including imaging otoliths and developing image database.
- Open River
 - On September 16, 2023 the field station hosted a day on the river event with over 800 attendees.
 - Missouri Department of Conservation magazine featured the field station staff.
- An LTRM all hands meeting was held on April 11-13, 2023 in Muscatine.
- An LTRM fisheries field meeting was held on May 8-11, 2023 in Pool 19.
- A vital rates, microchemistry & genetics synthesis meeting was held on August 3-4, 2023 in Pool 19.

Houser presented other FY 2023 UMRR LTRM accomplishments including:

- Welcoming Jim Fischer as the new USGS LTRM branch chief. Fischer was a Water Quality specialist at the La Crosse field station for 13 years. co-authored the Water Quality procedures manual and was a member of the A-team and UMRR Coordinating Committee.
- LTRM implementation planning process resulted in nine projects addressing information needs being proposed for funding from FY 2023 – FY 2026.
- Advancing the Lower Pool 13 HREP-Associated Research Project (HARP).
- Multiple presentations from LTRM staff on Viking Cruises
- Presentations at the MRRC and other regional conferences by LTRM staff or featuring LTRM data.
- Distribution of the LTRM Status and Trends Snapshot Summaries.
- Hosting two science webinars on September 25, 2023, and October 5, 2023. Recordings of the webinars are available at <https://www.mvr.usace.army.mil/Missions/Environmental-Stewardship/Upper-Mississippi-River-Restoration/Key-Initiatives/Workshops/>
- Completing the Water Quality Lab remodel. The upgraded facility enhances the region's research capabilities and is also expected to contribute to national efforts in understanding and addressing ecological challenges. USGS leadership, Congressional representatives, and community leaders attended the ribbon cutting ceremony.
- Uploading all 2022 LTRM data online and on graphical browsers.

Brian Stenquist asked what resources are available to help assess the 50-year timeframe for analysis in the Resist-Accept-Direct Framework. Houser said the last science meeting identified a need for hydrologic changes to be forecast 50-100 years in the future and efforts are underway to downscale climate forecasts to help identify the suite of scenarios that may be likely to occur. Vanessa Perry expressed appreciation for LTRM staff involvement in updating Minnesota DNR's Invasive Carp Action Plan. Perry said she will share the updated plan when it is complete. In response to a question from Andrew Stephenson, Houser said the 2019 floodplain forest assessment analysis is still underway.

USACE LTRM Report

Davi Michl reported that LTRM obligated \$13.7 million of its \$13.85 million FY 2023 funds, or 99.2 percent. FY 2023 funds advanced two information needs identified through LTRM implementation planning and topobathy pilot study contracts were awarded in September. Michl said low water may be advantageous for topobathy lidar acquisition this fall. UMRR's LTRM FY 2024 budget allocation is \$7 million (\$5.5 million for base monitoring and \$1.5 million for analysis under base) with an additional \$6.85 million available for "science in support of restoration and management."

A-Team Report

Matt Vitello presented the A-Team updated on behalf of Matt O'Hara. Vitello reported that the A-Team met on October 18, 2023. The A-Team welcomed Jim Fischer and Davi Michl to the A-Team in their new roles as USGS LTRM Branch Chief and USACE LTRM Project Manager, respectively. Vitello reported that Marshall Plumley provided HREP and LTRM programmatic updates and Andrew Stephenson summarized results of the social media rollout of the two-page snapshot summaries communicating the major findings from the 2022 UMRR LTRM status and trends report. The A-team discussed potential additional communication needs including a flyer on water level fluctuation, press release regarding new hydrology database that is close to completion, and utilizing the Corps' existing podcast capabilities.

Vitello reported that Houser led a discussion on planning for the 2024 UMRR LTRM science meeting including a review of focal areas and initial work groups. A-Team members suggested additional topics including emerging contaminants, lentic fish assemblages, refuge and backwater overwintering habitat, turtle bycatch, and floodplain forestry.

Vitello said that Shawn Giblin presented on burrowing mayfly trends and Mike Miller, WI DNR inland streams biologist, presented on emerging contaminants. Both presentations are relevant to ongoing macroinvertebrates monitoring. Vitello said Scott Gritters and Seth Fopma presented on the history of telemetry in Pool 12.

Wade Strickland noted that Miller has also been working on neonicotinoids and could present that research to the UMRR Coordinating Committee or others if there was interest. Lauren Salvato noted that UMRBA's water quality monitoring data could be analyzed for neonicotinoids as well.

Matt Vitello said the next A-Team meeting will be held in conjunction with the January 16-18, 2024 science meeting. The A-Team may hold a special meeting in November or December 2023 to finalize focal areas for the science meeting. [Note: The A-Team scheduled a meeting on November 30, 2023 to finalize focal areas ahead of the science meeting.]

LTRM implementation planning

Houser said that he will provide a progress update on implementation plans for the information needs not partially funded with FY 2023 funds at the February 28, 2024 UMRR Coordinating Committee meeting.

Other Business

Upcoming quarterly meetings are as follows:

- February 2024 – Virtual
 - UMRBA quarterly meeting – February 27
 - UMRR Coordinating Committee quarterly meeting – February 28
- May 2024 – Quad Cities
 - UMRBA quarterly meeting – May 21
 - UMRR Coordinating Committee quarterly meeting – May 22
- August 2024 – St. Paul
 - UMRBA quarterly meeting – August 6
 - UMRR Coordinating Committee quarterly meeting – August 7

With no further business, Matt Vitello moved and Kirk Hansen seconded a motion to adjourn the meeting.

The motion carried unanimously. The meeting adjourned at 2:12 p.m.

**UMRR Coordinating Committee Attendance List
October 25, 2023**

UMRR Coordinating Committee Members

Thatch Shepard (on behalf of Brian Chewning)	U.S. Army Corps of Engineers
Sabrina Chandler	U.S. Fish and Wildlife Service
Jeff Houser	U.S. Geological Survey, UMESC
Chad Craycraft	Illinois Department of Natural Resources
Kirk Hansen	Iowa Department of Natural Resources
Vanessa Perry	Minnesota Department of Natural Resources
Matt Vitello	Missouri Department of Conservation
Wade Strickland	Wisconsin Department of Natural Resources

Others In Attendance

LeeAnn Riggs	U.S. Army Corps of Engineers, MVD
Jim Lewis	U.S. Army Corps of Engineers, MVD
Nathan Wallerstedt	U.S. Army Corps of Engineers, MVP
Angela Deen	U.S. Army Corps of Engineers, MVP
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Davi Michl	U.S. Army Corps of Engineers, MVR
Julie Millhollin	U.S. Army Corps of Engineers, MVR
Rachel Perrine	U.S. Army Corps of Engineers, MVR
Kyle Bales	U.S. Army Corps of Engineers, MVR
Leo Keller	U.S. Army Corps of Engineers, MVR
Brian Markert	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, MVS
Greg Kohler	U.S. Army Corps of Engineers, MVS
Sara Schmuecker	U.S. Fish and Wildlife Service, IIFO
Lauren Larson	U.S. Fish and Wildlife Service, IIFO
Matt Mangan	U.S. Fish and Wildlife Service, IIFO
Jon Amberg	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Jim Fischer	U.S. Geological Survey, UMESC
Travis Black	Maritime Administration
Sammi Boyd	Wisconsin Department of Natural Resources
Lindsay Brice	Audubon
Brian Taylor	The Waterways Journal
Anshu Singh	Corn Belt Ports
John O'Donnell	Heartlands Conservancy
Rob Levinthal	University of Pennsylvania
Kirsten Wallace	Upper Mississippi River Basin Association
Brian Stenquist	Upper Mississippi River Basin Association
Andrew Stephenson	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Lauren Salvato	Upper Mississippi River Basin Association
Erin Spry	Upper Mississippi River Basin Association
Sam Hund	Upper Mississippi River Basin Association

[Note: This includes in-person and virtual attendees]

ATTACHMENT B

Regional Management and Partnership Collaboration

- UMRR Quarterly Budget Reports (1/10/2024) *(B-1 to B-3)*
- UMRR 10-Year Outlook FY2023 – FY2033 UMRR CC (02/2024) *(B-4)*
- Senate UMRR FY 2025 Funding Request Letter to Administration (01/31/2024) *(B-5 to B-6)*
- Overview of a Proposed UMRR Strategic Planning Process (1/29/2024) *(B-7 to B-12)*
 - USACE Facilitator Chrissa Waite Biography *(B-13)*

UMRR Quarterly Budget Report: St. Paul District

FY2024 Q1; Report Date: Wed Jan 10 2024

Habitat Projects

Project Name	Cost Estimates			FY2024 Financials			
	Non-Federal	Federal	Total	Carry In	Allocation	Funds Available	Actual Obligations
Lower Pool 10 Island and Backwater Complex	-	\$17,000,000	\$17,000,000	\$78,068	\$5,000,000	\$5,078,068	\$126,526
Lower Pool 4, Big Lake	-	\$18,000,000	\$18,000,000	\$29,071	\$250,000	\$279,071	\$91,017
Lower Pool 4, Robinson Lake, MN	-	\$12,000,000	\$12,000,000	\$29,061	\$550,000	\$579,061	\$71,550
McGregor Lake	-	\$23,550,000	\$23,550,000	\$60,065	\$350,000	\$410,065	\$45,630
Reno Bottoms	-	\$10,000,000	\$10,000,000	\$21,379	\$5,000,000	\$5,021,379	\$964,095
Total	-	\$80,550,000	\$80,550,000	\$217,644	\$11,150,000	\$11,367,644	\$1,298,818

Habitat Rehabilitation

Subcategory	FY2024 Financials			
	Carry In	Allocation	Funds Available	Obligations
District Program Management	-	-	-	\$95,339
Total	-	-	-	\$95,339

Regional Program Administration

Subcategory	FY2024 Financials			
	Carry In	Allocation	Funds Available	Obligations
Habitat Eval/Monitoring	-	\$425,000	\$425,000	\$91,502
Total	-	\$425,000	\$425,000	\$91,502

	Carry In	Allocation	Funds Available	Actual Obligations
St. Paul Total	\$217,644	\$11,575,000	\$11,792,644	\$1,485,659

UMRR Quarterly Budget Report: Rock Island District

FY2024 Q1; Report Date: Wed Jan 10 2024

Habitat Projects

Project Name	Cost Estimates			FY2024 Financials			
	Non-Federal	Federal	Total	Carry In	Allocation	Funds Available	Actual Obligations
Beaver Island	-	\$25,288,000	\$25,288,000	-	-	-	\$32,403
Green Island, IA	-	\$16,600,000	\$16,600,000	\$131,858	\$1,900,000	\$2,031,858	\$241,839
Huron Island	-	\$15,773,000	\$15,773,000	\$2,383	-	\$2,383	\$1,154
Keithsburg Division	-	\$29,643,000	\$29,643,000	\$78,794	\$500,000	\$578,794	\$99,791
Lower Pool 13	-	\$25,288,000	\$25,288,000	-	\$550,000	\$550,000	\$339
Lower Pool 13 Phase II	-	-	-	\$8,035	\$600,000	\$608,035	\$58,092
Pool 11, WI	-	-	-	-	\$50,000	\$50,000	-
Pool 12 (Forestry)	-	-	-	\$45,550	\$600,000	\$645,550	\$135,183
Pool 18 Forestry	-	-	-	-	\$600,000	\$600,000	\$38,407
Quincy Bay, IL	-	-	-	\$68,096	\$700,000	\$768,096	\$174,717
Steamboat Island	-	\$41,977,000	\$41,977,000	\$54,700	\$8,200,000	\$8,254,700	\$202,527
Total	-	\$154,569,000	\$154,569,000	\$389,416	\$13,700,000	\$14,089,416	\$984,452

Habitat Rehabilitation

Subcategory	FY2024 Financials			
	Carry In	Allocation	Funds Available	Obligations
District Program Management	-	-	-	\$12,813
Total	-	-	-	\$12,813

Regional Program Administration

Subcategory	FY2024 Financials			
	Carry In	Allocation	Funds Available	Obligations
Adaptive Management	\$2,828	\$200,000	\$202,828	\$2,828
Habitat Eval/Monitoring	\$118,857	\$425,000	\$543,857	\$21,867
Model Certification/Regional HREP	-	\$100,000	\$100,000	\$2,010
Public Outreach	-	\$50,000	\$50,000	-
Regional Program Management	\$162,211	\$1,500,000	\$1,662,211	\$273,952
Regional Project Sequencing	-	\$125,000	\$125,000	\$7,795
Total	\$283,896	\$2,400,000	\$2,683,896	\$308,452

Regional Science and Monitoring

Subcategory	FY2024 Financials			
	Carry In	Allocation	Funds Available	Obligations
Long Term Resource Monitoring	\$174	\$5,500,000	\$5,500,174	\$3,323,106
Science in Support of Restoration/Management	-	\$8,350,000	\$8,350,000	\$17,656
Total	\$174	\$13,850,000	\$13,850,174	\$3,340,762

	Carry In	Allocation	Funds Available	Actual Obligations
Rock Island Total	\$673,486	\$29,950,000	\$30,623,486	\$4,646,479

UMRR Quarterly Budget Report: St. Louis District

FY2024 Q1; Report Date: Wed Jan 10 2024

Habitat Projects

Project Name	Cost Estimates			FY2024 Financials			
	Non-Federal	Federal	Total	Carry In	Allocation	Funds Available	Actual Obligations
Clarence Cannon	-	\$29,800,000	\$29,800,000	\$51,513	\$650,000	\$701,513	\$104,277
Crains Island	-	\$36,562,000	\$36,562,000	\$3,340	\$4,825,000	\$4,828,340	\$75,137
Gilead Slough	-	\$11,000,000	\$11,000,000	\$2,454	\$550,000	\$552,454	\$50,381
Harlow Island	-	\$37,971,000	\$37,971,000	-	\$925,000	\$925,000	\$11,483
Oakwood Bottoms	-	\$29,000,000	\$29,000,000	-	\$525,000	\$525,000	\$21,267
Piasa - Eagle's Nest Islands	-	\$26,746,000	\$26,746,000	-	\$3,950,000	\$3,950,000	\$80,761
Red's Landing Wetlands	-	\$16,573,680	\$16,573,680	-	\$475,000	\$475,000	\$53,335
West Alton Missouri Islands	-	-	-	-	\$400,000	\$400,000	\$145,873
Yorkinut Slough, IL	-	\$8,500,000	\$8,500,000	\$5,721	\$750,000	\$755,721	\$95,624
Total	-	\$196,152,680	\$196,152,680	\$63,028	\$13,050,000	\$13,113,028	\$638,138

Habitat Rehabilitation

Subcategory	FY2024 Financials			
	Carry In	Allocation	Funds Available	Obligations
District Program Management	\$46,864	-	\$46,864	\$125,145
Total	\$46,864	-	\$46,864	\$125,145

Regional Program Administration

Subcategory	FY2024 Financials			
	Carry In	Allocation	Funds Available	Obligations
Habitat Eval/Monitoring	-	\$425,000	\$425,000	\$38,739
Total	-	\$425,000	\$425,000	\$38,739

	Carry In	Allocation	Funds Available	Actual Obligations
St. Louis Total	\$109,892	\$13,475,000	\$13,584,892	\$802,022

	FY23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32
Habitat Rehabilitation and Enhancement Projects	October 2022 - September 2023	October 2023 - September 2024	October 2024 - September 2025	October 2025 - September 2026	October 2026 - September 2027	October 2027 - September 2028	October 2028 - September 2029	October 2029 - September 2030	October 2030 - September 2031	October 2031 - September 2032
St. Paul District										
McGregor Lake, WI										
Lower Pool 10 Islands, IA										
Reno Bottoms, MN/IA										
Lower Pool 4, Big Lake, WI										
Robinson Lake, MN										
TBD MVP										
Rock Island District										
Huron Island Stage II & III										
Keithsburg										
Steamboat Island, IA										
Beaver Island Stage I & II										
Lower Pool 13										
Green Island, IA										
Pool 12 Forestry										
Quincy Bay, IL										
Lower Pool 13 Phase II										
Pool 18 Forestry										
Lower Pool 11										
St. Louis District										
Clarence Cannon NWR, MO										
Piasa and Eagles Nest, IL										
Crains Islands, IL										
Harlow, MO										
Oakwood Bottoms, IL										
Yorkinut Slough, IL										
Swan Lake Flood Damage Rehabilitation										
West Alton, MO Islands										
Gilead Slough, IL										
Reds Landing, IL										
Meredosia Island, IL										
HREP Feasibility Phase	Feasibility Completion = 2	Feasibility Completion = 4	Feasibility Completion = 2	Feasibility Completion = 4	Feasibility Completion = 1	Feasibility Completion = 2	Feasibility Completion = 0	Feasibility Completion = 0	Feasibility Completion = 0	Feasibility Completion = 0
HREP P&S Phase	Design Completion = 0	Design Completion = 2	Design Completion = 4	Design Completion = 4	Design Completion = 3	Design Completion = 3	Design Completion = 2	Design Completion = 0	Design Completion = 0	Design Completion = 0
HREP Construction Phase	Construction Completion = 0	Construction Completion = 1	Construction Completion = 0	Construction Completion = 1	Construction Completion = 2	Construction Completion = 3	Construction Completion = 3	Construction Completion = 2	Construction Completion = 5	Construction Completion = 3
HREP M&AM/Sponsor O&M Phase(2)										
(2) Physical features are turned over to the sponsor at construction completion for Operation & Maintenance. Monitoring & Adaptive Management activities will begin (WRDA 2039; as amended) and per the Feasibility Report.										

United States Senate
WASHINGTON, DC 20510

January 31, 2024

The Honorable Shalanda Young
Director
Office of Management and Budget
725 17th Street, NW
Washington, DC 20503

The Honorable Michael L. Connor
Assistant Secretary of the Army - Civil Works
Department of the Army
108 Army Pentagon
Washington, DC 20310

Dear Director Young and Assistant Secretary Connor:

We write in continued support of the Army Corps of Engineers' (Corps) Upper Mississippi River Restoration (UMRR) program. The program has demonstrated its success in reversing trends of degradation of the Mississippi River ecosystem and increasing the abundance and quality of fish and wildlife habitat. Indeed, UMRR has proven that investing in the Upper Mississippi River ecosystem strengthens the nation's economy and quality of life for over 30 years. Therefore, we respectfully request that you include \$55 million for UMRR in the President's Fiscal Year 2025 budget.

The UMRR program plays a critical role in habitat restoration to help ensure important ecological services and uses are sustained for future generations, such as clean water benefitting municipalities, manufacturers, and agricultural and energy producers. The Upper Mississippi is a major tourism and recreation hub, generating over \$24.6 billion annually, with UMRR's habitat projects expanding the draw of visitors. UMRR restoration projects are tested and proven to address the most significant degrading influences to the ecosystem. UMRR invests significantly in data research of the habitats to better understand and improve the resiliency of the Upper Mississippi River.

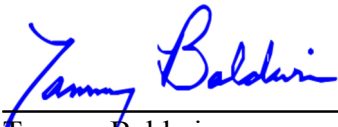
The program helps ensure thousands of species of birds, fish, and other wildlife continue to thrive in their natural habitats in and along the Mississippi River. UMRR projects protect wetlands and lakes from fluctuating water levels and high sedimentation, recreate islands to provide refuge and food for many species of fish and wildlife, and restore natural diversity of water velocities and depths to improve fish habitat. Projects help protect against threats from invasive species, including Asian carp, that outcompete native fish and wildlife for food sources and limited habitat. Still more projects restore forest health and diversity.

It is imperative to build on the progress of the UMRR program to ensure it can continue to advance its mission and goals. FY 2025 promises to be another extraordinary year for UMRR with several high-profile projects planned for implementation, and more in the pipeline, provided the program continues to receive sufficient funding.

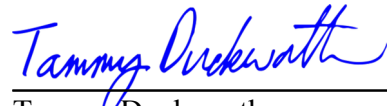
UMRR has broad, bipartisan support across Illinois, Iowa, Minnesota, Missouri and Wisconsin, as well as support of the navigation industry and conservation interests. As you finalize the Army Corps of Engineers Fiscal Year 2025 budget, we encourage you to recommend \$55 million for UMRR to continue to ensure this program has the resources needed to protect the river's integrity and wildlife for generations to come.

Thank you for your consideration of our request.

Sincerely,



Tammy Baldwin
United States Senator



Tammy Duckworth
United States Senator



Richard J. Durbin
United States Senator



Tina Smith
United States Senator



Amy Klobuchar
United States Senator

Overview of a Proposed UMRR Strategic Planning Process

Final 1/29/2024

Task	2023			2024												2025								
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	
Outline process	█	█	█																					
ID strategic planning team		█	█																					
ID potential facilitators			█	█																				
Select facilitator(s)				█	█																			
Review planning process					█	█																		
2-day strategic planning team workshop on Mission, Vision, Goals, Objectives and identify stakeholder engagement opportunities						█	█																	
UMRR workshop – review initial draft of Mission, Vision, Goals, Objectives								█																
Report out on workshop review									█															
Open Space event on strategic issues facing UMRR										█	█													
Report out on Open Space event and strategic issues											█													
2-day strategic planning team workshop to draft suite of strategic issues												█	█											
Report out on draft strategic issues													█											
2-day strategic planning team workshop on strategies and actions																	█							
Report out on draft strategies and actions																		█						
1-day strategic planning team meeting regarding public review process																			█					
Public Review of strategic plan																				█	█			
Report out on public review process																					█	█		
2-day strategic planning team workshop to revise strategic plan in light of public review and affirm final version of strategic plan																						█	█	
Agency review of strategic plan																							█	█
UMRR CC approval of strategic plan																								█

Purpose of the Strategic Planning Process:

1. To support the strategic management of the Upper Mississippi River Restoration Program (UMRR) by the UMRR Program Manager and the UMRR Coordinating Committee
2. Enhance the collaboration among the UMRR Program Manager, the UMRR Coordinating Committee, individuals and organizations actively engaged in UMRR activities, and individuals and organizations interested in and/or impacted by UMRR activities

Products of the Strategic Planning Process:

1. A Strategic Plan 2025-2035, which will include:
 - Program Mission, Vision, Goals, Objectives, Strategies
 - A description of Strategic Issues that will impact the program and how the program will address those Strategic Issues
 - A description of how the Strategic Plan will be implemented and evaluated at the 5-year midpoint
2. Enhanced relationships among the individuals and organizations that participate in the strategic planning process

People involved in the Strategic Planning Process:

1. The UMRR Coordinating Committee will review and affirm quarterly the products of the strategic planning team discussions and make final endorsement of the strategic planning document.
2. A Strategic Planning Team (15-20 people) actively engaged in design, discussion, and development of the process and the plan.
3. A Strategic Planning Leadership Team (3-5 members e.g., UMRR Program Manager, LTRM Science Director, and UMRBA staff) will lead the planning process, prepare meetings and materials, and work with the facilitator(s) in setting agendas.
4. 1 or 2 Facilitators who will help the Leadership Team design and manage the various strategic planning meetings, discussions, feedback sessions, and events.
5. Subject matter experts, as needed, to inform specific areas of the strategic plan.
6. Stakeholders, individuals, and organizations impacted by the UMRR and its Strategic Plan 2025-2035 to be engaged at quarterly meetings or other specific opportunities

The Process:

1. The strategic planning process will involve a series of meetings, discussions, feedback sessions, and events beginning in October 2023 and concluding in May 2025.
2. The process will use UMRR Quarterly meetings for exploration, discussion, review, and feedback on emerging ideas.
3. The Strategic Planning Team will meet in between the UMRR Quarterly meetings to develop additional information, explore ideas, and design the strategic planning discussion and feedback sessions that will be held during each Quarterly meeting.
4. The Strategic Planning Team may design additional discussions and feedback sessions necessary to develop an effective strategic plan with robust public participation.

Next Steps in the Strategic Planning Process:

1. Review, refine, and affirm a strategic planning process
2. Create a Strategic Planning Team and identify the Strategic Planning Leadership Team
3. Let the Strategic Planning Team design a process
4. Identify the strategic planning facilitators

Strategic Planning Team Members:

Marshall Plumley, USACE
Davi Michl, USACE
Angela Deen, USACE
Rachel Perrine, USACE
Elisa Royce, USACE
Sabrina Chandler, USFWS refuges
Sara Schmuecker, USFWS ecological services
Jeff Houser, USGS
Jim Fischer, USGS
Kristen Bouska, USGS
Kirsten Wallace, UMRBA
Andrew Stephenson, UMRBA
Kirk Hansen, IA DNR
Jim Lamer, INHS
Nick Schlessler, MN DNR
Vanessa Perry, MN DNR
Wade Strickland/Sammi Boyd, WI DNR
Rich Vaughn, NRCS
Molly Sobotka, MO DoC
Bryan Hopkins, TNC
Lindsay Brice, Audubon
Olivia LeDee, Midwest CASC
Michael Anderson, MRN

Strategic Planning Leadership Team Members:

Marshall Plumley, USACE
Jim Fischer, USGS
Andrew Stephenson, UMRBA
Vanessa Perry, MN DNR
Molly Sobotka, MO DoC

Strategic Planning Project Leaders

Marshall Plumley, USACE, Project Manager
Andrew Stephenson, UMRBA, Project Coordinator

Strategic Planning Facilitators

Chrissa Waite, USACE

UMRR Coordinating Committee

Brian Chewing, USACE
Sabrina Chandler, USFWS
Kirk Hansen, IA DNR
Chad Craycraft, IL DNR
Matt Vitello, MO DoC
Vanessa Perry, MN DNR
Wade Strickland, WI DNR
Rich Vaughn, NRCS
Travis Black, MARAD

Timeline:

1. October UMRR CC Quarterly Meeting
 - Review one page draft process
2. November 27, 2023 - UMRR CC meeting
 - More detailed process plan
 - Identify potential facilitator(s)
 - Identify strategic planning team (up to 20 people)
3. December 11, 2023 - UMRR CC meeting
 - Review/select potential facilitator(s)
 - Affirm or modify next process steps
4. February UMRR CC quarterly meeting (note: virtual Quarterly Meeting)
 - Review Strategic Planning process
 - Seek and respond to public comments on the process in the meeting
5. Host a March or April 2-day Strategic Planning Team meeting
 - Review, discuss and create “Draft 1 - 2025-2035 UMRR Mission, Vision, Goals, Objectives”
 - Stakeholder analysis exercise to determine engagement opportunities and activities.
6. UMRR Workshop – May 7-9
 - Workshop attendees review and provide comment on Draft 1 - 2025-2035 UMRR Mission, Vision, Goals, Objectives
7. May UMRR CC quarterly meeting
 - Report out on results of the March/April Strategic Planning Team meeting and the UMRR Workshop review of “Draft 1 - 2025-2035 UMRR Mission, Vision, Goals, Objectives”
 - Seek and respond to public comments on the report out
8. In conjunction with the August UMRR CC meeting, host a 1-day in-person Open Space event focused on the question: “What are the important Strategic Issues facing the Upper Mississippi River System and the UMRR Program over the next fifty years?”
 - Invite the widest range of stakeholders possible
 - Also offer online opportunities to respond to the question
9. August UMRR CC quarterly meeting
 - Provide an update on the Strategic Planning process
 - Report out on the Open Space event
 - Seek and respond to public comments on the report out
10. Host a 2-day Strategic Planning Team meeting (September or October)
 - Review and reflect on the Open Space Event information and online responses to the questions
 - Develop the “Draft 1 - Suite of Strategic Issues” that will be included in the 2025-2035 UMRR Strategic Plan

11. October UMRR CC quarterly meeting
 - Provide an update on the Strategic Planning process
 - Report out on the “Draft 1 - Suite of Strategic Issues” to be included in the 2025-2035 Strategic Plan
 - Seek and respond to public comments on the report out
12. Host a 2-day Strategic Planning Team meeting (late January)
 - Review and reflect on the Strategic Plan so far
 - Develop the “Draft 1 - Set of Strategies and Actions” that will accomplish the Objectives and address the Strategic Issues
13. February UMRR CC quarterly meeting
 - Provide an update on the Strategic Planning process
 - Report out on the “Draft 1 – Set of Strategies and Actions”
 - Seek and respond to public comments on the report out
14. Host a 1-day Strategic Planning Team meeting (March)
 - Review, discuss, revise, affirm a full Public Review Draft 2025-2035 Strategic Plan
 - Discuss and affirm public review process
15. Public Review – April and May
16. May UMRR CC quarterly meeting
 - Provide an update on the Strategic Planning process
 - Report out on the Public Review Process
 - Seek and respond to public comments on the report out
17. Host a 2-day Strategic Planning Team meeting (June)
 - Review public review comments
 - Revise elements of the Strategic Plan in light of public comments
 - Affirm the final recommended version of the Strategic Plan
18. August UMRR CC quarterly meeting
 - Approval of new strategic plan

It is anticipated that the Strategic Planning Leadership Team will meet on a biweekly basis to prepare meetings and materials, and work with the facilitator(s) in setting agendas.

DATE	SP Leadership Team	Strategic Planning Team	UMRR CC	Public, Stakeholders, Potentially Affected Interests	SP Project Manager and Project coordinator
November 2023					prepare for 11/27 and 12/11 meetings
Nov 27, 2023			review and affirm strategic planning process and people (SP Team and id potential facilitators)		
December 2023			review and affirm facilitators		prepare for 12/11 meeting
January 2023	prepare for Feb UMRR CC meeting				prepare for Feb UMRR CC meeting
February 2024		present SP process	review sp process; respond to public questions	review sp process; ask questions; offer perspectives	
	prepare for March/April SP meeting				prepare for March/April SP meeting
March or April 2024		Host a 2-day SP Meeting: create Draft 1 - Mission, Vision, Goals, Objectives			
April 2024	prepare for UMRR Workshop				prepare for UMRR Workshop
May 7-9, 2024		Lead discussion of Draft 1 Mission, Vision, Goals, Objectives at UMRR Workshop			
	prep for UMRR CC mtg				prep for UMRR CC mtg
May UMRR CC Quarterly Meeting		Report out results of April and May SP meetings; respond to CC and Public questions and perspectives	Review results of April and May SP meetings; provide comments and perspectives	Review results of April and May SP meetings; provide comments and perspectives	
	prep for the Open Space Event and for the online input process				prep for the Open Space Event and for the online input process
June 2024		Host a 1-day in person Open Space Event focused on "What are the important Strategic Issues facing the Upper Mississippi River System and the UMRR Program over the next fifty years?" and Host an online opportunity to answer the question		Participate in a 1-day in person Open Space Event focused on "What are the important Strategic Issues facing the Upper Mississippi River System and the UMRR Program over the next fifty years?" and/or participate in an online opportunity to answer the question	
July 2024					
August 2024	prep for UMRR CC mtg				prep for UMRR CC mtg
August 2024		Report out results of Open Space Event and online input opportunity; respond to CC and Public questions and perspectives	Review results of Open Space Event and online input opportunity; offer perspectives	Review results of Open Space Event and online input opportunity; offer perspectives	
September 2024	prep for the September meeting				prep for the September meeting
September 2024		Host a 2-day SP Meeting: create Draft 1 - Suite of Strategic Issues 2025-2035			
October 2024	prep for UMRR CC mtg				prep for UMRR CC mtg
October 2024		Present Draft 1 - Suite of Strategic Issues in 2025-2035 Plan; respond to CC and Public questions and perspectives	Review Draft 1 - Suite of Strategic Issues in 2025-2035 Plan; offer perspectives	Review Draft 1 - Suite of Strategic Issues in 2025-2035 Plan; offer perspectives	
December 2024	prep for the January meeting				prep for the January meeting
January 2025		Host a 2-day SP Meeting: create "Draft 1 - Set of Strategies and Actions" that will accomplish objectives and address actions			
February 2025	prep for UMRR CC mtg				prep for UMRR CC mtg
February 2025		Present "Draft 1 - Set of Strategies and Actions" that will accomplish objectives and address actions	Review "Draft 1 - Set of Strategies and Actions" that will accomplish objectives and address actions; offer perspectives	Review "Draft 1 - Set of Strategies and Actions" that will accomplish objectives and address actions; offer perspectives	
March 2025	prep for April SP meeting				prep for April SP meeting
March 2025		Host a 1-day SP Meeting: create "Public Review Draft of 2025-2035 UMRR Strategic Plan"; discuss and affirm public review process			
April 2025	prep for UMRR CC mtg				prep for UMRR CC mtg
May 2025		Present results of Public Review process; clarify next steps to produce final plan	Review results of Public Review process and next steps to produce final plan; offer perspectives	Review results of Public Review process and next steps to produce final plan; offer perspectives	
June 2025	prep for July SP meeting				prep for July SP meeting
July 2025		Host a 2-day SP Meeting: create "Final Draft of 2025-2035 UMRR Strategic Plan" incorporating public and other stakeholder comments			
July 2025	prep for UMRR CC mtg				prep for UMRR CC mtg
August 2025		Present Final Draft of the 2025-2035 UMRR Strategic Plan	Review Final Draft of the 2025-2035 UMRR Strategic Plan; offer perspectives	Review Final Draft of the 2025-2035 UMRR Strategic Plan; offer perspectives	

Chrissa Waite
Project Manager & Public Involvement Specialist
Charleston District
chrissa.waite@usace.army.mil



Chrissa Waite joined USACE in 2019. She is a Senior Project Manager for Civil Works projects in the Charleston District and serves as a Public Involvement Specialist for the Collaboration and Public Participation Center of Expertise (CPCX). Chrissa is a Certified Professional Facilitator with the International Association of Facilitators, and has been facilitating non-profits, government agencies and academics since 2008. Chrissa is also a Project Management Professional with the Project Management Institute.

As a Public Involvement Specialist, Chrissa provides direct support to USACE teams through virtual and in-person facilitation. She loves incorporating visuals, music and activities into facilitated meetings. Chrissa has facilitated strategic meetings of senior leadership, public meetings, planning charettes, and worked with specialized groups in USACE such as the Silver Jackets, Engineering with Nature, National Flood Risk Management Program, and the CPCX. Chrissa is a member of the Collaborative Technologies Working Group, helping to ensure that USACE staff are able to find the best collaborative technologies to fit their needs. Chrissa has offered short training on topics such as Facilitation 101, Risk Communication and WebEx Tips and Tricks.

As a project manager in Civil Works, Chrissa enjoys working on projects with leaders in the state of South Carolina, helping solve water resources problems to benefit the people of South Carolina and the Nation. Chrissa has experience managing Environmental Infrastructure, Coastal Storm Risk Management, Navigation, Ecosystem Restoration, and Planning Assistance to States projects.

ATTACHMENT C

Program Reports

- UMRR 2024 Science Meeting Working Group Reports (January 2024) (C-1 to C-3)
- FY2023 Milestones (February 2024) (C-4 to C-23)

Working Groups for the UMRR 2024 Science Meeting

Working Group #1: Modeling physical and biological components of the UMRS under different environmental and management actions: How is climate change likely to affect river flows, water quality, and aquatic and floodplain vegetation on the UMRS? (Lead: Nathan De Jager, USGS UMESC; ndejager@usgs.gov)

Simulating the spatial and temporal dynamics of river and floodplain physical and biological processes under different environmental and management scenarios can help disentangle complex, interacting phenomena in river systems. Within the Upper Mississippi River Restoration Program (UMRR), developing spatial simulation models was one of the primary objectives of the Landscape Patterns research framework (De Jager 2011) and is a key aspect of planning habitat restoration projects at both the site (USACE 2012) and system scales (De Jager et al. 2018). Recent examples of process-based simulation models, which seek to represent the functioning of various ecosystem components, include floodplain inundation (Van Appledorn et al. 2020, 2023), forest succession (De Jager et al. 2019), wind and wave fetch (Rohweder et al. 2008), and aquatic vegetation (Carhart et al. 2021). Additional approaches to spatial modelling include the use of machine learning predictions and online dashboards (Delaney and Larson 2023b), which rely on observed associations among ecosystem components in space and time.

The purpose of this working group is to review past and present simulation models used to understand the UMRS ecosystem and forecast impacts of management actions (e.g., HREP's) and alternative environmental conditions (e.g., climate change). We will identify opportunities for model improvements, needed data and information needs, and develop management and environmental scenarios for model applications.

Working Group #2: Water quality (Lead: Kathi Jo Jankowski, kjankowski@usgs.gov)

One topic this group will address is the multifaceted ecological impacts of increased aquatic vegetation in a large floodplain river system (Leads: Patrick Kelly and Alicia Carhart, WDNR). The return of aquatic vegetation has likely significantly improved habitat quality throughout the upper portions of the UMR, with benefits ranging from fish refuge to waterfowl foraging sites. In addition, aquatic vegetation may have significant geomorphologic and biogeochemical impacts. Lower water velocities associated with high densities of vegetation contribute to increased sedimentation, and with that, possible burial of carbon and retention of nutrients that may otherwise be mobilized to impact downstream ecosystems. On the other hand, aquatic vegetation may serve as sites of high biogeochemical processing, large fluctuations in oxygen availability, and GHG production (Bastviken et al. 2011, Zhao et al. 2022). For example, high densities of aquatic vegetation may impact localized oxygen dynamics in areas with high hydrologic residence times, as microbes rapidly break down labile senesced or dead vegetation causing hypoxic conditions (Rabaey et al. 2021). Thus, although many habitat benefits of vegetation are well understood, other ecosystem-level benefits or drawbacks have not been as widely explored. We will link this to implications for habitat within the systems themselves (i.e., metabolic processes that impact oxygen concentrations), downstream habitats (i.e., export of nutrients and carbon), and across larger scales (i.e., greenhouse gas dynamics). This working group will explore the following types of questions:

1. What role does vegetation play in retaining and processing carbon and nutrients over an annual cycle? Do areas with different types or abundances of vegetation retain or export carbon and nutrients differently?
2. How does vegetation affect hydrogeomorphology and sediment retention?
3. Is there variation in metabolic rates and oxygen dynamics across vegetation types in ways that affect habitat conditions (e.g., hypoxia)?

Additional topics may be considered as this group's planning continues.

Working Group #3: Quantifying spatial and temporal patterns in temperature in the UMRS (Leads: Kathi Jo Jankowski, kjankowski@usgs.gov, Nate De Jager, John Delaney, Danelle Larson, Kristen Bouska) (joint discussion of modeling and WQ groups)

Temperature is a fundamental control on habitat and processes in aquatic ecosystems. There is widespread change occurring in air temperature across the region (Fifth National Climate Assessment 2023), but how this has and will affect water temperature across the diverse habitats of the UMRS is not well quantified. In addition, whether and how shifts in water temperature are linked to changes in native and invasive species distributions, phenology, shifts in community composition, or metabolism and energetics now and into the future is of great management interest. This working group topic will focus on the general question: How and where has water temperature changed over time? What are the ecological implications? Potential outcomes of this group include:

1. Building a system-wide dataset of water temperature
2. Historical analysis of water temperature change using existing data
3. Creating a modeling framework to estimate temperature at unmonitored locations

Additional topics (e.g., magnitude of changes in ice cover and its effects on water quality and habitat conditions) may be considered as this group's planning continues.

Working Group #4: Fisheries: Enhanced understanding of UMRS upper aquatic trophics (Lead: Brian S. Ickes, USGS UMESC, bickes@usgs.gov)

The enhanced understanding of UMRS upper aquatic trophics working group will use the first science planning meeting following the third Status and Trends report to drill down into some concerning systemic and regional trends observed and presented in the report. Discussions will center upon potential endogenous and exogenous forces that may be driving systemic declines in forage fish production, strong regional imbalances in native versus invasive production, and functional simplification of fish assemblages within northern impounded reaches. During the working group session, this group will likely focus on (1) crafting a conceptual model of upper aquatic trophic dynamics, (2) identify and articulate testable hypotheses, (3) identify complementary existing data, and (4) prioritize new data needs. Discussions within this working group will work towards clearly describing research questions and management needs, identifying appropriate methods of inquiry, and developing project teams to advance proposals and conduct the research.

Working Group #5: Floodplain ecology (Leads: Molly Van Appledorn, USGS UMESC, mvanappledorn@usgs.gov; Lyle Guyon, NGRREC; Andrew Meier, USACE)

The floodplain ecology working group will discuss studies aimed at developing a comprehensive understanding of the patterns and processes that influence vegetation. This includes discussing topics related to hydrogeomorphic interactions and feedbacks with forest succession processes; the role of groundwater-surface water interactions in tree establishment, tree growth, and other forest dynamics; relationships between soils, water, and vegetation; and recent forest loss, land cover transitions, and regeneration patterns. The group may also discuss how wildlife species use floodplain resources as time and interest allows. Discussions will prioritize how to leverage existing datasets to address critical gaps in applied floodplain research, including relationships with HREPs and forest management practices.

Working Group #6: Linking restoration actions and ecological responses (Leads: Kristen Bouska, USGS UMESC, kbouska@usgs.gov; Molly Sobotka, MDC; Nicole Ward, MNDNR; Sara Schmuecker, USFWS)

The linking restoration actions and ecological responses working group will discuss projects that aim to resolve uncertainties regarding the ecological role of management actions and inform HREP selection and design. A plenary session will be held at the Science Meeting to brainstorm priority hypotheses from which a research framework will be developed. During the subsequent working group session, this group will likely focus on advancing three sub-topics: understanding physical changes and associated ecological benefits of side channel rehabilitation, evaluating habitat associations of lentic/backwater fish assemblages, and identifying habitat criteria for freshwater mussels. For each of these sub-topics, discussions within this working group will work towards clearly describing the research question and management need, identifying existing datasets and/or opportunities to learn from HREPs or other management actions, and developing project teams to advance proposals.

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Developing and Applying Indicators of Ecosystem Resilience to the UMRS						
2024R1	Updates provided at quarterly UMRR CC meeting and A team meeting	Various				Bouska, Houser
2024R2	Coordination of HARP data collection (see HARP SOW for additional milestones)	30-Sep-24				Bouska
2024R3	Submit draft Research Framework for Linking restoration actions and ecological responses	30-Sep-24				Bouska
On-Going						
2021R3	Submit resilience assessment synthesis manuscript for peer review publication	30-Mar-2021	30-Sep-2024		Delayed due to work on Pool 13 HARP proposal and LTRM Implementation planning group	Bouska
2021R4	Submit resilience assessment synthesis fact sheet for USGS peer review	30-Sep-2021	30-Sep-2024		Delayed due to work on Pool 13 HARP proposal and LTRM Implementation planning group	Bouska
2022R2	Submit manuscript that investigates associations between general and specified resilience for peer review publication	30-Sep-2022	30-Sep-2024		Delayed due to work on Pool 13 HARP proposal and LTRM Implementation planning group	Bouska
Landscape Pattern Research and Application						
2024LP1	Map Set: UMRS Contiguous Forest Areas (Pools 9, 12, OR2, LaG, 1, 2, 3, 7, 11, 10, Stc, Alt, 17, 22, 6, 5A, 5, 24, 25)	30-Sep-2024				Rohweder and De Jager
2024LP2	Map Set: Aquatic Areas (Pools 1, 2, 3, 7, 10, 11, 17, 22, Alt, 5, 5a, 6).	30-Sep-2024				Rusher, Rohweder, De Jager
2024LP3	Map Set: Attributes of 2010-2020 forest loss areas (Pools 4, 8, 13, 26, 9, 12, OR2, LaG, 1, 2, 3, 7, 11, 10, Stc, Alt, 17, 22, 6, 5A, 5, 24, 25)	30-Sep-2024				Rohweder and De Jager
2024LP4	Story Map: Land Cover Change (1989-2000-2010-2020)	30-Sep-2024				Rohweder and De Jager
2024LP5	Data Analysis: Effects of management actions and hydrological changes on forest succession at Reno Bottoms	30-Sep-2024				Trumper, De Jager, Van Appledorn

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
On-Going						
2023LP1	Draft Report: 2020 Land Cover Change	30-Sep-2023	30 sep 204		Initial rough draft is being revised. 2020 Landcover results delayed because of staff departures.	Rohweder and De Jager
2023LP2	Data Analysis: Thresholds analysis of Reed canary grass habitat suitability.	30-Sep-2023	30 sep 20224		Data analysis has taken longer than anticipated. Partially completed.	Delaney and Rohweder
2023LP3	Draft Report: Thresholds analysis of Reed canary grass habitat suitability	30-Sep-2023	30-Sep-24		We have started writing a rough draft for this report	Delaney, De Jager, Van Appledorn, Bouska, Rohweder
2023LP4	Data Analysis: Detecting decadal changes in RCG dominance in wet meadows	30-Sep-2023	30-Sep-24		Data analysis is well underway but has taken longer than expected. We will be working on identifying additional data needs and summarizing results for a report or manuscript.	Delaney, De Jager, Van Appledorn, Bouska, Rohweder
2016LP3	Draft Manuscript: Review of Landscape Ecology on the UMR	NA	30-Sep-24			De Jager
Intended for distribution						
Manuscript: Delaney, J.T., Van Appledorn, M., De Jager, N.R., Bouska, K.L., Rohweder, J.J. Draft. Predicting Phalaris arundinacea (reed canarygrass) invasion in forest understories of the Upper Mississippi River floodplain. Draft complete, 2022LP3 Manuscript 2021LP3: De Jager et al. 2024. Identifying conditions where reed canarygrass (Phalaris arundinacea) functions as a driver of forest loss in the Upper Mississippi River floodplain under different hydrological scenarios 10.1007/s11273-023-09969-6 Cooperator Report: 2023LP5 Rohweder, J., De Jager, N., 2023, Attributes of Upper Mississippi River System contiguous forest areas. Cooperator report prepared for the U.S. Army Corps of Engineers' Upper Mississippi River Restoration – Long Term Resource Monitoring element. 29 p. https://www.usgs.gov/centers/upper-midwestenvironmental-sciences-center/science/attributes-upper-mississippi-river						

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Eco-hydrologic Research						
2024EH1	Analysis of groundwater levels on floodplain forest experimental plots	30-Sep-2024				Van Appledorn
2024EH2	Draft manuscript of underplanting growth and survival and relation to groundwater levels, surface flooding, and other environmental variables	30-Sep-2025				Van Appledorn
On-Going						
2023EH1	Draft report of backwater sedimentation patterns through time to support vulnerability modeling effort	30-Sep-2023	31-July-2024		Delayed due to parental leave	Van Appledorn, Rohweder, DeJager, Kalas
2023EH2	Draft manuscript of reed canary grass, wood nettle, and silver maple seedling distributions and persistence in the UMR floodplain across environmental gradients	30-Sep-2023	31-July_2024		Delayed due to Kirsch retirement; R. Burner is now working will Van Appledorn to complete	Van Appledorn, Kirsch
2020EH02	Submit manuscript of temporal patterns in UMRS inundation regimes for peer review	30-Sep-2021	31-Dec-2024		Delayed due to change in priorities	Van Appledorn, De Jager, Rohweder
2021EH02	Draft manuscript of UMRS floodplain forest classification	30-Sep-2021	30-Sep-2024		Delayed due to change in priorities	Van Appledorn, De Jager
Intended for distribution						
Development of UMRS inundation model query tool; Van Appledorn, Fox, Rohweder, De Jager; 2019EH03						
Manuscript: 2021EH01 Draft manuscript of Temporal and spatial trends of large wood in the UMRS and potential eco-hydrologic drivers. In review. IP-156995						
Published 03 August 2023 : Van Appledorn, M., N. R. De Jager, and J. J. Rohweder. 2023. Low-complexity floodplain inundation model performs well for ecological and management applications in a large river ecosystem. <i>Journal of the American Water Resources Association</i> , https://doi.org/10.1111/1752-1688.13152						

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Acquisition and Interpretation of Imagery for Production of 2020 UMRS Land Cover/Land Use Data and Pool-Based Orthomosaics						
2024LCU4	Image processing, stereo model development, orthorectification, pool-based mosaicking, image interpretation, automation, QA/QC, and serving of 2020 LCU datasets for Pools 5-6, 17, and 22-25.	30-Sep-2024				Dieck, Strassman
Intended for Distribution						
2023LCU3 Image processing, stereo model development, orthorectification, pool-based mosaicking, image interpretation, automation, QA/QC, and serving of 2020 LCU datasets for Pools 1-3, 7, 11, and 50% of Pool 10, the St. Croix and lower Minnesota Rivers, and the Alton Pool of the Illinois River INSERT A LINK HERE						
Aquatic Vegetation, Fisheries, and Water Quality Research, Statistical Evaluation						
On-Going						
Manuscript: Evidence of functionally defined non-random fish community responses over 25 years in a large river system (Ickes; 2019B13 replacing 2015B17 and 2016B17; Resubmitted to						
Manuscript: A synthesis on river floodplain connectivity and lateral fish passage in the Upper Mississippi River, (Ickes; Submitted River Research and Applications, IP-123678)						
Statistical Evaluation						
Intended for distribution						
Manuscript: Inferring decreases in among-backwater heterogeneity in large rivers using among-backwater variation in limnological variables (2010E1; IP-027392; Gray; in journal review)						
Manuscript: How well do trends in LTRM percent frequency of occurrence SAV statistics track trends in true occurrence? (2016E2; IP-123221; Published as Gray, B.R., 2021. Probabilities of detecting submersed aquatic vegetation species using a rake method may vary with biomass. Aquatic Botany, 171, p.103375.)						
Pool 12 Overwintering HREP Adaptive Management Fisheries Response Monitoring						
2024P13d	Age determination of bluegills	1-Feb-2024				Keuter
2024P13e	In-house databases updated	31-Mar-2024				Keuter
2024P13f	Made available to program partners via Iowa Fish Mgmt. State Report	30-Jun-2024				Keuter

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Conceptual Model and Hierarchical Classification of Hydrogeomorphic Settings in the UMRS						
2019CM6	Submit Final LTRM Completion report on hydrogeomorphic conceptual model and hierarchical classification system	30-Jun-2020	30-Jun-2024		Sent to SPN (USGS publishing hub). JNH updated modified target data from 30 Dec 2022 to June 2024	Fitzpatrick, Hendrickson, Sawyer, Strange
Water Exchange Rates and Change in UMRS Channels and Backwaters, 1980 to Present						
2019WE4	Submit Final LTRM Completion Report	30-Mar-2020	30-Dec-2023		Draft report complete. Lead author retired and next steps are TBD.	Hendrickson
Intrinsic and extrinsic regulation of water clarity over a 950-km longitudinal gradient of the UMRS						
Intended for distribution						
Accepted for Publication December 2023; Published January 18, 2024: 2019IE3 Carhart, A.M., D. Drake, J. Fischer, J.N. Houser, K.J. Jankowski, J. Kalas, and E. Lund. 2024. Intrinsic and extrinsic regulation of water clarity in a large, floodplain-river ecosystem. <i>Ecosystems</i> . https://doi.org/10.1007/s10021-023-00895-5 .						
Systemic analysis of hydrogeomorphic influences on native freshwater mussels						
2019FM9	Final LTRM completion report (changed to manuscript)	30-Jan-2023	31-Mar-2024		Both MS are in review by co-authors. Lead PI took a different job in Sep 2022 without completing the MS	Teresa Newton
Using dendrochronology to understand historical forest growth, stand development, and gap dynamics						
2022DD1	Draft manuscript: Floodplain forest structure and the recent decline of <i>Carya illinoensis</i> (Wangenh.) K. Koch (northern pecan); Part 2	30-May-2022	TBD		brief update received from BV 12/26/23. Follow up query regarding modified target date sent to BV 01/25/24	Grant Harley (U Idaho), Ben Vandermyde(USACE contact)
Forest canopy gap dynamics: quantifying forest gaps and understanding gap – level forest regeneration						
Manuscript 2019FG5: Guyon, L., Strassman, A., Oines, A., Meier, A., Thomsen, M., Sattler, S., DeJager, N., Hoy, E., Vandermyde, B., and Cosgriff, R., 2023, Forest canopy gap dynamics: quantifying forest gaps and understanding gap – level forest regeneration in Upper Mississippi River floodplain forests: U.S. Geological Survey data release, https://doi.org/10.5066/P9Q5EKU1						

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Investigating vital rate drivers of UMRS fishes to support management and restoration						
2019VR8	Data set complete (data delivered to Ben Schlifer, physical structures delivered to BRWFS)	30-Sep-2021	31-Dec-24		Initial age estimates have been provided by MSU for all species. Otoliths have been transferred to IRBS, where further otolith processing has been occurring, species by species, for biochronology purposes. Any age differences between MSU and IRBS will be re-evaluated. Final age dataset will be delayed until all otoliths are processed and discrepancies re-evaluated.	Quinton Phelps
On-Going						
2019VR10	Submit draft manuscript (Drivers of vital rates)	31-Dec-2021	31-Dec-24		Thesis chapter has been completed. Submission as a journal article has been delayed due to age discrepancies among otolith readers.	Quinton Phelps, Kristen Bouska
Intended for distribution						
Manuscript 2019VR11: Valentine, S. A., K. L. Bouska, and G. W. Whitley. In review. Network connectivity contributes to native small-bodied fish assemblages in the Upper Mississippi River						
FY19 Funded Science in Support of Restoration and Management						
Reforesting UMRS forest canopy openings occupied by invasive species						
2019ref3	Draft LTRM Completion (changed to draft MS)	30-Apr-2021	30-Apr-24		Delayed. Intent now is to submit to journal rather than completion report. 1/23/24 comm w/LG	Guyon and Cosgriff
2019ref4	Final LTRM Completion (changed to journal submission)	30-Sep-2021	30-Sep-2024		Delayed. Intent now is to submit to journal rather than completion report	Guyon and Cosgriff

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
A year of zooplankton community data from the habitats and pools of the UMR						
2019zoo2	Draft LTRM Completion report on utility of zooplankton community monitoring for HREP assessment	30-Dec-2020	30-Mar-2024		Sample collection delayed because of Covid-19 state protocols; zooplankton ID delayed; Fulgoni took new position. Discussion needed about value of completing 2019zoo2 and to determine next steps.	Sobotka
2019zoo3	Final LTRM Completion report on utility of zooplankton community monitoring for HREP assessment	30-Jun-2021	30-Jun-2024			Sobotka
2019zoo4	Draft LTRM Completion report on detailing differences between pools and habitats. Report will also investigate the potential impacts of Asian carp on the zooplankton community.	30-Dec-2020	30-Mar-2024			Sobotka
2019zoo5	Final LTRM Completion report detailing differences between pools and habitats and investigating potential impacts of Asian carp on zooplankton community.	30-Jun-2021	30-Jun-2024			Sobotka
FY19 Funded Illinois Waterway 2020 Lock Closure						
Intended for distribution						
2023IWW Pre- and Post-Maintenance Aerial Imagery for Illinois River's Alton through Brandon Lock and Dams, 2019-2021. 1 Dec 2022. Final Completion Report. LTRMP-2019AERZ						
FY20 Funded Science in Support of Restoration and Management						
Mapping Potential Sensitivity to Hydrogeomorphic Change in the UMRS Riverscape and Development of Supporting GIS Database and Query Tool						
2021HG7	Submit Final LTRM Completion report on hydrogeomorphic change GIS database and query tool.	30-Mar-2022	30-Jun-2023		Update 5/5/23: Reconciling peer review comments Update 12/22/23: Submitted to BAO for approval, but was sent back b/c data product needs to be released simultaneously. Data product is currently undergoing peer review	Vaughan, Strange, Fitzpatrick, Van Appledorn, USACE core team

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Improving our understanding of historic, contemporary, and future UMRS hydrology by improving workflows, reducing redundancies, and setting a blueprint for modelling potential						
2021HH1	Historic and Contemporary Hydrologic Database Release and Documentation	30-Sep-2021	30-Sep-2024		Delayed due to issues of data acquisition from USACE; expected submission of data and metadata to USGS Fundamental Science Practices by 31-Jan-2024	M. Van Appledorn, L. Sawyer
2021HH2	Draft LTRM Completion Report: document database and documentation development steps, database capabilities, and quantitative summaries of the hydrologic regime through time.	30-Dec-2021	31-Jul-2024		Postponed due to delays in data acquisition from USACE	M. Van Appledorn, L. Sawyer
2021HH3	Final LTRM Completion Report: document database and documentation development steps, database capabilities, and quantitative summaries of the hydrologic regime through time	31-Mar-2022	30-Sep-2024		Postponed due to delays in data acquisition from USACE	M. Van Appledorn, L. Sawyer
Intended for distribution						
2021HH6 Final LTRM Completion Report (Scenarios): This report will serve as the blueprint for modeling future hydrology to be undertaken with future funding						
Understanding physical and ecological differences among side channels of the Upper Mississippi River System						
2021SC4	Final report on UMRR management implications submitted for USGS review	30-Sep-2022	30-Mar-2023		TBD. Delayed by McCain departure and results provided insufficient information to support this report. A similar item could be moved to the new Learning from HREPS group or removed.	Sobotka & McCain
2021SC5	Manuscript on benthic invertebrate associations with side channel characteristics submitted for USGS and peer review	30-May-2023	30-Dec-24		Delayed due to macroinvertebrate processing time required. Graduate student making steady progress towards manuscript.	Sobotka & Vander Vorste

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Refining our Upper Mississippi River's ecosystem states framework						
Intended for Distribution						
Delaney, J. T., and D. M. Larson. 2023. Using explainable machine learning methods to evaluate vulnerability and restoration potential of ecosystem state transitions. Conservation						
Tool: Submersed aquatic vegetation vulnerability evaluation application (SAVVEA); (Completed, 2021SS10; Delaney and Larson, IP-142969)						
Augmenting the UMRR fish vital rates project with greater species representation for genetics and otolith microchemistry						
2021VR3	Submit draft manuscript (genetics)	31-Dec-2022	31-Dec-24		Multiple delays occurred including the need for additional samples (frozen samples were low quality) and ensuring consistent methods with phase I genetics. Initial analyses have been completed with a few samples requiring re-sequencing.	Davis, Tan, Lamer
2021VR4	Submit draft manuscript (genetics - mimic/channel)	31-Dec-2022	31-Dec-24		Multiple delays occurred including the need for additional samples (frozen samples were low quality) and ensuring consistent methods with phase I genetics. Initial analyses have been completed with a few samples requiring re-sequencing.	Davis, Tan, Lamer
2021VR5	Submit draft manuscript (constructing management units)	31-Dec-2022	31-Dec-24		Delays in each individual component (vital rate, genetics, microchemistry) have pushed this product back	Bartels, Bouska, Davis, Lamer, Larson, Phelps, Tan, Whitledge
Functional UMRS fish community responses and their environmental associations in the face of a changing river: hydrologic variability, biological invasions, and habitat rehabilitation						
2021FF2	Draft manuscript: "Has large scale ecosystem rehabilitation altered functional fish community	30-Sep-2021	30-Jun-2024		Gatto departed for another position. Analyses complete manuscript in prep	Ickes and Gatto
2021FF3	Draft Manuscript: "Why aren't bigheaded carps (<i>Hypophthalmichthys</i> sp.) everywhere in the Upper Mississippi River System?"	30-Sep-2021	30-Jun-2024			Ickes and Gatto

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Understanding landscape-scale patterns in winter conditions in the Upper Mississippi River System						
2021WL1	System wide spatial layers of habitat conditions	30-Sep-2022	30-Jun-2024		Lead author was on family leave and moved to a new job; Manuscript and dataset very close to submission.	Mooney, Dugan, Magee
2021WL2	Draft manuscript: Landscape scale controls on overwintering habitat in a large river	30-Sep-2022	30-Jun-2024		Lead author was on family leave and moved to a new job; Manuscript and dataset very close to submission	Mooney, Dugan, Jankowski, Magee
2021WL3	Draft manuscript: Response of oxygen dynamics to ice and snow phenology in backwater lakes	30-Sep-2023	30-Dec-24		Analysis in progress; final data collection occurred May 2023.	Jankowski, Dugan, Burdis, Kalas, Kueter
2021WL4	Draft Manuscript: Patterns in sediment characteristics and oxygen demand across a winter riverine landscape	30-Sep-2023	30-Dec-24		MS Thesis in process of publication; manuscript in progress but lead author has taken another job. Kreiling and Jankowski working to move it ahead with his help.	Perner, Kreiling, Jankowski, Giblin
Forest Response to Multiple Large-Scale Inundation Events						
2021FR3	Technical Report	1-Jun-2022	30-Sep-24		Delayed due to staffing shortages, hiring of new staff at NGREEC; modifying from technical report to manuscript. Shelby has a paper in revision.	Cosgriff, Guyon, De Jager

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
FY22 Funded Science in Support of Restoration and Management						
Assessing Forest Development Processes and Pathways in Floodplain Forests along the Upper Mississippi River using Dendrochronology						
2023dendro3	Coordination and scheduling for three to five virtual meetings; Meetings will address current objectives outlined in Activity 3 and future directions	1 March – 31 May 2024		first virtual meeting held 11-Sep-2023. Subsequent meetings are planned		Windmuller-Campione and Van Appledorn
2023dendro4	Draft manuscript – Age data of floodplain forests of the Upper Mississippi River	30-May-2024				Windmuller-Campione and Van Appledorn
2023dendro5	Draft Manuscript – Growth dynamics of silver maple of the Upper Mississippi River	30-Sep-2024				Windmuller-Campione and Van Appledorn
2023dendro6	Final report writing, edits on manuscript, and completion of all data storage	30-Nov-2024				Windmuller-Campione and Van Appledorn
Evaluating the LOCA-VIC-mizuRoute hydrology data products for scientific and management applications in the UMRS						
2023Hydro3	ECB 2018-14 compliance completion	30-Sep-2023	30-Sep-24		USACE work priority shift. Modified target date to accommodate	Sawyer and Van Appledorn
2023Hydro4	Annual update: Year 1	31-Dec-2023	16-Jan-24	16-Jan-24	Oral update to UMRR planned for UMRR Science Meeting in mid-January; date modified to align with UMRR Science Meeting dates	Sawyer and Van Appledorn
2023Hydro5	UMRS projected hydrology data and documentation release	30-Sep-2024			No data and documentation release anticipated, as LOCA-VIC-mizuRoute products were found to be unreliable for UMRS per evaluation results	Sawyer and Van Appledorn
2023Hydro6	UMRR webinar on UMRS projected hydrology data release	31-Dec-2024			No data and documentation release anticipated, as LOCA-VIC-mizuRoute products were found to be unreliable for UMRS per evaluation results	Sawyer and Van Appledorn

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
2023Hydro7	Virtual workshop or LTRM project team update for red pathway outcomes	31-Mar-2024	10-May-24		Update to UMRR planned for UMRR Workshop on May 7-9, 2024	Sawyer and Van Appledorn
2023Hydro8	Draft LTRM completion report	30-Sep-2024			In progress with goal of submitting to IPDS by 31-May-24 as a USGS SIR	Sawyer and Van Appledorn
2023Hydro9	Final LTRM completion report	30-Dec-2025				Sawyer and Van Appledorn
Putting LTRM's long-term phytoplankton archive to work to understand ecosystem transitions and improve methodological approaches						
2023Phyto1	System-wide phytoplankton community dataset	30-Sep-2023	30-May-24		Sample identification completed Dec 1, 2023 by contractor. In progress of completing dataset compilation	Jankowski
2023Phyto2	Draft Manuscript: Phytoplankton community composition over the past 20 years in the Upper Mississippi River: distribution of harmful taxa and relationships with environmental trends	30-May-2024				Jankowski and others
2023Phyto3	Draft Manuscript: Relating phytoplankton communities to distinct vegetation recovery trajectories in Pools 4 and 13	30-May-2024				Jankowski and others
2023Phyto4	Report: Assessment of FloCam for use on archived and fresh phytoplankton samples for LTRM sampling	30-Mar-2024				Larson, James
2023Phyto5	Draft Manuscript: Comparison of trends captured by microscopy and FlowCam phytoplankton community analysis	30-May-2024				Larson, James

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Assessing long term changes and spatial patterns in macroinvertebrates through standardized long-term monitoring						
2023inv2	Laboratory identification of macroinvertebrates	30-Aug-2023	30-Sep-24		Delayed by large sample processing and ID workload	Manisha Pant
2023inv3	Screening level mayfly tissue analysis	30-Sep-2023	30-Jun-24		Samples shipped to AXYS for analysis. UI working with AXYS to resolve contract language issues. Once resolved, anticipate results in about 20 weeks.	Giblin, Pant
2023inv4	Annual summary	31-Dec-2023	30-Sep-24			Lamer
2023inv5	Complete data entry and QA/QC of 2023 data; 1250 observations.				2023inv2 delayed by large sample processing and ID workload	
	a. Data entry completed and submission of data to USGS (Includes contaminant data)	31-Jan-2024	30-Sep-24			State field station staff, Giblin
	b. Data loaded on level 2 browsers; QA/QC scripts run and data corrections sent to Field Stations	15-Feb-2024	30-Sep-24			Lamer, Schlifer
	c. Field Station and contaminant QA/QC with corrections to USGS	15-Mar-2024	30-Sep-24			State field station staff, Giblin
	d. Corrections made and data moved to public Web Browser	30-Mar-2024	30-Sep-24			Lamer, Schlifer
2023inv6	Field collection of macroinvertebrates	14-Jun-2024				State field station staff
2023inv7	Laboratory identification of macroinvertebrates	30-Aug-2024				TBD
2023inv8	Screening level mayfly tissue analysis	30-Sep-2024				Giblin
2023inv9	Annual summary	31-Dec-2024				Lamer

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Science in Support of Restoration and Management Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
2023inv10						
	a. Data entry completed and submission of data to USGS (Includes contaminant data)	31-Jan-2025				State field station staff, Giblin
	b. Data loaded on level 2 browsers; QA/QC scripts run and data corrections sent to Field Stations	15-Feb-2025				Lamer, Schlifer
	c. Field Station and contaminant QA/QC with corrections to USGS	15-Mar-2025				State field station staff, Giblin
	d. Corrections made and data moved to public Web Browser	30-Mar-2025				Lamer, Schlifer
2023inv11	Draft LTRM Completion report or manuscript on contaminant sampling	30-Sep-2025				Giblin
2023inv12	Field collection of macroinvertebrates	14-Jun-2025				State field station staff
2023inv13	Laboratory identification of macroinvertebrates	30-Aug-2025				TBD
2023inv14	Annual summary	31-Dec-2025				Lamer
2023inv15						
	a. Data entry completed and submission of data to USGS (Includes contaminant data)	31-Jan-2026				State field station staff, Giblin
	b. Data loaded on level 2 browsers; QA/QC scripts run and data corrections sent to Field Stations	15-Feb-2026				Lamer, Schlifer
	c. Field Station and contaminant QA/QC with corrections to USGS	15-Mar-2026				State field station staff, Giblin
	d. Corrections made and data moved to public Web Browser	30-Mar-2026				Lamer, Schlifer
2023inv16	Draft LTRM Completion report or manuscript on macroinvertebrate sampling, trends, etc.	30-Sep-2026				Lamer

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Base Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Aquatic Vegetation Component						
2024A1	Complete data entry and QA/QC of 2023 data; 1250 observations.					
	a. Data entry completed and submission of data to USGS	30-Nov-2023		30-Nov_2023		Lund, Carhart, Fopma
	b. Data loaded on level 2 browsers	15-Dec-2023				Schlifer
	c. QA/QC scripts run and data corrections sent to Field Stations	28-Dec-2023				Sauer, Schlifer
	d. Field Station QA/QC with corrections to USGS	15-Jan-2024				Lund, Carhart, Fopma
	e. Corrections made and data moved to public Web Browser	30-Jan-2024				Larson, Schlifer, Caucutt
2024A2	Web-based: Creating surface distribution maps for aquatic plant species in Pools 4, 8, and 13; 2023 data	31-Jul-2024				Larson, Schlifer
2024A3	Wisconsin DNR annual summary report 2023 that combines current year observations from LTRM with previous years' data, for the fish, aquatic vegetation, and water quality components.	30-Sep-2024				Bartels, Kalas, Carhart
2024A4	Complete aquatic vegetation sampling for Pools 4, 8, and 13 (Table 1)	31-Aug-2024				Lund, Carhart, Fopma
2024A5	Pool 4: Graphical summary and maps of aquatic vegetation current status and long-term trends.	30-Dec-2024				Lund
2024A6	Pool 8: Graphical summary and maps of aquatic vegetation current status and long-term trends.	30-Dec-2024				Carhart
2024A7	Pool 13: Graphical summary and maps of aquatic vegetation current status and long-term trends.	30-Dec-2024				Fopma
2024A8	Aquatic Vegetation Sampling Protocol Update	30-Sep-2024				Larson, Lund, Carhart, Fopma
Intended for distribution						
Manuscript and data release: Sherman J, St. Clair K, Gray B, Larson DM (in revision) Predicting a continuous causal variable given ordinal outcomes and structural zeroes with application to submersed aquatic vegetation biomass. In revision at USGS and Environmental and Ecological Statistics since December 2022. IP-149488.						

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Base Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Fisheries Component						
2024B1	Complete data entry, QA/QC of 2023 fish data; ~1,590 observations					
	a. Data entry completed and submission of data to USGS	31-Jan-2024				DeLain, Dawald, Bartels, Hine, Kueter, Gittinger, West, Solomon, Maxson
	b. Data loaded on level 2 browsers; QA/QC scripts run and data corrections sent to Field Stations	15-Feb-2024				Ickes, Schlifer
	c. Field Station QA/QC with corrections to USGS	15-Mar-2024				DeLain, Dawald, Bartels, Kueter, Hine, Gittinger, West, Solomon, Maxson
	d. Corrections made and data moved to public Web Browser	30-Mar-2024				Ickes and Schlifer
2024B2	Update Graphical Browser with 2023 data on Public Web Server.	31-May-2024				Ickes and Schlifer
2024B3	Complete fisheries sampling for Pools 4, 8, 13, 26, the Open River Reach, and La Grange Pool (Table 1)	31-Oct-2024				DeLain, Dawald, Bartels, Kueter, Hine, Gittinger, West, Solomon, Maxson
2024B4	Sample collection and database increment on invasive carp age and growth: collection of cleithral bones	31-Jan-2024				Solomon, Maxson
2024B5	IDNR Fisheries Management State Report: Fisheries Monitoring in Pool 13, Upper Mississippi River, 202;. Includes Pool 12 Overwintering HREP Adaptive Management Fisheries Response Monitoring	30-Sep-2024				Kueter
2024B8(D)	Database increment: Stratified random day electrofishing samples collected in Pools 9–11	30-Sep-2024				Kueter
2024B9(D)	Database increment: Stratified random day electrofishing samples collected in Pools 16–18	30-Sep-2024				Kueter
Intended for distribution						
Manuscript: A synthesis on river floodplain connectivity and lateral fish passage in the Upper Mississippi River (2021B11; Journal Promised a finding and set of reviews in the next 6 weeks.; IP-123678)						

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Base Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Water Quality Component						
2024D1	Complete calendar year 2023 fixed-site and SRS water quality sampling	31-Dec-2023	31-Dec-23			Jankowski, Burdis, Kalas, Johnson, L. Gittinger, Sawicki, Sobotka
2024D2	Complete laboratory sample analysis of 2023 fixed site and SRS data; Laboratory data loaded to Oracle data base.	15-Mar-2024				Yuan, Schlifer
2024D3	1st Quarter of laboratory sample analysis (~12,600)	30-Dec-2023				Yuan, Manier, Burdis, Kalas, Johnson, L. Gittinger, Sobotka
2024D4	2nd Quarter of laboratory sample analysis (~12,600)	30-Mar-2024				Yuan, Manier, Burdis, Kalas, Johnson, L. Gittinger, Sawicki, Sobotka
2024D5	3rd Quarter of laboratory sample analysis (~12,600)	29-Jun-2024				Yuan, Manier, Burdis, Kalas, Johnson, L. Gittinger, Sawicki, Sobotka
2024D6	4th Quarter of laboratory sample analysis (~12,600)	28-Sep-2024				Yuan, Manier, Burdis, Kalas, Johnson, L. Gittinger, Sawicki, Sobotka
2024D7	Complete QA/QC of calendar year 2023 fixed-site and SRS data.					
	a. Data loaded on level 2 browsers; QA/QC scripts run; SAS QA/QC programs updated and sent to Field Stations with data.	30-Mar-2024				Schlifer, Jankowski
	b. Field Station QA/QC; USGS QA/QC.	15-Apr-2024				Jankowski, Burdis, Kalas, Johnson, L. Gittinger, Sawicki, Sobotka
	c. Corrections made and data moved to public Web Browser	30-Apr-2024				Schlifer, Jankowski
2024D8	Complete FY2024 fixed site and SRS sampling for Pools 4, 8, 13, 26, Open River Reach, and La Grange Pool	30-Sep-2024				Jankowski, Burdis, Kalas, Johnson, L. Gittinger, Sawicki, Sobotka
2024D9	WEB-based annual Water Quality Component Update w/2023 data on Server.	30-May-2024				Schlifer, Jankowski

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Base Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
2024D10	Operational Support to the UMRR LTRM Element. Serve as in-house Field Station for USGS for consultation and support on various LTRM-wide topics	30-Sep-2024				Bartels, Carhart, Kalas, Patschull
2024D11	Phytoplankton dataset updated	30-Dec-2024				Jankowski
On-Going						
2019D12	Draft LTRM Completion Report: Assessment of Phytoplankton Samples collected by the Upper Mississippi River Restoration Program-Long Term Resource Monitoring Water Quality Component	30-Dec-2019	TBD		Lead (Fulgoni) took new position, plan for completion is TBD	TBD and Jankowski
2020D12	Final LTRM Completion Report: Assessment of Phytoplankton Samples collected by the Upper Mississippi River Restoration Program-Long Term Resource Monitoring Water Quality Component	30-Mar-2021	TBD		Lead (Fulgoni) took new position, plan for completion is TBD	TBD and Jankowski
2024D12	Carp, phosphorus, and winter conditions influence summer phytoplankton community dynamics across lotic-lentic gradient of a large, eutrophic river	30-Dec-2024				Jankowski, J. Larson
Intended for distribution						

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Base Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Spatial Data Component						
2024SD1	Orthorectification of scanned photos (St. Louis District Mississippi River pools and Open River Reach, and the Illinois River pools)	30-Sep-2024				Schoen, Strassman
2024SD2	Pilot dataset and report of Real-Time Kinematic GNSS for use in remote or inaccessible vegetation locations	31-Dec-2023				Finley
2024SD3	Dataset of Applied UAS based ground penetrating radar to assist topobathy data collection	30-Sep-2024				Finley
2024SD4	Pilot dataset and report of material volumetrics using three methods	30-Jun-2024				Finley
2024SD5	Report on conducting surveys over existing backwater sediment transects using ground penetrating radar during ice cover	30-Sep-2024				Finley
2024SD6	Maintenance ArcGIS server	30-Sep-2024				Rohweder
2024SD7	Data Set: Land Cover Change in the UMRS for newly developed pools: Stc, Alt, 17, 22, 6, 5, 5a, 24, 25.	30-Sep-2024				De Jager
2024SD8	Draft Report: Land Cover Change in the UMRS Key Pools	30-Sep-2024				De Jager
On-Going						
2022SD7	Draft LTRM Completion Report: Pattern of Wild Rice Colonization (2022SD7)	30-Sep-2024				De Jager
2023SD9	Draft Report: Spatial Data Component Review and Future Objectives	30-Sep-2024				De Jager
Intended for distribution						
2021SD7 Topobathy 2023 For the Upper Mississippi River System. SOW/Strategic Planning Document available upon request.						
2021SD10 (2021LP3): Published 2 Jan 2024. De Jager et al. 2024. Identifying conditions where reed canarygrass (<i>Phalaris arundinacea</i>) functions as a driver of forest loss in the Upper Mississippi River floodplain under different hydrological scenarios. <i>Wetlands Ecology and Management</i> . 10.1007/s11273-023-09969-6 .						

Upper Mississippi River Restoration
 Long Term Resource Monitoring Element
 FY2023 Base Scope of Work

Tracking number	Milestone	Original Target Date	Modified Target Date	Date Completed	Comments	Lead
Data Management						
2024M1	Update vegetation, fisheries, and water quality component field data entry and correction applications.	30-May-2024				Schlifer
2024M2	Load 2023 component sampling data into Database tables and make data available on Level 2 browsers for field stations to QA/QC.	30-Jun-2024				Schlifer
2024M3	Assist LTRM Staff with development and review of metadata and databases in conjunction with publishing of reports and manuscripts	On-going				Schlifer
UMRR Science Meeting						
2024SM1	2024 Science Meeting in La Crosse, WI	30-Jan-2024		18-Jan-2024		
2024SM2	Proposals distributed for review	4-Apr-2024				
2024SM3	Proposals submitted as UMRR CC quarterly mtg read ahead	3-May-2024				
2024SM3	Proposal recommendations presented to UMRR CC	22-May-24				
Status and Trends 3rd edition						
2022ST4	Draft S&T3 Fact Sheet	1-Mar-24				Authors
2022ST5	Final S&T3 Fact Sheet	30-Sep-2024				Authors

ATTACHMENT D

Additional Items

- Future Meeting Schedule (D-1)
- Frequently Used Acronyms (4-29-2022) (D-2 to D-8)

**QUARTERLY MEETINGS
FUTURE MEETING SCHEDULE**

MAY 2024	
<u>Quad Cities</u>	
May 21	UMRBA Quarterly Meeting
May 22	UMRR Coordinating Committee Quarterly Meeting

AUGUST 2024	
<u>St. Paul</u>	
August 6	UMRBA Quarterly Meeting
August 7	UMRR Coordinating Committee Quarterly Meeting

Acronyms Frequently Used on the Upper Mississippi River System

AAR	After Action Report
A&E	Architecture and Engineering
ACRCC	Asian Carp Regional Coordinating Committee
AFB	Alternative Formulation Briefing
AHAG	Aquatic Habitat Appraisal Guide
AHRI	American Heritage Rivers Initiative
AIS	Aquatic Invasive Species
ALC	American Lands Conservancy
ALDU	Aquatic Life Designated Use(s)
AM	Adaptive Management
ANS	Aquatic Nuisance Species
AP	Advisory Panel
APE	Additional Program Element
ARRA	American Recovery and Reinvestment Act
ASA(CW)	Assistant Secretary of the Army for Civil Works
A-Team	Analysis Team
ATR	Agency Technical Review
AWI	America's Watershed Initiative
AWO	American Waterways Operators
AWQMN	Ambient Water Quality Monitoring Network
BA	Biological Assessment
BATIC	Build America Transportation Investment Center
BCOES	Bid-ability, Constructability, Operability, Environmental, Sustainability
BCR	Benefit-Cost Ratio
BMPs	Best Management Practices
BO	Biological Opinion
CAP	Continuing Authorities Program
CAWS	Chicago Area Waterways System
CCC	Commodity Credit Corporation
CCP	Comprehensive Conservation Plan
CEICA	Cost Effectiveness Incremental Cost Analysis
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CFS	Cubic Feet Per Second
CG	Construction General
CIA	Computerized Inventory and Analysis
CMMP	Channel Maintenance Management Plan
COE	Corps of Engineers
COPT	Captain of the Port
CPUE	Catch Per Unit Effort
CRA	Continuing Resolution Authority
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program

CSP	Conservation Security Program
CUA	Cooperative Use Agreement
CWA	Clean Water Act
CY	Cubic Yards
DALS	Department of Agriculture and Land Stewardship
DED	Department of Economic Development
DEM	Digital Elevation Model
DET	District Ecological Team
DEWS	Drought Early Warning System
DMMP	Dredged Material Management Plan
DNR	Department of Natural Resources
DO	Dissolved Oxygen
DOA	Department of Agriculture
DOC	Department of Conservation
DOER	Dredging Operations and Environmental Research
DOT	Department of Transportation
DPR	Definite Project Report
DQC	District Quality Control/Quality Assurance
DSS	Decision Support System
EA	Environmental Assessment
ECC	Economics Coordinating Committee
EEC	Essential Ecosystem Characteristic
EIS	Environmental Impact Statement
EMAP	Environmental Monitoring and Assessment Program
EMAP-GRE	Environmental Monitoring and Assessment Program-Great Rivers Ecosystem
EMP	Environmental Management Program [Note: Former name of Upper Mississippi River Restoration Program.]
EMP-CC	Environmental Management Program Coordinating Committee
EO	Executive Order
EPA	Environmental Protection Agency
EPM	Environmental Pool Management
EPR	External Peer Review
EQIP	Environmental Quality Incentives Program
ER	Engineering Regulation
ERDC	Engineering Research & Development Center
ESA	Endangered Species Act
EWMN	Early Warning Monitoring Network
EWP	Emergency Watershed Protection Program
FACA	Federal Advisory Committee Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FDR	Flood Damage Reduction
FFS	Flow Frequency Study
FMG	Forest Management Geodatabase
FONSI	Finding of No Significant Impact
FRM	Flood Risk Management

FRST	Floodplain Restoration System Team
FSA	Farm Services Agency
FTE	Full Time Equivalent
FWCA	Fish & Wildlife Coordination Act
FWIC	Fish and Wildlife Interagency Committee
FWS	Fish and Wildlife Service
FWWG	Fish and Wildlife Work Group
FY	Fiscal Year
GAO	Government Accountability Office
GEIS	Generic Environmental Impact Statement
GI	General Investigations
GIS	Geographic Information System
GLC	Governors Liaison Committee
GLC	Great Lakes Commission
GLMRIS	Great Lakes and Mississippi River Interbasin Study
GPS	Global Positioning System
GREAT	Great River Environmental Action Team
GRP	Geographic Response Plan
H&H	Hydrology and Hydraulics
HAB	Harmful Algal Bloom
HEC-EFM	Hydrologic Engineering Center Ecosystems Function Model
HEC-RAS	Hydrologic Engineering Center River Analysis System
HEL	Highly Erodible Land
HEP	Habitat Evaluation Procedure
HNA	Habitat Needs Assessment
HPSF	HREP Planning and Sequencing Framework
HQUSACE	Headquarters, USACE
H.R.	House of Representatives
HREP	Habitat Rehabilitation and Enhancement Project
HSI	Habitat Suitability Index
HU	Habitat Unit
HUC	Hydrologic Unit Code
IBA	Important Bird Area
IBI	Index of Biological (Biotic) Integrity
IC	Incident Commander
ICS	Incident Command System
ICWP	Interstate Council on Water Policy
IDIQ	Indefinite Delivery/Indefinite Quantity
IEPR	Independent External Peer Review
IGE	Independent Government Estimate
IIA	Implementation Issues Assessment
IIFO	Illinois-Iowa Field Office (formerly RIFO - Rock Island Field Office)
ILP	Integrated License Process
IMTS	Inland Marine Transportation System
IPR	In-Progress Review
IRCC	Illinois River Coordinating Council

IRPT	Inland Rivers, Ports & Terminals
IRTC	Implementation Report to Congress
IRWG	Illinois River Work Group
ISA	Inland Sensitivity Atlas
IWR	Institute for Water Resources
IWRM	Integrated Water Resources Management
IWS	Integrated Water Science
IWTF	Inland Waterways Trust Fund
IWUB	Inland Waterways Users Board
IWW	Illinois Waterway
L&D	Lock(s) and Dam
LC/LU	Land Cover/Land Use
LDB	Left Descending Bank
LERRD	Lands, Easements, Rights-of-Way, Relocation of Utilities or Other Existing Structures, and Disposal Areas
LiDAR	Light Detection and Ranging
LMR	Lower Mississippi River
LMRCC	Lower Mississippi River Conservation Committee
LOI	Letter of Intent
LTRM	Long Term Resource Monitoring
M-35	Marine Highway 35
MAFC	Mid-America Freight Coalition
MARAD	U.S. Maritime Administration
MARC 2000	Midwest Area River Coalition 2000
MCAT	Mussel Community Assessment Tool
MICRA	Mississippi Interstate Cooperative Resource Association
MDM	Major subordinate command Decision Milestone
MIPR	Military Interdepartmental Purchase Request
MMR	Middle Mississippi River
MMRP	Middle Mississippi River Partnership
MNRG	Midwest Natural Resources Group
MOA	Memorandum of Agreement
MoRAST	Missouri River Association of States and Tribes
MOU	Memorandum of Understanding
MRAPS	Missouri River Authorized Purposes Study
MRBI	Mississippi River Basin (Healthy Watersheds) Initiative
MRC	Mississippi River Commission
MRCC	Mississippi River Connections Collaborative
MRCTI	Mississippi River Cities and Towns Initiative
MRRC	Mississippi River Research Consortium
MR&T	Mississippi River and Tributaries (project)
MSP	Minimum Sustainable Program
MVD	Mississippi Valley Division
MVP	St. Paul District
MVR	Rock Island District
MVS	St. Louis District

NAS	National Academies of Science
NAWQA	National Water Quality Assessment
NCP	National Contingency Plan
NIDIS	National Integrated Drought Information System (NOAA)
NEBA	Net Environmental Benefit Analysis
NECC	Navigation Environmental Coordination Committee
NED	National Economic Development
NEPA	National Environmental Policy Act
NESP	Navigation and Ecosystem Sustainability Program
NETS	Navigation Economic Technologies Program
NGO	Non-Governmental Organization
NGRREC	National Great Rivers Research and Education Center
NGWOS	Next Generation Water Observing System
NICC	Navigation Interests Coordinating Committee
NPDES	National Pollution Discharge Elimination System
NPS	Non-Point Source
NPS	National Park Service
NRC	National Research Council
NRCS	Natural Resources Conservation Service
NRDAR	Natural Resources Damage Assessment and Restoration
NRT	National Response Team
NSIP	National Streamflow Information Program
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
O&M	Operation and Maintenance
OHWM	Ordinary High Water Mark
OMB	Office of Management and Budget
OMRR&R	Operation, Maintenance, Repair, Rehabilitation, and Replacement
OPA	Oil Pollution Act of 1990
ORSANCO	Ohio River Valley Water Sanitation Commission
OSC	On-Scene Coordinator
OSE	Other Social Effects
OSIT	On Site Inspection Team
P3	Public-Private Partnerships
PA	Programmatic Agreement
PAS	Planning Assistance to States
P&G	Principles and Guidelines
P&R	Principles and Requirements
P&S	Plans and Specifications
P&S	Principles and Standards
PCA	Pollution Control Agency
PCA	Project Cooperation Agreement
PCX	Planning Center of Expertise
PDT	Project Delivery Team
PED	Preconstruction Engineering and Design
PgMP	Program Management Plan

PILT	Payments In Lieu of Taxes
PIR	Project Implementation Report
PL	Public Law
PMP	Project Management Plan
PORT	Public Outreach Team
PPA	Project Partnership Agreement
PPT	Program Planning Team
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RCP	Regional Contingency Plan
RCPP	Regional Conservation Partnership Program
RDB	Right Descending Bank
RED	Regional Economic Development
RIFO	Rock Island Field Office (now IIFO - Illinois-Iowa Field Office)
RM	River Mile
RP	Responsible Party
RPEDN	Regional Planning and Environment Division North
RPT	Reach Planning Team
RRAT	River Resources Action Team
RRCT	River Resources Coordinating Team
RRF	River Resources Forum
RRT	Regional Response Team
RST	Regional Support Team
RTC	Report to Congress
S.	Senate
SAV	Submersed Aquatic Vegetation
SDWA	Safe Drinking Water Act
SEMA	State Emergency Management Agency
SET	System Ecological Team
SMART	Specific, Measurable, Attainable, Risk Informed, Timely
SONS	Spill of National Significance
SOW	Scope of Work
SRF	State Revolving Fund
SWCD	Soil and Water Conservation District
T&E	Threatened and Endangered
TEUs	twenty-foot equivalent units
TIGER	Transportation Investment Generating Economic Recovery
TLP	Traditional License Process
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TSP	Tentatively selected plan
TSS	Total Suspended Solids
TVA	Tennessee Valley Authority
TWG	Technical Work Group
UMESC	Upper Midwest Environmental Sciences Center

UMIMRA	Upper Mississippi, Illinois, and Missouri Rivers Association
UMR	Upper Mississippi River
UMRBA	Upper Mississippi River Basin Association
UMRBC	Upper Mississippi River Basin Commission
UMRCC	Upper Mississippi River Conservation Committee
UMRCP	Upper Mississippi River Comprehensive Plan
UMR-IWW	Upper Mississippi River-Illinois Waterway
UMRNWFR	Upper Mississippi River National Wildlife and Fish Refuge
UMRR	Upper Mississippi River Restoration Program [Note: Formerly known as Environmental Management Program.]
UMRR CC	Upper Mississippi River Restoration Program Coordinating Committee
UMRS	Upper Mississippi River System
UMWA	Upper Mississippi Waterway Association
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VTC	Video Teleconference
WCI	Waterways Council, Inc.
WES	Waterways Experiment Station (replaced by ERDC)
WHAG	Wildlife Habitat Appraisal Guide
WHIP	Wildlife Habitat Incentives Program
WIIN	Water Infrastructure Improvements for the Nation Act
WLM	Water Level Management
WLMTF	Water Level Management Task Force
WQ	Water Quality
WQEC	Water Quality Executive Committee
WQTF	Water Quality Task Force
WQS	Water Quality Standard
WRDA	Water Resources Development Act
WRP	Wetlands Reserve Program
WRRDA	Water Resources Reform and Development Act