



Upper Mississippi River Restoration Program Coordinating Committee Quarterly Meeting

Agenda with
Background and Supporting Materials

August 5, 2026
St. Louis, Missouri



**Upper Mississippi River Restoration
Coordinating Committee**

August 5, 2026

Agenda

Time	Topic	Page	Presenter
8:00 a.m.	Call to Order and Introductions		Kelly Keefe, USACE, <i>Chair</i>
8:05	Approval of Minutes of May 20, 2026 Meeting	A1-6	
8:10	Regional Management and Partnership Collaboration	B1-9	Marshall Plumley, USACE
	- Fiscal Report for FY 2026 - Outlook for FY 2027 2025-2035 Strategic Plan - Communications and Outreach Team - HREP Adaptive Management Task Force		
9:10	UMRR Showcases		
	- Invasive Grass Carp Sampling Gear Efficiency - Craigs Lake HREP		Kristopher Maxson, Illinois River Biological Station Shane Simmons, USACE
10:15	Break		
10:30	Program Reports		
	- Long Term Resource Monitoring and Science — Quarterly Highlights — A-Team Report — LTRM Fiscal Report i. USACE Report ii. Overview of Financial Processes iii. FY 2026 and 2027 Status and Outlook — Implementation Planning — LTRM After Action Report - Habitat Rehabilitation and Enhancement Projects — Implementation of Ongoing Projects	C1-19	Jeff Houser, USGS Shawn Giblin, Wisconsin DNR Davi Michl, USACE Jim Fischer, USGS Jim Fischer, USGS and Davi Michl, USACE Kirsten Wallace, UMRBA District HREP Managers
11:55	Other Business	D1-13	Kelly Keefe, USACE
	— Future Meeting Schedule		
12:00 noon	Adjourn		

Upper Mississippi River Restoration Program Quarterly Meetings

Attachment A

UMRR Coordinating Committee Draft Minutes

Page Number	Document Title
A-1 to A-6	Draft Minutes of the May 20, 2026 UMRR Quarterly Meeting

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

**May 20, 2026
Quarterly Meeting**

Edina, MN

Sabrina Chandler of the U.S. Fish and Wildlife Service called the meeting to order at 8:34 a.m. on May 20, 2026. Other UMRR Coordinating Committee representatives present were Kelly Keefe (USACE), Jim Fischer (USGS), Chad Craycraft (Illinois DNR), Kirk Hansen (Iowa DNR), Liz Scherber (Minnesota DNR), Sam Clary (Missouri DoC) on behalf of Matt Vitello, and Wade Strickland (Wisconsin DNR) on behalf of Vanessa Perry. A complete list of attendees follows these minutes.

Minutes of the February 25, 2026 Meeting

Chad Craycraft moved and Kirk Hansen seconded a motion to approve the draft minutes of the February 25, 2026, meeting. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2026 Work Plan

Marshall Plumley shared optimism for UMRR in FY 2026 and thanked partners for their trust and dedication to the work.

The FY 2026 funding outcome is a dramatic improvement for the program from FY 2025, with \$53 million appropriated to UMRR. Under this work plan, the St. Paul and St. Louis Districts may both have new project starts and LTRM base monitoring will be fully funded. The immediate work interruption following the FY 2025 work plan continues to affect the implementation of UMRR habitat rehabilitation and enhancement projects (HREPs).

FY 2027 President's Budget

Plumley noted that UMRR was one of only four USACE aquatic ecosystem projects to be included in the FY 2027 President's Budget. In the FY 2027 USACE Budget, the Administration creates a standalone District Salaries and Expenses Account (S&E Account), separating Division and District personnel expenses from direct project costs. For UMRR, the Administration is recommending \$55,487,000 for UMRR direct project costs and an additional \$4,020,000 million for salary and overhead expenses in FY 2027. Plumley highlighted that this is the highest budget recommendation ever for the program.

In response to questions from Kirsten Wallace and Sabrina Chandler, Plumley stated that he believes that UMRR will be limited to \$4.02 million for salaries in FY 2027 but noted that a lot of uncertainty remains. The FY 2027 Budget allocates most of UMRR's project dollars to construction; there is no funding allocated to ongoing feasibility work.

Plumley concluded by stating that a \$59 million total budget for the program is a powerful statement about the strength and quality of the partnership's work.

Strategic Planning

Before May 2025, the program made significant progress on the strategic plan. The Strategic Planning Leadership Team (SPLT) met recently and will be resolving some comments provided by the Communication and Outreach Team (COT) and Analysis Team (A-Team), as well as stakeholders and nongovernmental organizations that shared resources at the beginning of the strategic planning process. Plumley acknowledged the program has lost a year of the strategic plan's implementation timeframe. Jim Fischer and Liz Scherber noted that the draft strategic plan has been a helpful resource over the past year despite not being finalized.

The SPLT will revise the strategic plan in June. A webinar will be held in July to kick off a 30-day public review process. The UMRR Coordinating Committee will receive the document with public comments at the August quarterly meeting, with an opportunity to endorse the final product at the October quarterly meeting.

In response to a question from Sammi Boyd, Plumley explained that the stakeholder review will involve sharing the draft strategic plan document on the UMRR website, disseminating a request for input via UMRR's email distribution list, and publishing a press release to encourage any input from interested stakeholders on the draft strategic plan.

LTRM Low Funding Scenario Planning After Action Review

Plumley explained that the partnership has been having conversations over the past year about the impacts of low funding and funding uncertainty on implementing LTRM. While the program was able to maintain base monitoring in FY 2025, it was limited in the carryover dollars that are normally available to ensure there is no pause in operations between fiscal years.

There will be an after action review (AAR) conducted on this LTRM low funding scenario planning process, involving the Coordinating Committee and LTRM field station leads. A meeting is scheduled for May 27 to scope the process. Plumley views this as an opportunity to improve the program's response to future situations.

In response to a question from Olivia Dorothy, Plumley stated that the AAR's findings will be provided at a future quarterly meeting.

LTRM Future Discussions

Plumley stated his intent to find opportunities to further educate the partnership on LTRM work and operations. Plumley noted that the LTRM low funding scenario planning process was inhibited by the differing levels of understanding participants had on LTRM. Future quarterly meetings could include a component of LTRM education.

Jim Fischer noted that LTRM has been in operation for over forty years thanks to the efficient work of states, field stations, and the Upper Midwest Environmental Sciences Center (UMESC); that work is dependent on a continual flow of both money and staff, both of which were interrupted in FY 2025.

Kirsten Wallace noted that any future onboarding materials created for the program could capture the information shared on LTRM in these quarterly meeting components.

Program Reports

HREP Planning and Construction

John Henderson, Marshall Plumley, and Shane Simmons reported on the progress in implementing UMRR HREPs, including the following milestones:

- The St. Paul District has kicked off planning for the Bankline Stabilization HREP and will be holding an interagency meeting on May 22.
- The St. Paul District is wrapping up construction on the McGregor Lake HREP Stage 2 and will hold a ribbon cutting on September 22.
- The Rock Island District will hold a kickoff meeting for the Lower Pool 11 HREP planning process in August.
- The Rock Island District is in negotiations to find a new sponsor for the Quincy Bay HREP.
- The St. Louis District expects to complete Stage 1 of the Yorkinut Slough HREP design in November.
- The RRAT barge trip is scheduled for July 14-16.

Long Term Resource Monitoring, Research, and Other Science

USACE Update

Marshall Plumley reiterated that LTRM base monitoring is fully funded for FY 2026 at \$7 million. That money is on its way to USGS. The scope of work for Science in Support of Restoration and Management (SSRM) was drafted and approved in May, which will bring the LTRM total funding in FY 2026 of \$9 million. While some SSRM work was delayed in FY 2025, it is starting to resume.

Quarterly Progress Report

Jim Fischer reported that the accomplishments of the second quarter of FY 2026 include the publication of the following manuscripts that were supported by UMRR funding and the partnership infrastructure:

- 1) Reforesting Upper Mississippi River Floodplain Openings Colonized by Invasive Species
- 2) Seasonal Environmental Conditions and River Morphology Shape Summer Phytoplankton Communities

Fischer reported that the UMESC Water Quality Analytical Lab participated in the USGS's annual interlaboratory comparison. Fischer presented on the results, which underscore the high quality and accuracy of the sampling data.

Fischer mentioned that the 2026 National Conference on Ecosystem Restoration in Omaha, Nebraska included two special sessions on UMRR.

Analysis Team Update

Shawn Giblin reported on the Analysis Team's April 22 meeting. The next meeting will be on July 30.

Showcase

Upper Mississippi River Restoration Program Project Soil Analyses

Aaron McFarlane reported results from soil analyses conducted at roughly three hundred plots across several UMRR HREPs. Soil properties can confirm if forest restoration efforts are on the right path. The study compared soil samples from completed restoration sites, restoration sites in development, and historical dredged material placement sites and compared these samples with soil samples from natural reference (control) sites.

Important factors for healthy soil at restoration sites include hydrology, inundation; sediment characteristics, soil compaction; the construction techniques used at the site; any plantings done at the site; and the placement of historic dredged material.

The study found that the amount of organic matter in the soil samples from natural sites was typically double that of soil samples from restoration sites. Organic matter is an important component in soil as it reduces bulk density, holds in water, and is a source of nutrients. McFarlane's recommendations resulting from the study are to consider ways to add organic matter to soil at restoration sites, and to be mindful of soil compaction. McFarlane is hoping to do a large-scale analysis of 2025 sampling data this fiscal year to inform the HREP Design Handbook.

Towards an Integrated Framework for Floodplain Vegetation Monitoring and Research in the UMRS

Matt Trumper shared insights from an effort to create a framework for long-term floodplain vegetation monitoring in the Upper Mississippi River System. Both UMRR and the Navigation and Ecosystem Sustainability Program (NESP) are conducting significant floodplain vegetation work. Trumper's team wanted to develop a conceptual framework for floodplain vegetation, with a hierarchical approach to monitoring (site- regional- and system-scale monitoring) integrated through research and modelling. This effort would link data that already exists with management actions. Trumper noted that coordination is key for the team moving forward, as the data and interagency partnerships needed already exist.

Other Business

Future Meeting Schedule

- August 2026 to be held in St. Louis, Missouri
 - UMRBA quarterly meeting – August 4
 - UMRR Coordinating Committee quarterly meeting – August 5
- October 2026 to be held in the Quad Cities

- UMRBA quarterly meeting – October 13
 - UMRB Coordinating Committee quarterly meeting – October 14
- February 2027 to be held virtually
- UMRBA quarterly meeting – February 16
 - UMRB Coordinating Committee quarterly meeting – February 17

Attendance List

UMRR Coordinating Committee Members

Kelly Keefe	U.S. Army Corps of Engineers, MVD
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges
Jim Fischer	U.S. Geological Survey, UMESC [on behalf of Jon Amberg]
Chad Craycraft	Illinois Department of Natural Resources
Kirk Hansen	Iowa Department of Natural Resources
Liz Scherber	Minnesota Department of Natural Resources
Sam Clary	Missouri Department of Conservation [on behalf of Matt Vitello]
Wade Strickland	Wisconsin Department of Natural Resources [on behalf of Vanessa Perry]

Others In Attendance

Jim Cole	U.S. Army Corps of Engineers, MVD
Samantha Thompson	U.S. Army Corps of Engineers, MVD
Trevor Cyphers	U.S. Army Corps of Engineers, MVP
Kacie Grupa	U.S. Army Corps of Engineers, MVP
John Henderson	U.S. Army Corps of Engineers, MVP
Aaron McFarlane	U.S. Army Corps of Engineers, MVP
Dan Reburn	U.S. Army Corps of Engineers, MVP
Davi Michl	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Shane Simmons	U.S. Army Corps of Engineers, MVS
Greg Kohler	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, MVS
Jared Schmalstieg	U.S. Environmental Protection Agency
Lauren Larson	U.S. Fish and Wildlife Service, Ecological Services
Matt Mangan	U.S. Fish and Wildlife Service, Ecological Services
Kraig McPeck	U.S. Fish and Wildlife Service, Ecological Services
Sara Schmuecker	U.S. Fish and Wildlife Service, Ecological Services
Kristen Bouska	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Matt Trumper	U.S. Geological Survey, UMESC
Neil Rude	Minnesota Department of Natural Resources
Sammi Boyd	Wisconsin Department of Natural Resources
Shawn Giblin	Wisconsin Department of Natural Resources
Alicia Vasto	Audubon
Andrew Stephenson	The Nature Conservancy
Olivia Dorothy	One Mississippi
Ken Lubinski	One Mississippi
Aaron Field	Theodore Roosevelt Conservation Partnership
Kirsten Wallace	Upper Mississippi River Basin Association
Brian Stenquist	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Natalie Lenzen	Upper Mississippi River Basin Association
Tyler Leske	Upper Mississippi River Basin Association
Sadie Neuman	Upper Mississippi River Basin Association
Laura Talbert	Upper Mississippi River Basin Association
Josh Wolf	Upper Mississippi River Basin Association

Upper Mississippi River Restoration Program Quarterly Meetings

Attachment B

UMRR Quarterly Budget Reports

Page Number	Document Title
B-1	St. Paul District Quarterly Budget Report (7-20-2026)
B-2 to B-3	Rock Island District Quarterly Budget Report (7-20-2026)
B-4	St. Paul District Quarterly Budget Report (7-20-2026)
B-5 to B-9	UMRR 2026-2036 Strategic Plan Implementation Timeline Draft (7-13-2026)

UMRR Quarterly Budget Report: St. Paul District

FY2026 Q3; Report Date: 2026-07-20

Habitat Projects

Project Name	Cost Estimates			FY2026 Financials			
	Non-Federal	Federal	Total	Carry In	Allocation	Funds Available	Actual Obligations
Bank Stabilization, Minnesota River, MN	-	\$20,000,000	\$20,000,000	\$5,823	\$1,800,000	\$1,805,823	\$273,790
Lower Pool 10 Island and Backwater Complex, IA	-	\$32,428,000	\$32,428,000	\$86,018	\$7,000,000	\$7,086,018	\$5,953,090
Lower Pool 4, Big Lake, WI	-	\$44,679,000	\$44,679,000	\$1,906	\$100,000	\$101,906	\$109,079
Lower Pool 4, Robinson Lake, MN	-	\$20,000,000	\$20,000,000	\$150	\$200,000	\$200,150	-
McGregor Lake, WI	-	\$20,336,695	\$20,336,695	\$27,318	\$50,000	\$77,318	(\$490,953)
Miss River Bank Stabilization, MN	-	-	-	-	\$300,000	\$300,000	\$28,017
Reno Bottoms, MN	-	\$38,965,000	\$38,965,000	\$12,346	\$3,000,000	\$3,012,346	\$122,598
Total	-	\$176,408,695	\$176,408,695	\$133,561	\$12,450,000	\$12,583,561	\$5,995,621

Habitat Rehabilitation

Subcategory	FY2026 Financials			
	Carry In	Allocation	Funds Available	Actual Obligations
District Program Management	-	-	-	\$225,910
Total	-	-	-	\$225,910

Regional Program Administration

Subcategory	FY2026 Financials			
	Carry In	Allocation	Funds Available	Actual Obligations
Habitat Eval/Monitoring	\$129,457	\$400,000	\$529,457	-
Total	\$129,457	\$400,000	\$529,457	-

	Carry In	Allocation	Funds Available	Actual Obligations
District Total	\$263,018	\$12,850,000	\$13,113,018	\$6,221,531

UMRR Quarterly Budget Report: Rock Island District

FY2026 Q3; Report Date: 2026-07-20

Habitat Projects

Project Name	Cost Estimates			FY2026 Financials			
	Non-Federal	Federal	Total	Carry In	Allocation	Funds Available	Actual Obligations
Green Island, IA	-	\$36,579,000	\$36,579,000	-	-	-	-
Keithsburg Division, IL	-	\$29,643,000	\$29,643,000	\$75,212	\$4,300,000	\$4,375,212	\$404,705
Lower Pool 11, WI	-	\$20,000,000	\$20,000,000	-	\$600,000	\$600,000	\$98,150
Lower Pool 13 Phase II, IA	-	\$20,000,000	\$20,000,000	\$3,259	\$500,000	\$503,259	\$364,484
Lower Pool 13, IA	-	\$26,083,000	\$26,083,000	\$7,073	-	\$7,073	\$258,757
Pool 12 (Forestry), IL	-	\$35,737,000	\$35,737,000	-	\$900,000	\$900,000	\$109,359
Pool 18 Forestry, IA	-	\$20,000,000	\$20,000,000	-	\$400,000	\$400,000	\$315,367
Project to be determined	-	-	-	-	\$600,000	\$600,000	-
Quincy Bay, IL	-	\$42,588,000	\$42,588,000	-	\$2,350,000	\$2,350,000	\$76,157
Steamboat Island, IA	-	\$41,977,000	\$41,977,000	\$135,423	\$2,000,000	\$2,135,423	\$326,921
Total	-	\$272,607,000	\$272,607,000	\$220,967	\$11,650,000	\$11,870,967	\$1,953,900

Habitat Rehabilitation

Subcategory	FY2026 Financials			
	Carry In	Allocation	Funds Available	Actual Obligations
District Program Management	-	-	-	\$42,717
Total	-	-	-	\$42,717

Regional Program Administration

Subcategory	FY2026 Financials			
	Carry In	Allocation	Funds Available	Actual Obligations
Adaptive Management	-	\$200,000	\$200,000	-
Habitat Eval/Monitoring	\$500	\$400,000	\$400,500	\$82,525
Model Certification/Regional HREP	-	\$100,000	\$100,000	\$30,062
Public Outreach	-	\$50,000	\$50,000	\$1,869
Regional Program Management	\$220,245	\$1,850,000	\$2,070,245	\$893,096
Regional Project Sequencing	-	\$125,000	\$125,000	\$30,206
Total	\$220,745	\$2,725,000	\$2,945,745	\$1,037,758

Regional Science and Monitoring

Subcategory	FY2026 Financials			
	Carry In	Allocation	Funds Available	Actual Obligations
Long Term Resource Monitoring	-	\$7,000,000	\$7,000,000	\$6,609,536
Science in Support of Restoration/Management	\$105,619	\$6,800,000	\$6,905,619	\$44,706
Total	\$105,619	\$13,800,000	\$13,905,619	\$6,654,242

	Carry In	Allocation	Funds Available	Actual Obligations
District Total	\$547,331	\$28,175,000	\$28,722,331	\$9,688,617

UMRR Quarterly Budget Report: St. Louis District

FY2026 Q3; Report Date: 2026-07-20

Habitat Projects

Project Name	Cost Estimates			FY2026 Financials			
	Non-Federal	Federal	Total	Carry In	Allocation	Funds Available	Actual Obligations
Clarence Cannon, NWR, MO	-	\$29,800,000	\$29,800,000	\$44,483	\$500,000	\$544,483	\$123,069
Crains Island, IL	-	\$36,562,000	\$36,562,000	\$10,000	\$4,000,000	\$4,010,000	\$93,158
Gilead Slough, IL	-	\$20,000,000	\$20,000,000	\$256,793	\$250,000	\$506,793	\$462,771
Harlow Island, MO	-	\$37,971,000	\$37,971,000	\$3,000	\$2,000,000	\$2,003,000	\$209,168
Illinois Bayou, IL	-	-	-	\$10,000	\$100,000	\$110,000	\$26,635
Meredosia Island, IL	-	\$29,000,000	\$29,000,000	\$107,172	\$450,000	\$557,172	\$239,696
Oakwood Bottoms, IL	-	\$34,200,000	\$34,200,000	-	\$525,000	\$525,000	-
Piasa - Eagle's Nest Islands, IL	-	\$26,746,000	\$26,746,000	\$555,348	\$650,000	\$1,205,348	\$31,710
Red's Landing Wetlands, IL	-	\$16,573,680	\$16,573,680	\$308,220	\$275,000	\$583,220	\$494,078
Swan Lake Rehab	-	-	-	\$37,464	\$1,500,000	\$1,537,464	\$109,192
West Alton Missouri Islands, MO	-	\$14,500,000	\$14,500,000	-	\$200,000	\$200,000	(\$13,518)
Yorkinut Slough, IL	-	\$31,000,000	\$31,000,000	\$152,446	\$1,125,000	\$1,277,446	\$521,847
Total	-	\$276,352,680	\$276,352,680	\$1,484,926	\$11,575,000	\$13,059,926	\$2,297,806

Habitat Rehabilitation

Subcategory	FY2026 Financials			
	Carry In	Allocation	Funds Available	Actual Obligations
District Program Management	-	-	-	\$382,709
Total	-	-	-	\$382,709

Regional Program Administration

Subcategory	FY2026 Financials			
	Carry In	Allocation	Funds Available	Actual Obligations
Habitat Eval/Monitoring	-	\$400,000	\$400,000	\$44,304
Total	-	\$400,000	\$400,000	\$44,304

	Carry In	Allocation	Funds Available	Actual Obligations
District Total	\$1,484,926	\$11,975,000	\$13,459,926	\$2,724,819

UMRR Strategic Plan					
Legend:	New line of effort	Continuation of ongoing effort	Adjustment of ongoing effort	Workshop	

Workshop

stressors:
Action 1.1.2.e: Develop policy and process for rapid response and opportunistic research (major floods and other unusual conditions).
Action 1.1.2.f: Use cutting-edge monitoring and analysis techniques (e.g. big data, AI, remote sensing, in situ continuous monitoring).
Action 1.1.2.g: Identify key research areas related to changing drivers.

Upper Mississippi River Restoration Program Quarterly Meetings

Attachment C

Long Term Resource Monitoring and Science

Page Number	Document Title
C-1 to C-5	Base Monitoring FY 2026 Completed Activities (7-16-2026)
C-6 to C-9	Base Monitoring New and Ongoing Activities (7-16-2026)
C-10 to C-11	Science in Support of Restoration and Management FY 2026 Completed Activities (7-17-2026)
C-12 to C-19	Science in Support of Restoration and Management New and Ongoing Activities (7-17-2026)

Completed Base SOW Milestones as of July 16, 2026

(AV = vegetation, FS = Fisheries, DM = Data Mgmt., OR = Outreach, WQ = water quality, SD = Spatial Data)

Category	FY Funded	Activity	Tracking number	Milestone Description	Target Date	Modified Target Date	Date Completed	Comments	UMESC POC email	Project Lead	Staff
AV	FY26	Aquatic Vegetation Component	2026A1	Publish previous field season data; 1350 observations.	1-Jan-26		30-Sep-25		dmlarson@usgs.gov	dmlarson@usgs.gov	eric.lund@state.mn.us, TBD
AV	FY26	Aquatic Vegetation Component	2026A1a	a. Data entry completed and submission of data to USGS	1-Oct-25		30-Sep-25		dmlarson@usgs.gov	dmlarson@usgs.gov	eric.lund@state.mn.us; Alicia.Carhart@wisconsin.gov; Iowa TBD
AV	FY26	Aquatic Vegetation Component	2026A1b	b. Data loaded on level 2 browsers	15-Oct-25		15-Sep-25		bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov
AV	FY26	Aquatic Vegetation Component	2026A1c	c. QA/QC scripts run and data corrections sent to Field Stations	1-Nov-25		15-Sep-25		dmlarson@usgs.gov	dmlarson@usgs.gov	dmlarson@usgs.gov; bschlifer@usgs.gov
AV	FY26	Aquatic Vegetation Component	2026A1d	d. Field Station QA/QC with corrections to USGS	1-Dec-25		15-Sep-25		dmlarson@usgs.gov	dmlarson@usgs.gov	eric.lund@state.mn.us; Alicia.Carhart@wisconsin.gov; Iowa TBD
AV	FY26	Aquatic Vegetation Component	2026A1e	e. Corrections made and data moved to public Web Browser	1-Jan-26		15-Sep-25		dmlarson@usgs.gov	dmlarson@usgs.gov	dmlarson@usgs.gov; bschlifer@usgs.gov; mcaucutt@usgs.gov
DM	FY26	Field Data Collection Platforms	2026M1	Update vegetation, fisheries, water quality, and Invertebrate component field data entry and correction applications.	30-May-26		30-May-26	Updating the invertebrate database is a recent addition to the ongoing and increasing workload for data management. Phytoplankton will add another level to the DM workload.	bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov ; dfedorenko@usgs.gov
DM	FY26	QA/QC and Loading database tables	2026M2	Load 2025 component sampling data into Database tables and make data available on Level 2 browsers for field stations to QA/QC.	30-Jun-26		30-May-26		bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov
FS	FY26	Fisheries Component	2026B1	Complete data entry, QA/QC, of Calendar year data (May – October), ~1,670 observations	30-Mar-26	1-May-26	1-May-26	Delays occurred due to funding issues. Coordination of fisheries component field operations—vice Brian Ickes—has been sustained with support from Steven A. Delain of the MN DNR Lake City Field Station, along with distribution of critical items to LTRM branch staff. Hiring for the still-vacant position remains a priority once the freeze is lifted.	jrfischer@usgs.gov (TBD)	steve.delain@state.mn.us; bschlifer@usgs.gov	steve.delain@state.mn.us; Benjamin.patschull@wisconsin.gov; travis.kueter@dnr.iowa.gov; Andrew.Glen@mdc.mo.gov; kmxs87@illinois.edu; soloml@illinois.edu; erichine@illinois.edu; egitting@illinois.edu

FS	FY26	Fisheries Component	2026B1a	a. Calendar year field data entry completed and sent to USGS	31-Jan-26	1-Mar-26	1-Mar-26	Delays occurred due to funding and Ickes vacancy	jrfischer@usgs.gov (TBD)	steve.delain@state.mn.us ; bschlifer@usgs.gov	steve.delain@state.mn.us; Benjamin.patschull@wisconsin.gov; travis.kueter@dnr.iowa.gov; Andrew.Glen@mdc.mo.gov; kmaxs87@illinois.edu; soloml@illinois.edu; erichine@illinois.edu; egitting@illinois.edu
FS	FY26	Fisheries Component	2026B1b	b. Calendar year field data loaded on level 2 browsers; QA/QC scripts run, and data corrections sent to Field Stations	15-Feb-26	15-Mar-26	15-Mar-26	Kristen Bouska conducted the QA analyses vice Ickes, covering work associated with the still-vacant position	jrfischer@usgs.gov (TBD)	steve.delain@state.mn.us; bschlifer@usgs.gov	bschlifer@usgs.gov; UMESC (Vice Ickes)
FS	FY26	Fisheries Component	2026B1c	c. Field Station QA/QC complete and corrections to USGS	15-Mar-26	1-Apr-26	1-Apr-26	Delays occurred due to funding and Ickes vacancy	jrfischer@usgs.gov (TBD)	steve.delain@state.mn.us; bschlifer@usgs.gov	steve.delain@state.mn.us; Benjamin.patschull@wisconsin.gov; travis.kueter@dnr.iowa.gov; Andrew.Glen@mdc.mo.gov; kmaxs87@illinois.edu; soloml@illinois.edu; erichine@illinois.edu; egitting@illinois.edu
FS	FY26	Fisheries Component	2026B1d	d. Corrections made and field data moved to public Web Browser	30-Mar-26	15-Apr-26	15-Apr-26	Delays occurred due to funding and Ickes vacancy	jrfischer@usgs.gov (TBD)	steve.delain@state.mn.us; bschlifer@usgs.gov	bschlifer@usgs.gov; UMESC (Vice Ickes)
FS	FY26	Fisheries Component	2026B2	Update Graphical Browser with field data data on Public Web Server.	31-May-26		1-May-26		jrfischer@usgs.gov (TBD)	steve.delain@state.mn.us; bschlifer@usgs.gov	steve.delain@state.mn.us; Benjamin.patschull@wisconsin.gov; travis.kueter@dnr.iowa.gov; Andrew.Glen@mdc.mo.gov; kmaxs87@illinois.edu; soloml@illinois.edu; erichine@illinois.edu; UMESC-TBD
FS	FY26	Fisheries Component	2026B4	Sample collection and database increment on invasive carp age and growth: collection of cleithral bones	31-Jan-26		31-Jan-26		jrfischer@usgs.gov (TBD)	kmaxs87@illinois.edu; soloml@illinois.edu	kmaxs87@illinois.edu; soloml@illinois.edu
OR	FY26	Q1 Contributions to UMRR COT	2026OR1	Participation and contributions to the COT. Outreach events at UMESC and community throughout the year.	30-Dec-25		30-Dec-25	LTRM work from WDNR Alicia Carhart and Cadie Olsen was presented at the USGS UWL Joint Seminar. The COT was on hiatus until Q4	bmorris@usgs.gov	bmorris@usgs.gov	jrfischer@usgs.gov ; bmorris@usgs.gov
OR	FY26	Q2 Contributions to UMRR COT	2026OR2	Participation and contributions to the COT. Outreach events at UMESC and community throughout the year.	30-Mar-26		30-Mar-26	LTRM work was highlighted at the La Crosse Sport Show. The COT was on hiatus until Q4	bmorris@usgs.gov	bmorris@usgs.gov	jrfischer@usgs.gov ; bmorris@usgs.gov
OR	FY26	Q3 Contributions to UMRR COT	2026OR3	Participation and contributions to the COT. Outreach events at UMESC and community throughout the year.	30-Jun-26		30-Jun-26	LTRM work was highlighted at the Earth Fair in La Crosse, Wisconsin. The COT was on hiatus until Q4 . LTRM is highlighted for every school tour of the Center. In total as of 7/16/26, 251 student across 4 schools have toured the center.	bmorris@usgs.gov	bmorris@usgs.gov	jrfischer@usgs.gov ; bmorris@usgs.gov

OR	FY26	2026 National Conference On Ecosystem Restoration (NCER)	2026OR5	Sharing the knowledge gained from the LTRM monitoring and science with restoration practitioners, and learning from other restoration and monitoring programs is an explicit UMRR goal. Select UMESC PI's, staff, and field station staff will attend the 2026 NCER conference in April 2026. A Special Session will be submitted to the conference coordinator where LTRM authors will contribute presentations.	30-Jun-26		16-Apr-26		jhouser@usgs.gov	jhouser@usgs.gov	jhouser@usgs.gov ; kbouska@usgs.gov ; myanappeldorn@usgs.gov ; buckley@usgs.gov ; jrfischer@usgs.gov ; nicole.ward@mn.state.us ; alicia.carhart@wisconsin.gov ; jrfischer@usgs.gov
WQ	FY26	Water Quality Component	2026D1	Complete calendar year fixed-site and SRS water quality sampling	31-Dec-25		31-Dec-25		kjankowski@usgs.gov	kjankowski@usgs.gov	kjankowski@usgs.gov ; Robert.Burdis@state.mn.us ; john.kalas@wisconsin.gov ; ashley.johnson@dnr.iowa.gov ; lgitting@inhs.uiuc.edu ; ssawicki@illinois.edu ; kathryn.smith@mdc.mo.gov
WQ	FY26	Water Quality Component	2026D2	Complete laboratory sample analysis of previous calendar year fixed site and SRS data; Laboratory data loaded to Oracle database.	15-Mar-26		15-Mar-26		kjankowski@usgs.gov	kjankowski@usgs.gov	bschlifer@usgs.gov ; UMESC.Lab.Manager@usgs.gov (Vacant)
WQ	FY26	Water Quality Component	2026D7	Complete QA/QC of calendar year (previous FY plus Q1 of current FY) fixed-site and SRS data.	30-Apr-26		1-May-26	2026D7a through 2026D7C is the entire process of moving data from the field to publishing on the browser.	kjankowski@usgs.gov	kjankowski@usgs.gov	kjankowski@usgs.gov ; Robert.Burdis@state.mn.us ; john.kalas@wisconsin.gov ; ashley.johnson@dnr.iowa.gov ; lgitting@inhs.uiuc.edu ; ssawicki@illinois.edu ; kathryn.smith@mdc.mo.gov ; UMESC.Lab.Manager@usgs.gov (Vacant)
WQ	FY26	Water Quality Component	2026D7a	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-26		1-Apr-26		kjankowski@usgs.gov	kjankowski@usgs.gov	bschlifer@usgs.gov ; kjankowski@usgs.gov
WQ	FY26	Water Quality Component	2026D7b	b. Field Station QA/QC; USGS QA/QC.	15-Apr-26		1-May-26		kjankowski@usgs.gov	kjankowski@usgs.gov	kjankowski@usgs.gov ; Robert.Burdis@state.mn.us ; john.kalas@wisconsin.gov ; ashley.johnson@dnr.iowa.gov ; lgitting@inhs.uiuc.edu ; ssawicki@illinois.edu ; kathryn.smith@mdc.mo.gov
WQ	FY26	Water Quality Component	2026D7c	c. Corrections made and data moved to public Web Browser	30-Apr-26		1-May-26		kjankowski@usgs.gov	kjankowski@usgs.gov	bschlifer@usgs.gov ; kjankowski@usgs.gov
WQ	FY26	Water Quality Component	2026D9	WEB-based annual Water Quality Component Update w/calendar year data on Server.	30-May-26		1-May-26		kjankowski@usgs.gov	kjankowski@usgs.gov	bschlifer@usgs.gov ; kjankowski@usgs.gov

AV	FY25	Froehly J, Larson DM (2024) Adaptive monitoring and management of the invasive plant, Butomus umbellatus on the Upper Mississippi River, Final Manager Report: 16 pages. Proposal: 14 pages. Protocol: 10 pages. Includes 2 original datasets. https://ecos.fws.gov/ServCat/Reference/Profile/152648 Carhart AM, Larson DM, Froehly J, Lund E, Szura S, Fopma S (2025) Impacts of flowering rush (Butomus umbellatus L.) on macrophyte diversity and composition in the Upper Mississippi River. Biological Invasions 27: 188. DOI: 10.1007/s10530-025-03643-z.	2025A9	manuscripts, manager report, protocol, and 2 original datasets published	30-Sep-2025		30-Jul-2025		dmlarson@usgs.gov	Froehly J	Froehly, Carhart, Lund, Szura
DM	FY25	Field Data Collection Platforms	2025M1	Update vegetation, fisheries, and water quality component field data entry and correction applications.	30-May-2025		30-May-2025		bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov; dfedorenko@usgs.gov student (vacant)
DM	FY25	QA/QC and Loading database tables	2025M2	Load 2024 component sampling data into Database tables and make data available on Level 2 browsers for field stations to QA/QC.	30-Jun-2025		30-Jun-2025		bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov;
DM	FY25	Assistance to LTRM staff and partners	2025M3	Assist LTRM Staff with development and review of metadata and databases in conjunction with publishing of reports and manuscripts	30-Sep-2025		30-Sep-2025		bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov;
SD	FY25	SRS Component Support	2025SD2	SRS data for each component is annually downloaded, formatted, and loaded to the spatial data query tools (one for each trend pool).	30-Sep-2025		9-Jun-2026		jrohwerder@usgs.gov	jrohwerder@usgs.gov	jrohwerder@usgs.gov
SD	FY25	Forest Loss in the UMRS (all available pools, 2010-2020)	2025SD3	Data Set: This data analysis effort will focus on identifying areas of forest loss between 2010 and 2020 using land cover data available for UMRS navigation pools.	30-Sep-2025		30-May-2026	Attributes of forest loss, gain, and persistence areas from 2010 to 2020 - Upper Mississippi River System - ScienceBase Catalog	ndejager@usgs.gov	ndejager@usgs.gov	ndejager@usgs.gov
SD	FY25	Patterns of floodplain forest mortality and recruitment along the Upper Mississippi and Illinois Rivers: associations with forest fragmentation and flood inundation	2025SD4	Draft Report: This study will utilize the mapped attributes of forest loss (2025SD3) to examine relationships among drivers of forest loss in various pools of the UMRS.	30-Sep-2025		30-May-2026	Patterns of floodplain forest mortality and recruitment along the Upper Mississippi and Illinois Rivers: associations with forest fragmentation and flood inundation Landscape Ecology Springer Nature Link	ndejager@usgs.gov	ndejager@usgs.gov	ndejager@usgs.gov
AV	FY24	Larson DM, Lund E, Carhart AM, Fopma S, Szura S (2025) Long Term Resource Monitoring sampling procedures: aquatic vegetation monitoring, version 2. U.S. Geological Survey, Techniques and Manuals report USGS series number 2-A22. DOI: 10.3133/tm2A22	2024A8	2024A8 Aquatic Vegetation Sampling Protocol Update IP-167317	30-Sep-2025	30-Sep-2025	1-Jan-2026	See FY24 Base Scope	dmlarson@usgs.gov	dmlarson@usgs.gov	dmlarson@usgs.gov ; eric.lund@state.mn.us ; Alicia.Carhart@wisconsin.gov ;

SD	FY24	De Jager, N.R., Rohweder, J.J. Expansion of aquatic and marsh area into once forest and agricultural area reflects changing hydrological	2024SD8	Manuscript: 2023LP1 and 2024SD8		30-Sep-25	30-Sep-2025	Completed/published	ndejager@usgs.gov	ndejager@usgs.gov	ndejager@usgs.gov
WQ	FY24	Manuscript: Annual variation in summer phytoplankton associated with morphology and seasonal environmental conditions	2024D12	Manuscript in review: Annual variation in summer phytoplankton associated with morphology and seasonal environmental conditions	30-Oct-2024	1-Mar-2026	Bureau approval 2/25/26		kjankowski@usgs.gov	kjankowski@usgs.gov	kjankowski@usgs.gov
SD	FY23	Report: Spatial Data Component Review and Future Objectives. De Jager – Poster available upon request	2023SD9	Draft Report: Spatial Data Component Review and Future Objectives. De Jager		30-Sep-25	25-Aug-2025	Poster Published	ndejager@usgs.gov	ndejager@usgs.gov	ndejager@usgs.gov
SD	FY21	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. Wetlands Ecology and Management: 10.1007/s11273-023-09969-6	2021SD10	Manuscript 2021LP3 and 2021SD10: De Jager et al. 2024. Identifying conditions where reed canarygrass (Phalaris arundinacea) functions as a driver of forest loss	2-Jan-24		2-Jan-2024	Manuscript 2021LP3 and 2021SD10: De Jager et al. 2024.	ndejager@usgs.gov	ndejager@usgs.gov	ndejager@usgs.gov

New, Ongoing, and Paused, Base SOW Milestones (Sorted by Category, FY Funded, Tracking Number)

Category	FY Funded	Status	Activity	Tracking number	Milestone Description	Target Date	Modified Target Date	Date Completed	Comments	UMESC POC email	Project Lead	Staff
AH	FY26	Status	All Hands and Component Meetings	2026AH1	Description	Target Date	Modified Date	Completed Date	Comments	jrfischer@usgs.gov	jrfischer@usgs.gov	Multiple
AH	FY26	Paused	2026 All-Hands LTRM Meeting	2026T1	Meeting with all USGS and field stations	Spring 2026			Postponed to FY27 due to travel and budget uncertainties. The FY25 AH meeting was changed to virtual due to travel restrictions.	jrfischer@usgs.gov	jrfischer@usgs.gov	jrfischer@usgs.gov ; bmorris@usgs.gov
AV	FY26	Status	Aquatic Vegetation Status and Trends	2026A	Description	Target Date	Modified Date	Completed Date		dmlarson@usgs.gov	dmlarson@usgs.gov	Multiple
AV	FY26	Ongoing	Aquatic Vegetation Component	2026A3	Wisconsin DNR annual summary report 2026 combines current year observations from LTRM with previous years' data, for the fish, aquatic vegetation, and water quality components.	30-Sep-2026				dmlarson@usgs.gov	Benjamin.patschull@wisconsin.gov; alicia.carhart@wisconsin.gov; patrick.kelly@wisconsin.gov	Benjamin.patschull@wisconsin.gov; alicia.carhart@wisconsin.gov; patrick.kelly@wisconsin.gov
AV	FY26	Ongoing	Aquatic Vegetation Component	2026A4	Complete aquatic vegetation sampling for Pools 4, 8, and 13 (SOW Table 1)	31-Aug-2026			Stations are sampling under a reduced minimal framework designed to preserve as much long-term data continuity as possible, focusing on vegetation, summer water quality, and Period 3 fish.	dmlarson@usgs.gov	eric.lund@state.mn.us; Alicia.Carhart@wisconsin.gov; Iowa TBD	eric.lund@state.mn.us; Alicia.Carhart@wisconsin.gov; Iowa TBD
AV	FY26	Ongoing	Aquatic Vegetation Component	2026A5	Pools 4, 8, and 13: Graphical summary and maps of aquatic vegetation's current status and long-term trends.	30-Dec-2026				dmlarson@usgs.gov	eric.lund@state.mn.us ; alicia.carhart@wisconsin.gov ; dave.bierman@dnr.iowa.gov	eric.lund@state.mn.us ; alicia.carhart@wisconsin.gov ; dave.bierman@dnr.iowa.gov
AV	FY26	Ongoing	Aquatic Vegetation Component	2026A6	Herbarium specimens collected, pressed, and preserved at the Bell Museum; ~50 specimens	1-Dec-2026				dmlarson@usgs.gov	eric.lund@state.mn.us ; alicia.carhart@wisconsin.gov ; dave.bierman@dnr.iowa.gov	eric.lund@state.mn.us ; alicia.carhart@wisconsin.gov ; dave.bierman@dnr.iowa.gov
DM	FY26	Status	Data Management	2026M	Description	Target Date	Modified Date	Completed Date	Comments	bschlifer@usgs.gov	bschlifer@usgs.gov	Multiple
DM	FY26	Ongoing	Assistance to LTRM staff and partners	2026M3	Assist LTRM Staff with development and review of metadata and databases in conjunction with publishing of reports and manuscripts	30-Sep-2026				bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov
DM	FY26	New	Develop a proof-of-concept for modern data-collection methods.	2026M4	Identify requirements to modernize legacy data-collection apps for maintainability and modern mobile workflows.	30-Sep-2026				bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov ; dfedorenko@usgs.gov
ER	FY26	Status	Equipment Refreshment	2026ER	Description	Target Date	Modified Date	Completed Date	Comments	jrfischer@usgs.gov	jrfischer@usgs.gov	Multiple
ER	FY26	New	LTRM Monitoirng Equipment Refreshment	2026ER1	Scheduled replacement of monitoring equipment as modified by annual updates to the equipment life-cycle tracking sheet.	30-Sep-2026				jrfischer@usgs.gov	jrfischer@usgs.gov	
FS	FY26	Status	Fisheries Component Status and Trends	2026B	Description	Target Date	Modified Date	Completed Date	Comments	jrfischer@usgs.gov (TBD)	jrfischer@usgs.gov (TBD)	Multiple
FS	FY26	Ongoing	Fisheries Component	2026B3	Complete 2026 fisheries sampling for Pools 4, 8, 13, 26, the Open River Reach, and La Grange Pool (SOW Table 1)	31-Oct-2026			Stations are sampling under a reduced minimal framework designed to preserve as much long-term data continuity as possible, focusing on vegetation, summer water quality, and Period 3 fish.	jrfischer@usgs.gov (TBD)	steve.delain@state.mn.us, UMESC (TBD)	steve.delain@state.mn.us; Benjamin.patschull@wisconsin.gov; travis.kueter@dnr.iowa.gov; Andrew.Glen@mdc.mo.gov; kmaxs87@illinois.edu; soloml@illinois.edu; erichine@illinois.edu; UMESC-TBD

FS	FY26	Ongoing	Fisheries Component	2026B5	IDNR Fisheries Management State Report: Fisheries Monitoring in Pool 13, Upper Mississippi River; Includes Pool 12 Overwintering HREP Adaptive Management Fisheries Response Monitoring	30-Sep-2026				jrfischer@usgs.gov (TBD)	travis.kueter@dnr.iowa.gov	travis.kueter@dnr.iowa.gov
FS	FY26	Ongoing	Fisheries Component	2026B8(D)	Database increment: Stratified random day electrofishing samples collected in Pools 9–11	30-Sep-2026				jrfischer@usgs.gov (TBD)	travis.kueter@dnr.iowa.gov	travis.kueter@dnr.iowa.gov
FS	FY26	Ongoing	Fisheries Component	2026B9(D)	Database increment: Stratified random day electrofishing samples collected in Pools 16–18	30-Sep-2026				jrfischer@usgs.gov (TBD)	travis.kueter@dnr.iowa.gov	travis.kueter@dnr.iowa.gov
OR	FY26	Status	Program Communication and Outreach	2026OR	Description	Target Date	Modified Date	Completed Date	Comments	jrfischer@usgs.gov	jrfischer@usgs.gov	Multiple
OR	FY26	Ongoing	Q4 Contributions to UMRR COT	2026OR4	Participation and contributions to the COT. Outreach events at UMESC and community throughout the year.	30-Sep-2026				bmorris@usgs.gov	bmorris@usgs.gov	jrfischer@usgs.gov ; bmorris@usgs.gov
SD	FY26	Status	Spatial Data Component	2026SD	Description	Target Date	Modified Date	Completed Date	Comments	ndejager@usgs.gov ; jdieck@usgs.gov	ndejager@usgs.gov ; jrohwerder@usgs.gov	Multiple
SD	FY26	Ongoing	Geospatial support to the UMRR Partnership	2026SD1	Provide expertise and assistance to other LTRM staff, HREP planners, Project Delivery Teams, River Teams, and other Partners: a. Support to other LTRM Components (Fish, WQ, Vegetation): Rohweder and De Jager b. LCLU data availability, interpretation, analysis: Strassman, Rohweder, De Jager c.Topobathy data availability, interpretation: Hanson and Rohweder d. Aquatic Areas data availability, interpretation, use: Ruhser, Rohweder, De Jager e. Forest Simulation Modelling, HNA-II data use, etc. De Jager f. Unmanned Aircraft System support: Strassman and Murphy	30-Sep-2026			a. b. Peoria pool is disseminated. OR1 and Lockport are in PI. c. d. Postponed due to budget reallocation e. f. Training on the Atla-X (Murphy and Strassman) and Wingtra and X10 (Strassman) was completed.	ndejager@usgs.gov ; jrohwerder@usgs.gov ; astrassman@usgs.gov ; amurphy@usgs.gov ; jhanson@usgs.gov ; jruhser@usgs.gov	ndejager@usgs.gov ; jrohwerder@usgs.gov ; astrassman@usgs.gov ; amurphy@usgs.gov ; jhanson@usgs.gov ; jruhser@usgs.gov	
SD	FY26	Ongoing	Apply UAS based ground penetrating radar to assist topobathy data collection	2026SD2	Draft Report: Companion to 2024SD3 GPR-Bathy Dataset. Using ground penetrating radar (GPR), survey locations as identified by the topobathy methods pilot studies to determine the range of ability for GPR produced datasets for bathymetric/geomorphic change studies	30-Sep-2026			Murphy and Strassman have completed training on the Alta-X and GPR unit and have collected test data. Additional work remains to be completed on the GPR mount to the UAS before USGS NUSO will clear it for further flights.	astrassman@usgs.gov ; amurphy@usgs.gov		
SD	FY26	New	Perform pilot study of material volumetrics using three methods	2026SD3	Draft Report: Companion to 2024SD4 Volumetrics Dataset. Conduct a study on a chosen UMRS island, containing dredge spoils or otherwise of interest, using traditional GNSS terrestrial survey, terrestrial LIDAR, and UAS based photogrammetry with real-time kinematic (RTK) GNSS and/or UAS based ground penetrating radar to create volumetric models.	30-Sep-2026			Pending data collection at Brownsville sand repo.	astrassman@usgs.gov ; amurphy@usgs.gov		
SD	FY26	Paused	Examining land cover compositional changes across the aquatic-terrestrial-transition zone of the Upper Mississippi River System	2026SD4	Draft Report: Land Cover change across the ATTZ of the UMRS	30-Sep-2026			Postponed due to budget reallocation	ndejager@usgs.gov	ndejager@usgs.gov ; jrohwerder@usgs.gov	ndejager@usgs.gov ; jrohwerder@usgs.gov
SD	FY26	Paused	Changes in the abundance and distribution of core, interior, dominant, and patch forest cover in the UMRS from 1989-	2026SD5	Data Set: forest area-density changes across the UMRS	30-Sep-2026			Postponed due to budget reallocation	ndejager@usgs.gov ; jrohwerder@usgs.gov	rohwerder@usgs.gov	ndejager@usgs.gov ; jrohwerder@usgs.gov
SD	FY26	Paused	Aquatic Areas Level 1 Data for Pools	2026SD6	complete level 1 aquatic areas for pools 5, 5A, 6, 14-25 and Level 2 for pool 19	30-Sep-2026			Postponed due to budget reallocation	strassman@usgs.gov ; ndejager@usgs.gov	jruhser@usgs.gov	jruhser@usgs.gov ; jdieck@usgs.gov
SD	FY26	New	Draft Report: Evaluating the utility of UAS for LCLU imagery collecti	2026SD7	Draft Report: Evaluating the utility of UAS for LCLU imagery collection in 2030	30-Sep-2026				astrassman@usgs.gov ; amurphy@usgs.gov	astrassman@usgs.gov	astrassman@usgs.gov ; amurphy@usgs.gov
WQ	FY26	Status	Water Quality Status and Trends	2026D	Description	Target Date	Modified Date	Completed Date	Comments	kjankowski@usgs.gov	kjankowski@usgs.gov	Multiple

WQ	FY26	Ongoing	Water Quality Component	2026D10	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-2026				kjankowski@usgs.gov	kjankowski@usgs.gov	john.kalas@wisconsin.gov ; alicia.carhart@wisconsin.gov ; benjamin.patschull@wisconsin.gov
WQ	FY26	Ongoing	Water Quality Component	2026D11	Phytoplankton enumerated and dataset updated	30-Dec-2026				kjankowski@usgs.gov	kjankowski@usgs.gov	kjankowski@usgs.gov
WQ	FY26	Ongoing	Water Quality Component	2026D3	Complete remaining Quarters of laboratory sample analysis (~12,600 samples per quarter)	30-Sep-2026			We collapsed the individual quarterly milestones D3-6 into one milestone to simplify tracking.	kjankowski@usgs.gov	jmanier@usgs.gov	Robert.Burdis@state.mn.us ; john.kalas@wisconsin.gov ; ashley.johnson@dnr.iowa.gov ; lgitting@inhs.uiuc.edu ; ssawicki@illinois.edu ; kathryn.smith@mdc.mo.gov ; UMESC Lab Manager (Vacant)
WQ	FY26	Ongoing	Water Quality Component	2026D8	Complete fixed site and SRS sampling for Pools 4, 8, 13, 26, Open River Reach, and La Grange Pool (Table 1, ~4428 sites)	30-Sep-2026			Stations are sampling under a reduced minimal framework designed to preserve as much long-term data continuity as possible, focusing on vegetation, summer water quality, and Period 3 fish.	kjankowski@usgs.gov	kjankowski@usgs.gov	kjankowski@usgs.gov ; Robert.Burdis@state.mn.us ; john.kalas@wisconsin.gov ; ashley.johnson@dnr.iowa.gov ; lgitting@inhs.uiuc.edu ; ssawicki@illinois.edu ; kathryn.smith@mdc.mo.gov
DM	FY25	Status	Data Management	2025M	Description	Target Date	Modified Date	Completed Date	Comments	bschlifer@usgs.gov	bschlifer@usgs.gov	Multiple
DM	FY25	Ongoing	Updating LTRM Web Services (long-term project)	2025M4	Inventory and cleaning up current LTRM web assets, generating an internal report of findings for future LTRM website rework.	1-Sep-2025	30-Sep-2026		Impacted by FY25 funding and rollout of IT staff to DOI	bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov ; dfedorenko@usgs.gov student (vacant)
DM	FY25	Ongoing	Updating LTRM Web Services (long-term project)	2025M5	Update water quality fixed-site web tools, introduce newer mapping technologies instead of static images and adding in better query and graphing tools.	1-Sep-2025	30-Sep-2026		Impacted by FY25 funding and rollout of IT staff to DOI	bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov ; dfedorenko@usgs.gov student (vacant)
DM	FY25	Ongoing	Updating LTRM Web Services (long-term project)	2025M6	Updating and modernizing existing LTRM web application tools, cleaning up look and feel of graphs and making the application more mobile friendly.	30-Sep-2025	30-Sep-2026		Impacted by FY25 funding and rollout of IT staff to DOI	bschlifer@usgs.gov	bschlifer@usgs.gov	bschlifer@usgs.gov ; dfedorenko@usgs.gov student (vacant)
SD	FY25	Status	Spatial Data Component	2025SD	Description	Target Date	Modified Date	Completed Date	Comments	ndejager@usgs.gov; jdieck@usgs.gov	ndejager@usgs.gov	Multiple
SD	FY25	Ongoing	Orthorectification of scanned photos. Scanned Photos: https://www.sciencebase.gov/catalog/item/559299a3e4b0b6d21dd67a65	2025SD1	Mosaicking of remaining pools, creation of metadata, and review and dissemination (portions of the 1975, 1989, and 1994 imagery collections)	30-Sep-2025			Work continues on this with data being actively reviewed in IPDS and in the process of dissemination.	jschoen@usgs.gov	jschoen@usgs.gov	astrassman@usgs.gov; jschoen@usgs.gov
WQ	FY25	Status	WQ	2025D	Description	Target Date	Modified Date	Completed Date	Comments	kjankowski@usgs.gov	kjankowski@usgs.gov	Multiple
WQ	FY25	Paused	Assessment of Phytoplankton Samples collected by the Upper Mississippi River Restoration Program-Long Term Resource Monitoring Water Quality Component	2025D11	Phytoplankton analyses and dataset updated	30-Dec-2025			paused due to FY25 funding shortfall	kjankowski@usgs.gov	kjankowski@usgs.gov	
AV	FY24	Status	Aquatic Vegetation Status and Trends	2024A	Description	Target Date	Modified Date	Completed Date	Comments	dmlarson@usgs.gov	dmlarson@usgs.gov	Multiple
AV	FY24	In Review	Sherman J, St. Clair K, Gray B, Larson DM. Predicting a continuous causal variable given ordinal outcomes and structural zeroes with application to submersed aquatic vegetation biomass. In review at Journal of Agricultural, Biological, and Environmental Statistics since August 2024		Manuscript and data release, leveraged product: Sherman J, St. Clair K, Gray B, Larson DM (in review) Predicting a continuous causal variable given ordinal outcomes and structural zeroes with application to submersed aquatic vegetation biomass. In review at Journal of Agricultural, Biological, and Environmental Statistics since August 2025. IP-149488.		30-Sep-2025		approved for publication as a journal article contingent on addressing the items marked required, prior to returning the manuscript to the journal	dmlarson@usgs.gov	dmlarson@usgs.gov	
SD	FY24	Status	Spatial Data Component	2024SD	Description	Target Date	Modified Date	Completed Date	Comments	jdieck@usgs.gov	amurphy@usgs.gov	Multiple
SD	FY24	Ongoing	Apply UAS based ground penetrating radar to assist topobathy data collection	2024SD2	Data Set: Using ground penetrating radar (GPR), survey locations as identified by the topobathy methods pilot studies to determine the range of ability for GPR produced datasets for bathymetric/geomorphic change studies	30-Sep-2024	30-Sep-2026		Reviewing options to complete this work. It may be delayed due to required approvals to modified UAS with GPR.	astrassman@usgs.gov; amurphy@usgs.gov		

SD	FY24	Ongoing	Dataset of Applied UAS based ground penetrating radar to assist topobathy data collection	2024SD3	Dataset of Applied UAS based ground penetrating radar to assist topobathy data collection	30-Sep-25	30-Sep-2026		Pending collection of GPR data. Collection date TBD.	amurphy@usgs.gov	amurphy@usgs.gov	astrassman@usgs.gov; amurphy@usgs.gov
SD	FY24	Ongoing	Perform pilot study of material volumetrics using three methods	2024SD4	Pilot dataset and report of material volumetrics using three methods	30-Sep-25	30-Sep-2026		Reviewing options for collecting these data at the Brownsville sand repo.	amurphy@usgs.gov	amurphy@usgs.gov	astrassman@usgs.gov; amurphy@usgs.gov
SD	FY24	Ongoing	Perform pilot study of material volumetrics using three methods	2024SD4	Data Set: Conduct a study on a chosen UMRS island, containing dredge spoils or otherwise of interest, using traditional GNSS terrestrial survey, terrestrial LIDAR, and UAS based photogrammetry with real-time kinematic (RTK) GNSS and/or UAS based ground penetrating radar to create volumetric models.	30-Sep-2024	30-Sep-2026		Reviewing options for collecting these data at the Brownsville sand repo.	astrassman@usgs.gov; amurphy@usgs.gov		
SD	FY24	Ongoing	Apply UAS based ground penetrating radar to assist topobathy data collection	2024SD5	Draft Report of Applied UAS based ground penetrating radar to assist topobathy data collection	30-Sep-25	30-Sep-2026		Pending collection of GPR data. Collection date TBD.	amurphy@usgs.gov	amurphy@usgs.gov	astrassman@usgs.gov; amurphy@usgs.gov
FS	FY21	Status	Fisheries Component Status and Trends	2021B	Description	Target Date	Modified Date	Completed Date	Comments	jrfischer@usgs.gov (TBD)	jrfischer@usgs.gov (TBD)	Multiple
FS	FY21	Paused	Manuscript: A synthesis on river floodplain connectivity and lateral fish passage in the Upper Mississippi River		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)				Impacted by FY25 staffing cuts. Initially deferred in lieu of the IWW nav closure study. UMESC PI now retired.	jrfischer@usgs.gov (TBD)	(Vice Ickes)	
WQ	FY21	Status	Water Quality Status and Trends	2021D	Description	Target Date	Modified Date	Completed Date	Comments	kjankowski@usgs.gov	kjankowski@usgs.gov	Multiple
WQ	FY21	Paused	Assessment of Phytoplankton Samples collected by the Upper Mississippi River Restoration Program-Long Term Resource Monitoring Water Quality Component	2021D12	Final LTRM Completion Report: Assessment of Phytoplankton Samples collected by the Upper Mississippi River Restoration Program-Long Term Resource Monitoring Water Quality Component	30-Dec-2025	Paused		Paused indefinitely due to FY25 funding shortfalls. UMESC Plankton Ecologist (planned/new position) is paused indefinitely due to FY25 funding shortfall and hiring restrictions.	kjankowski@usgs.gov (TBD)	kjankowski@usgs.gov (TBD)	Intended for new UMESC Plankton Ecologist
ST	FY20	Status	Status & Trends Report	2020ST	Description	Target Date	Modified Date	Completed Date	Comments	jhouser@usgs.gov	jhouser@usgs.gov	Multiple
ST	FY20	Paused	Draft S&T Fact Sheets	2020ST4	Draft S&T Fact Sheets		1-Mar-2025		Impacted by FY25 funding, staff losses, and related workload reprioritization	jhouser@usgs.gov	jhouser@usgs.gov	
ST	FY20	Paused	Final S&T3 Fact Sheet	2020ST5	Final S&T3 Fact Sheet		30-Sep-2025		Impacted by FY25 funding, staff losses, and related workload reprioritization	jhouser@usgs.gov	jhouser@usgs.gov	
WQ	FY19	Status	Water Quality Status and Trends	2019D	Description	Target Date	Modified Date	Completed Date	Comments	kjankowski@usgs.gov	kjankowski@usgs.gov	Multiple
WQ	FY19	Paused	Assessment of Phytoplankton Samples collected by the Upper Mississippi River Restoration Program-Long Term Resource Monitoring Water Quality Component	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-Oct-2024	Paused		Paused indefinitely due to FY25 funding shortfalls. UMESC Plankton Ecologist (planned/new position) is paused indefinitely due to FY25 funding shortfall and hiring restrictions.	kjankowski@usgs.gov (TBD)	kjankowski@usgs.gov (TBD)	Intended for new UMESC Plankton Ecologist

Completed Science Support Milestones as of 17 July 2026

Revised or Final Title & link	A0_Tracking number	Milestone Description	Target Date	Modified Target Date	Date Completed	Comments	A0_UMESC POC email	Project Lead email	Collaborator emails
Hydro Research 2022	2023_Hydro	See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Multiple
Van Appledorn, M., L. Sawyer, J. Delaney, C. Mueller, L. Youngblood, J. Harrell, B. Breaker, and C. Frans. 2025. Evaluating hydrologic data products for scientific and management applications related to potential future streamflow conditions in the Upper Mississippi and Illinois Rivers. USGS Scientific Investigations Report 2025-5101, 61 p., doi: 10.3133/sir20255101 . IP-168496	2023_Hydro9	Final LTRM completion report	30-Dec-2025		31-Dec-25		mvanappledorn@usgs.gov	Sawyer and Van Appledorn	Delaney, Youngblood, Harrell, Mueller, Breaker, Frans
Information Needs: IN 1.1 Floodplain Vegetation Change	2025FPV	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov		Multiple
Proceedings of the Floodplain Vegetation Monitoring Workshop for the Long Term Resource Monitoring Element of the Upper Mississippi River Restoration Program, January 7–8, 2025, Moline, Illinois https://pubs.usgs.gov/of/2026/1001/ofr20261001.pdf	2025FPV3	Draft Report: Post-workshop proceedings and plan for future floodplain vegetation monitoring	30 Sept. 2025		4/10/2026		saweiss@lc.edu	saweiss@lc.edu	Weiss, Trumper, others as appropriate
Information Needs: IN 1.1 Floodplain Vegetation Change	2026FPV	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov		Multiple
	2026FPV1	Project updates provided at quarterly A team meeting	30 Sept. 2026		4/22/2026	Presentation at April A team meeting	mtrumper@usgs.gov	mtrumper@usgs.gov	Trumper, Weiss, De Jager, Van Appledorn, Guyon
IN3.1: Aquatic Vegetation Distribution	2025A0	See Below	Multiple	Modified Target	Date Completed	Comments			
	2025A2	Publish sampling protocol (product 2024A8)	31 September 2025	2/28/2026	1/28/2026	published; https://pubs.usgs.gov/publication/tm2A22	dmlarson@usgs.gov	dmlarson@usgs.gov	Larson, Lamer
Acquisition and Interpretation of Four-Band Imagery for Production of 2020 UMRS Land Cover/Land Use Data and Pool-Based Orthomosaics	2024LCU	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov	astrassman@usgs.gov	Multiple
Imagery is available at: https://doi.org/10.5066/P962VKR4; Vector data is available at: https://doi.org/10.5066/P9U46VQP.	2024LCU	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	31-Mar-2025	31-Mar-2025	All aspects complete and posted for Pools 5-6, 17, and 22-25.	astrassman@usgs.gov		Dieck, Strassman, Hoy, Ruhser
Landscape Pattern Research and Application FY22-24	2024LP	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov	ndejager@usgs.gov	Multiple
2020 Aquatic Areas - Pools 1, 2, 3, 7, 10, 11, and Alton. Senior USGS Author: Ruhser, Janis. https://www.sciencebase.gov/catalog/item/652d6734d34e44db0e2ee48a	2024LP2	Map Set: Aquatic Areas (Pools 1, 2, 3, 7, 10, 11, 17, 22, Alt, 5, 5a, 6).	30-Sep-2024		29-Oct-24	Pools 1, 2, 3, 7, 10, 11, and Alton are posted to sciencebase. With modified milestone covering these pools, noting this MS as complete. Pools 17, 22, 5, 5a, and 6 now 2025LP2.	iruhser@usgs.gov	Janis Ruhser	Rusher, Rohweder, De Jager
Attributes of forest loss, gain, and persistence areas from 2010 to 2020 - Upper Mississippi River System. https://www.sciencebase.gov/catalog/item/699625dcb66b01c0fd9b33c6	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	30-Sep-2025	23-Mar-26	Expanded the scope to areas of forest loss, gain, and persistence, rather than just forest loss. Also, underlying flood inundation spatial data sets were updated to reflect changes in flood regime from the similar 2010 to 2020 timeframe. Map sets were developed for Pool 4, 8, 13, and 26 during 2024. In 2025, we completed the following pools: 3, 5, 5a, 6, 7, 9, 10, 17, 22, lag, or2 (2025LP3)	ndejager@usgs.gov	Nathan De Jager	Rohweder and De Jager
Landscape Pattern Research and Application FY25-27	2025LP	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov	ndejager@usgs.gov	Multiple
Level 2 Aquatic Areas for Pools 4, 8, 13, 25, OR2, LaG. https://www.sciencebase.gov/catalog/item/55929c11e4b0b6d21dd67a92	2025LP2	Map Set: Level 1 Aquatic Areas (p17, 22, 5, 5a, and 6). Level 2 AA (p4, 8, 13, 26, OR2, and La Grange).	30-Sep-2025		9/9/2025	AA2 complete and disseminated for p8 (IP-171160, 18 Dec-2024), p4, p13, p26, OR2, LaG (IP-79371). Level 1 AA for pools 17, 22, 5, 5a, and 6 moved to 2026LP2.	iruhser@usgs.gov	Janis Ruhser	Ruhser, Rohweder, De Jager
Attributes of forest loss, gain, and persistence areas from 2010 to 2020 - Upper Mississippi River System. https://www.sciencebase.gov/catalog/item/699625dcb66b01c0fd9b33c6Attributes of forest loss, gain, and persistence areas from 2010 to 2020 - Upper Mississippi River System	2025LP3	Map Set: Attributes of 2010-2020 forest loss areas (Pools 3, 4, 5, 5a, 6, 7, 8, 9, 10, 13, 17, 22, 26, OR2, LaG)	30-Sep-2025		23-Mar-26	Pools 3, 5, 5a, 6, 7, 9, 10, 17, 22, La Grange and Open River South completed in FY2025	irohweder@usgs.gov	Jason Rohweder	Rohweder and De Jager
Future forest conditions under alternative management and hydrological scenarios in the Upper Mississippi River floodplain https://link.springer.com/article/10.1007/s10980-025-02144-7	2025LP4	Draft Report: Effects of management actions and hydrological changes on forest succession at Reno Bottoms	30-Sep-2025		25-Sep-25	Manuscript Published in Landscape Ecology Sept 2025	mtrumper@usgs.gov	Matt Trumper	Trumper, De Jager, Van Appledorn
Patterns of floodplain forest mortality and recruitment along the Upper Mississippi and Illinois Rivers: associations with forest fragmentation and flood inundation	2025LP5	Draft Report: Causes of Forest Loss in the UMRS	30-Sep-2025		30-Dec-25	Manuscript accepted at Landscape Ecology Dec, 2025	ndejager@usgs.gov	Nathan De Jager	De Jager, Rohweder
Statistical Evaluations & Analysis Under Base	202x__	See Below	Multiple	Modified Target	Date Completed	Comments	dmlarson@usgs.gov	D Larson	Multiple
Re-oligotrophy in the Upper Mississippi River USA, occurred in just a few years. University of Chicago Press Journals	2023SE1	Manuscript	30-Oct-2025		30-Oct-25	DOI: 10.1086/738457	dmlarson@usgs.gov	D Larson	Davis K, Bungula W, Larson DM

Continuous dissolved oxygen and temperature data from 2009–2014 at multiple stations along the Portneuf River, Idaho USA	2025SE1	Data	31-Dec-2025		15-Nov-25	DOI: 10.5066/P1383QTD	dmlarson@usgs.gov	D Larson	Larson DM, Baxter C, Schenk M, Harris H, Cornell J, Mladenka G
Freshwater mussel, aquatic plants, and sediment characteristics associated with a habitat rehabilitation and enhancement project in Navigation Pool 13 of the upper Mississippi River	2025SE2	Data	31-Dec-2025		1-Nov-25	https://www.sciencebase.gov/catalog/item/691cee9dd4be021d1d89b404	dmlarson@usgs.gov	D Larson	DuBose T, Lipschultz J, Newton T, Larson DM, Bouska K
Estimating submersed aquatic vegetation biomass using a hierarchical Bayesian model	2025SE3	Manuscript	30-Jun-2026		15-Oct-25	BAO approved; in press	dmlarson@usgs.gov	D Larson	Sherman J, St. Clair K, Gray B, Larson DM
Herbarium collection: 1,300 digitized aquatic plant records with physical specimens permanently archived at the University of Minnesota’s Bell Museum. https://bellatlas.umn.edu/collections/list.php?db=1&labelproject=Upper%20Mississippi%20River%20Restoration%20Program&comingFrom=newsearch .	2025SE4	herbarium collection	30-Sep-2025		30-Sep-25	https://bellatlas.umn.edu/collections/list.php?db=1&labelproject=Upper%20Mississippi%20River%20Restoration%20Program&comingFrom=newsearch .	dmlarson@usgs.gov	D Larson	Larson DM, Whitfield T, Lund E, Carhart A, Szura S
Hydrologic Database: Improving our understanding of historic, contemporary, and future UMRS hydrology by improving workflows, reducing redundancies, and setting a blueprint for modelling potential future hydrology	2021HH	See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Multiple
	2021HH1	Historic and Contemporary Hydrologic Database Release and Documentation	30-Sep-2021	31-Jul-2023	9/23/2024		mvanappledorn@usgs.gov	M. Van Appledorn, L. Sawyer	Schlifer
see metadata/documentation written for the database (IP-170958)	2021HH2	Draft LTRM Completion Report: document database and documentation development steps, database capabilities, and quantitative summaries of the	30-Dec-2021	31-Jul-2024	31-Dec-25	Postponed due to delays in data acquisition; metadata for database IP-170958 sufficiently describe database	mvanappledorn@usgs.gov	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	31-Dec-25	Postponed due to delays in data acquisition; metadata mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	M. Van Appledorn, L. Sawyer	
Side Channels	2021SC	See Below	Multiple	Modified Target	Date Completed	Comments	kbouska@usgs.gov	molly.sobotka@mdc.mo.gov	Multiple
Bassham, C. K., K. L. Bouska, M. J. Sobotka, and R. Vander Vorste. 2026. Taxonomic and functional shifts in macroinvertebrates among side channels of a large river system. Freshwater Science; Bassham, C. K., K. L. Bouska, M. J. Sobotka, and R. Vander Vorste. 202X, Aquatic macroinvertebrate assemblage data from side channels of the Upper Mississippi River System, 2021, https://doi.org/10.5066/P13EXMPY .	2021SC5	Submit manuscript on benthic invertebrate associations with side channel characteristics	30-May-2023	30-Sep-2025	11-Sep-25	Delayed due to macroinvertebrate processing time required. Data and manuscript submitted to IPDS by 9/11/2025.	kbouska@usgs.gov ; molly.sobotka@mdc.mo.gov	Ross Vander Vorste	Molly Sobotka, Kristen Bouska
Dendrochronology: Assessing Forest Development Processes and Pathways in Floodplain Forests along the Upper Mississippi River using Dendrochronology	2023dendro	See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Multiple
	2023dendro4	Draft manuscript: age data of floodplain forests of the Upper Mississippi River	30-May-2024	30-May-2025	2-Dec-25	Manuscript and accompanying data product submitted to IPDS; manuscript received BAO approval and is in journal peer review; data product awaiting BAO approval (4/9/2026)	mvanappledorn@usgs.gov	Windmuller-Campione & Van Appledorn	Windmuller-Campione & Van Appledorn
	2023dendro5	Draft manuscript: growth dynamics of silver maple of the Upper Mississippi River	30-Sep-2024	31-Dec-2025	2-Dec-25	Manuscript and accompanying data product submitted to IPDS; manuscript under BAO review (4/9/2026)	mvanappledorn@usgs.gov	Windmuller-Campione & Van Appledorn	Windmuller-Campione & Van Appledorn
	2023Hydro3	ECB 2018-14 compliance completion	30-Sep-2023	30-Sep-24	30-Sep-25	USACE no longer requiring ECB 2018-14 because LOCA-VIC-mizuRoute hydro data products found to be insufficient for intended purposes; this milestone is no longer relevant to the project	mvanappledorn@usgs.gov	Sawyer and Van Appledorn	
System-wide phytoplankton	2023Pyyto	See Below	Multiple	Modified Target	Date Completed	Comments	kjankowski@usgs.gov	KJ Jankowski	Multiple
Bathy 2022 science meeting (Jayme)	2024Bathy	See Below	Multiple	Modified Target	Date Completed	Comments	jhanson@usgs.gov	jhanson@usgs.gov	Multiple
	2024Bathy1	Develop open-water method for backwater sedimentation measures and conduct RTK surveying transects in Pool 8.	1-Oct-2024	1-Oct-2025	1-Oct-2025	Open-water method developed. Some modifications to survey vessel are ongoing. Some initial transects were surveyed for comparison against hydroacoustic methods.	jhanson@usgs.gov	John Kalas	Steph Szura, Jeremy King, Angus Vaughan, Jenny Hanson
Using sUAS to monitor and survey regeneration and recruitment in areas of forest canopy loss	2024UASFR0	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov	astrassman@usgs.gov	Multiple
Using sUAS to monitor and survey regeneration and recruitment in areas of forest canopy loss	2024UASFR1	Site data review and site selection	30-Jun-2024	31-Mar-2026	31-Mar-2026	Project start delayed due federal issues. Work initiated in early 2026.	astrassman@usgs.gov	astrassman@usgs.gov	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy

Science Support Milestones New & Ongoing as of July 2026

Status	Revised or Final Title & link	A0_Tracking number	Milestone Description	Target Date	Modified Target Date	Date Completed	Comments	A0_UMESC POC email	Project Lead email	Collaborator emails
Ongoing	Eco-hydrologic Research (2020-2022)	2021EH	See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Multiple
Ongoing		2021EH02	Draft manuscript of UMRS floodplain forest classification	30-Sep-2021	30-Sep-2027		Draft in preparation; delayed due to FY25 and FY26 staff redirect	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Van Appledorn, De Jager, Raza
Ongoing	Eco-hydrologic Research (2023-2025)	2023EH	See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Multiple
Ongoing		2024EH2	Draft manuscript of underplanting growth and survival and relation to groundwater levels, surface flooding, and other environmental variables	30-Sep-2025	30-Sep-2027		delayed due to FY25 staff redirect	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
Ongoing		2025EH1	Draft data product of projected floodplain inundation dynamics using downscaled CMIP5 products		30-Sep-2027		Analyses currently underway; delayed due to FY25 and FY26 staff redirect	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
Ongoing	Eco-hydrologic Research (2026-2029)	2026EH	See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Multiple
Ongoing		2026EH0	Draft manuscript of projected floodplain inundation dynamics using downscaled CMIP5 products		30-Sep-2027		Analyses currently underway; delayed due to FY25 and FY26 staff redirect	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
New		2026EH1	Draft daily inundation depth CSV files, Pool 11-18	30-Sep-2027				mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
New		2026EH2	Draft daily inundation depth CSV files, Pool 19-26	31-Dec-2027				mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
New		2026EH3	Draft daily inundation depth CSV files, Illinois River Pools and Open River	31-Dec-2027				mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
New		2026EH4	Draft R scripts for generating daily inundation depths	30-Sep-2027				mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
New		2026EH5	Draft manuscript on floodplain forest successional trajectories	30-Sep-2027				mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	
Ongoing	Ecosystem Resilience and Restoration Applications in the Upper Mississippi River System (2025-2027)	2024R	See Below	Multiple	Modified Target	Date Completed	Comments	kbouska@usgs.gov	kbouska@usgs.gov	Multiple
Ongoing	Ecosystem Resilience and Restoration Applications in the Upper Mississippi River	2024R3	Submit draft Research Framework for Linking restoration actions and ecological responses	30-Sep-2024	30-Sep-2026		Re-prioritized due to hiring challenges w/Pool13 HARP and FY25 funding shortfalls. Restarted in Feb 2026 and making progress.	kbouska@usgs.gov	kbouska@usgs.gov	
Ongoing	Ecosystem Resilience and Restoration Applications in the Upper Mississippi River	2026R1	Updates provided at quarterly UMRR CC meeting and A team meeting	30-Sep-2026			Presentation at April A-team mtg.	kbouska@usgs.gov	kbouska@usgs.gov	
Ongoing	Ecosystem Resilience and Restoration Applications in the Upper Mississippi River	2026R2	Coordination of Pool 13 HARP data collection (see Pool 13 HARP SOW for additional milestones)	30-Sep-2026			Spring coordination calls completed and monitoring equipment deployed for 2026.	kbouska@usgs.gov	kbouska@usgs.gov	nbuckley@usgs.gov , tdubose@usgs.gov , dmlarson@usgs.gov , kjankowski@usgs.gov
Ongoing	Bouska, K. L., L. Solomon, A. Bartels, M. Bowler, S. DeLain, E. Gittinger, T. Kueter, K. Maxson, E. Ratcliff, J. West, J. Lamer, A. Glen, H. Kim and Q. Phelps. 2026. Life history traits and population dynamics of freshwater drum across large river gradients. Transactions of the American Fisheries Society.	2026R3	Publish vital rate manuscripts	30-Sep-2030			Initial manuscript included under vital rates project code. Progress: Two species completed, 4 species with age data ready to analyze, awaiting data for an additional 6 species	kbouska@usgs.gov	kbouska@usgs.gov	
Ongoing	Bouska, K. L. <i>In review</i> . Dynamic length frequency methods enhance multispecies age classification for fisheries monitoring.	2026R4	Apply length-frequency based age classification to estimate cohort-specific catch rates for vital rate species	30-Sep-2026			In final review with IPDS	kbouska@usgs.gov	kbouska@usgs.gov	
New		2026R5	Relate cohort-specific catch rates to hydrologic, temperature, and habitat variables	30-Sep-2027						
Ongoing	Information Needs: IN 1.1 Floodplain Vegetation Change	2025FPV	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov		Multiple
Ongoing		2025FPV2	Data Analysis: Evaluate existing data sets as candidates for long-term monitoring	30-May-2025	31 Dec. 2026		Delayed due to temporary reductions in personnel in FY25 and change in priorities--expanded the scope of analysis.	mtrumper@usgs.gov	mtrumper@usgs.gov	Trumper, Weiss
Ongoing		2025FPV4	Data Analysis: Evaluating species and age-specific mortality rates in response to the 1993 and 2019 floods.	30-Jul-2025	30 Sept. 2026		Preliminary analysis complete; delayed due to change in priorities.	saweiss@lc.edu	saweiss@lc.edu	Weiss, Guyon, De Jager, Trumper, Van Appledorn
Ongoing		2025FPV5	Draft floodplain vegetation data viewer	30 Dec. 2025	31 Dec. 2026		LTRM flood study data viewer. Initial draft data viewer complete, will be finalized based on working group feedback.	saweiss@lc.edu	saweiss@lc.edu	Weiss et al.
Ongoing	Information Needs: IN 1.1 Floodplain Vegetation Change	2026FPV	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov		Multiple

New		2026FPV2	Draft manuscript: floodplain vegetation monitoring framework	30 Sept. 2026				saweiss@lc.edu	saweiss@lc.edu	Weiss, Trumper, De Jager, Van Appledorn, Guyon
New		2026FPV3	Data release: USACE permanent plot forest dataset	30 Sept. 2026				mtrumper@usgs.gov	mtrumper@usgs.gov	Trumper, Meier, Vandermyde, Stoff, Redick
Ongoing	Information Needs: IN 1.1 Floodplain Vegetation Change	2027FPV	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov		Multiple
New		2027FPV1	Draft USACE permanent plot data viewer	31 Dec. 2026				mtrumper@usgs.gov	mtrumper@usgs.gov	Trumper, Meier, Vandermyde, Stoff, Redick
New		2027FPV2	Draft manuscript: Evaluating species and age-specific mortality rates in response to the 1993 and 2019 floods	31 Dec. 2026				saweiss@lc.edu	saweiss@lc.edu	Weiss, Guyon, De Jager, Trumper, Van Appledorn
New	River Gradients	2025RG	See Below	Multiple	Modified Target	Date Completed	Comments	jhouser@usgs.gov; jfischer@usgs.gov	lamer@illinois.edu	Multiple
Ongoing		2025RG01	assimilating data sources, synthesizing data, and indentifying data gaps in the reaches between Pool 13 and 26	30-Sep-2025				jhouser@usgs.gov; jfischer@usgs.gov	lamer@illinois.edu	Maddi Roberts, Lamer, Houser, Fischer
New	Information Need: IN 3.7 Macroinvertebrate Contribution	2022INV	See Below	Multiple	Modified Target	Date Completed	Comments			Multiple
?		2025INV01	Establish monitoring design based on pilot results	30-Sep-2025			During the first two quarters of FY25, a summary of work and findings to-date will be completed, alternative designs with various levels of effort will be developed, and initial discussions will be held with key partners. The goal will be to develop suggested alternatives for sharing and discussion at the 2025 All-hands meeting. Results, lessons-learned, and alternatives for future monitoring designs will be presented and discussed at the 2025 LTRM All-hands meeting. The goal will be to agree upon the appropriate design and level of effort for out-years.	jrfischer@usgs.gov		UMRR Partnership
Ongoing	Future landscape adaptation informed by historical landscape patterns and dynamic conditions scenarios	2024LA	See Below	Multiple	Modified Target	Date Completed	Comments	jdelaney@usgs.gov	jdelaney@usgs.gov	Multiple
Ongoing		2024LA03	Draft Report: Response of reed canarygrass dominance to decadal inundation regimes	30-Sep-2024	31-May-2027		Pending completion of 2025LA01 and currently on hold due to temporary transfer to another project.	jdelaney@usgs.gov	jdelaney@usgs.gov	Delaney, Van Appledorn, De Jager, Bouska, Rohweder
Ongoing		2025LA01	Data Release: Classification of reed canarygrass dominance in wet meadows and wet meadow shrub areas of the Upper Mississippi River Restoration 2020 landcover dataset	30-Sep-2025	30-Sep-2026		In IPDS	jdelaney@usgs.gov	jdelaney@usgs.gov	Erin Hoy, Janis Ruhser, Delaney, Delager
In-review	Acquisition and Interpretation of Four-Band Imagery for Production of 2020 UMRS Land Cover/Land Use Data and Pool-Based Orthomosaics	2025LCU	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov	astrassman@usgs.gov	Multiple
In-review	Imagery is available at: https://doi.org/10.5066/P962VKR4 ; Vector data is available at: https://doi.org/10.5066/P9U46VQP .	2025LCU	Image processing, stereo model development, orthorectification, pool-based mosaicking image interpretation, automation, QA/QC, and serving of 2020 LCU datasets for Pools 14-16, 18-21, and Peoria of the Illinois River.	30-Sep-2025	30-Jun-2026		All aspects complete and posted for Pools 14-16, 18-21 with Peoria pool in FSP/IPDS (IP-189089)	astrassman@usgs.gov		Dieck, Strassman, Hoy, Ruhser
Ongoing	Acquisition and Interpretation of Four-Band Imagery for Production of 2020 UMRS Land Cover/Land Use Data and Pool-Based Orthomosaics	2026LCU	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov	astrassman@usgs.gov	Multiple
Ongoing	Imagery is available at: https://doi.org/10.5066/P962VKR4 ; Vector data is available at: https://doi.org/10.5066/P9U46VQP .	2026LCU Q3	Image processing, stereo model development, orthorectification, pool-based mosaicking image interpretation, automation, QA/QC, and serving of 2020 LCU datasets for the Open River North.	30-Sep-2026			All imagery for the LCU2020 project is processed and provided to mapping team. Photointerpretation (PI) of Open River North continues.	astrassman@usgs.gov		Dieck, Strassman, Hoy, Ruhser
New	Acquisition and Interpretation of Four-Band Imagery for Production of 2020 UMRS Land Cover/Land Use Data and Pool-Based Orthomosaics	2027LCU	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov	astrassman@usgs.gov	Multiple
New		2027LCU	Image processing, stereo model development, orthorectification, pool-based mosaicking image interpretation, automation, QA/QC, and serving of 2020 LCU datasets for The Lockport - Starved Rock of the Illinois River and project wrap-up.	30-Sep-2027				astrassman@usgs.gov		Dieck, Strassman, Hoy, Ruhser
Ongoing	Landscape Pattern Research and Application FY_	2016LP	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov	ndejager@usgs.gov	Multiple

In Review	Perspectives and Insights Gained from Applying Landscape Ecological Approaches to the Upper Mississippi Riverscape	2016LP3	Draft Manuscript: Review of Landscape Ecology on the UMR	NA	30-Sep-2025	24-Feb-26	In Review at Bioscience 4/2026	ndejager@usgs.gov	Nathan De Jager	
Ongoing	Landscape Pattern Research and Application FY22-24	2023LP	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov	ndejager@usgs.gov	Multiple
Ongoing	Data Analysis: Inundation drivers of decadal changes in RCG dominance in wet meadows	2023LP4	Data Analysis: Detecting decadal changes in RCG dominance in wet meadows	30-Sep-2023	28-Feb-2027		Pending completion of 2025LA01 and this work is currently on hold due to temporary transfer to another project.	jdelaney@usgs.gov	John Delaney	Delaney, De Jager, Van Appledorn, Bouska, Rohweder
Ongoing	Landscape Pattern Research and Application FY22-24	2024LP	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov	ndejager@usgs.gov	Multiple
In Review	Attributes of Upper Mississippi River System contiguous forest areas (Pools 3, 7, 9, 10, 11, 12, Open River South, Alton, and La Grange)	2024LP1	Map Set: UMRS Contiguous Forest Areas (Pools 3, 7, 9, 10, 11, 12, OR2, LaG, Alt)	30-Sep-2024	30-Sep-2025		In Review IPDS. Note 2025LP1 has the same IPDS #. All pools will be released in a single file.	ndejager@usgs.gov		jrohwerder@usgs.gov
Ongoing	Upper Mississippi River Land Cover Change (1989-2020)	2024LP4	Story Map: Land Cover Change (1989-2000-2010-2020)	30-Sep-2024	30-Sep-2025	done, but waiting for it to be online to say complete	Delayed as we search for the most effective way to view maps and results online. One issue: moving from ArcMap to ArcGIS Pro caused issues with the GIS server. Update April 2026: Dissemination is pending approval for distribution via EGIS per J. Dieck	jrohwerder@usgs.gov	Jason Rohweder	Rohweder and De Jager
Ongoing	Landscape Pattern Research and Application FY25-27	2025LP	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov	ndejager@usgs.gov	Multiple
In Review	Attributes of Upper Mississippi River System contiguous forest areas	2025LP1	Map Set: UMRS Contiguous Forest Areas Pools StC, 1, 2, 5, 5a, 6, 17, 22, 24, 25	30-Sep-2025			Pools 1, 2, 3, 5, 5A, 6, 7, 9, 10, 11, 12, 17, 19, 22, 24, 25, Open River South, Alton, and La Grange reviewed and currently at Bureau Approval level in IPDS-April 2026	jrohwerder@usgs.gov	Jason Rohweder	Rohweder and De Jager
New		2026LP1	Map Set: UMRS Contiguous Forest Areas Pools 14, 15, 16, 18, 20, 21, or1, bra, dre, loc, mar, peo, sta	30-Sep-2026	30 Sept. 2027		This will complete the systemic map set for 2020 data. Delayed b/c of funding changes	jrohwerder@usgs.gov	Jason Rohweder	Rohweder and De Jager
New		2026LP2	Map Set: Attributes of 2010-2020 forest loss areas (Pools: 11, 12, 14, 15, 16, 18, 19 20, 21, 24, 25, alt, bra, dre, loc, mar, peo, sta)	30-Sep-2026	30 Sept. 2027		This will complete systemic map set. Work contingent upon completion of 2026EH1, 2026EH2, 2026EH3 Delayed b/c of funding changes	jrohwerder@usgs.gov	Jason Rohweder	Rohweder and De Jager
Ongoing	Pool 12 Overwintering	2026P13	See Below	Multiple	Modified Target	Date Completed	Comments	keuter	bierman	Multiple
	Statistical Evaluations & Analysis Under Base	202x	See Below	Multiple	Modified Target	Date Completed	Comments	dmlarson@usgs.gov	D Larson	Multiple
Ongoing	River re-oligotrophication and hydrologic changes over 20 years contributed to macrophyte community shifts and recovery.	2024SE1	Manuscript, data release, software release	31-Dec-2026			In USGS CD/BAO approval	dmlarson@usgs.gov	D Larson	Jones M, Weigel B, Gray B, Ovaskainen O
Ongoing	Why do scuds flourish in some wetlands?	2025SE5	Magazine manuscript	30-Sep-2026			accepted in Sept 2026 issue of Wildlife Professional magazine	dmlarson@usgs.gov	D Larson	Larson DM, Isaacson C, Anteau MJ, Fitzpatrick M
Ongoing	Pocket Booklet for Long Term Resource Monitoring procedures—Aquatic vegetation monitoring	2026SE1	Pocket Booklet (field guide)	30-Sep-2026			good progress	dmlarson@usgs.gov	D Larson	Larson DM, Lund E, Carhart AM, Fopma S, Szura S
Ongoing	Multi-scale spatiotemporal modeling of total suspended solids across the Upper Mississippi River using automated machine learning	2026SE2	Manuscript	30-Sep-2026			good progress	dmlarson@usgs.gov	D Larson	Rezaei S, Peter BG, Ruhl-whittle LS, Weiss J, Larson DM
Ongoing	Habitat mosaics in a large-river floodplain ecosystem: Uncovering physical-biological relationships across multiple taxa.	2026SE3	Manuscript	30-Sep-2026			good progress	dmlarson@usgs.gov	D Larson	Hampton J, De Jager N, De Boer J, Larson DM, Kaemink M
Ongoing	Role of eDNA in early detection and biosecurity for invasive aquatic plants.	2026SE4	Field data collection	30-Sep-2026			external funding to collect aquatic plants in summer 2026	dmlarson@usgs.gov	D Larson	Larson DM, Waterhouse L, Spear S, Gotakar D
Ongoing	Role of eDNA in early detection and biosecurity for invasive aquatic plants.	2026SE5	Presentations	30-Sep-2026			external funding to present at multiple conferences and working groups	dmlarson@usgs.gov	D Larson	Larson DM, Waterhouse L, Spear S, Gotakar D
In review	Seasonal and spatial variation in chlorophyll a in a large, eutrophic river over three decades.		Manuscript	30-Sep-2026			in review	kjankowski@usgs.gov	KJ Jankowski	Kreiling, JH Larson, S Sawicki, and J Murphy
In review	Anthropogenic land use decouples seasonal nutrient regimes and drives stoichiometric variability in rivers.		Manuscript	30-Sep-2026			in review	kjankowski@usgs.gov	KJ Jankowski	
New	Augmenting the UMRR fish vital rates project with greater species representation for genetics and otolith microchemistry	2021VR	See Below	Multiple	Modified Target	Date Completed	Comments	kbouska@usgs.gov	kbouska@usgs.gov	Multiple

Ongoing	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-26		Initial delays occurred due to needing additional samples and difficulty obtaining lab supplies (COVID). Subsequent delays as post-doc as changed positions. They have told me the manuscript will be finalized in 2026.	kbouska@usgs.gov	Mark Davis, Milton Tan	Jim Lamer, Kristen Bouska
Ongoing	Cucalón, R. V., J. B. Corush, R. A. Hrabik, K. Bouska, J. T. Lamer, M. A. Davis, and M. Tan. In prep. Distribution and hybridization of the Mimic Shiner (<i>Paranotropis volucellus</i>) and Channel Shiner (<i>P. wickliffi</i>) in the Upper Mississippi River System. Ecology and Evolution.	2021VR4	Submit draft manuscript (genetics- mimic/channel)	31-Dec-2022	30-Sep-26		Draft manuscript was shared with co-authors in March.	kbouska@usgs.gov	Mark Davis, Milton Tan	Jim Lamer, Kristen Bouska
Ongoing	Augmenting the UMRR fish vital rates project with greater species representation for genetics and otolith microchemistry	2021VR5	Submit draft manuscript (constructing management units)	31-Dec-2022	31-Dec-2026		Delays in each component of the vital rates projects have pushed this manuscript back. The original intent may need to be adjusted as genetics project staff are nearly wrapped up with their positions. Vital rate products may incorporate management implications in discussion materials.	kbouska@usgs.gov	Mark Davis, Milton Tan, Jim Lamer, Wes Larson, Greg Whitledge	
New	Dendrochronology: Assessing Forest Development Processes and Pathways in Floodplain Forests along the Upper Mississippi River using Dendrochronology	2023dendro	See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov	mvanappledorn@usgs.gov	Multiple
In review		2023dendro6	Final report writing, edits on manuscript, and completion of all data storage	30-Nov-2024	30-Sep-2026		Delayed due to temporary reductions in personnel at partnering institution; manuscripts currently in review (3/28/2026) may fulfill final report and data publication mentioned in milestone description	mvanappledorn@usgs.gov	Windmuller-Campione & Van Appledorn	Windmuller-Campione & Van Appledorn
Ongoing	System-wide phytoplankton	2023Pyyto	See Below	Multiple	Modified Target	Date Completed	Comments	kjankowski@usgs.gov	KJ Jankowski	Multiple
Ongoing		2023Phyto1	System-wide phytoplankton community dataset	30-Sep-2024	30-Sep-2026		In progress now that samples are analyzed	kjankowski@usgs.gov	James Larson and KathiJo Jankowski	Kenna Gierke, James Larson
Ongoing		2023Phyto4	Report: Assessment of FloCam for use on archived and fresh phytoplankton samples for LTRM sampling	30-Mar-2024	30-Sep-2025		This will be combined with 2023Phyto5	jlharson@usgs.gov	James Larson and KathiJo Jankowski	
Ongoing		2023Phyto5	Draft Manuscript: Comparison of trends captured by microscopy and FlowCam phytoplankton community analysis	30-May-2024	30-Sep-2026		Awaiting data review before submission to Ecology and Evolution	jlharson@usgs.gov	James Larson and KathiJo Jankowski	Kenna Gierke, Sean Bailey
Ongoing	Bathy 2022 science meeting (Jayme)	2024Bathy	See Below	Multiple	Modified Target	Date Completed	Comments	jhanson@usgs.gov	jhanson@usgs.gov	Multiple
Ongoing		2024Bathy1b	Complete RTK surveys of Pool 8 transects that will be used in accuracy assessment.	1-Oct-2025	1-Oct-2026			jhanson@usgs.gov	John Kalas Steph Szura, Jeremy King	Steph Szura, Jeremy King, Jenny Hanson, Angus Vaughan
Ongoing		2024Bathy2	Conduct shallow water hydroacoustic surveys of select Pool 8 transects (2024Bathy1) and previously surveyed side channels (2019).	1-Oct-2024	1-Oct-2026		Few transects were surveyed in Spring of 2024 due minimal spring pulse. About 1/2 of the P8 side channels were surveyed and will continue into FY26.	jhanson@usgs.gov	Jenny Hanson	Angus Vaughan, John Kalas, Steph Szura, Jeremy King
Ongoing		2024Bathy2b	Complete hydroacoustic surveys of Pool 8 transects (2024Bathy1b).	1-Oct-2025	1-Oct-2026			jhanson@usgs.gov	Jenny Hanson	Angus Vaughan, John Kalas, Steph Szura, Jeremy King
Ongoing		2024Bathy3	Establish methods, add transect data to current DB, begin comparing technologies for bed elevation surveys, complete geomorphic change analyses for P8 side channels.	30-Mar-2025	1-Oct-2026		Currently not enough transect data collected due to lack of elevated water levels last spring and fall. The few remaining side channel will be surveyed in 2025.	jhanson@usgs.gov	John Kalas, Jenny Hanson	Angus Vaughan, Steph Szura, Jeremy King
New	HARP Lower Pool 13 -- Understanding wind dynamics and contributing factors of water clarity, aquatic vegetation, and native freshwater mussels (FY23 – FY26)	2024HARP	See Below	Multiple	Modified Target	Date Completed	Comments	kbouska@usgs.gov	kbouska@usgs.gov	Multiple
Ongoing	Buckley, N.R., Bouska, K.L., and Johnson, A., 2025, Semi-continuous pressure and water quality sensor data from 5 locations in Lower Pool 13 of the Upper Mississippi River from May - September 2024: U.S. Geological Survey data release, https://doi.org/10.5066/P13BYQEG .; Buckley, N.R., Bouska, K.L., and Johnson, A., 2026, Hydrodynamic and water quality time-series data from 6 locations in Lower Pool 13 of the Upper Mississippi River from April – October 2025: U.S. Geological Survey data release.	2024HARP1	Submit manuscript on wind, wave, and turbidity interactions	30-May-2026	30-Sep-2026		2024 dataset published and 2025 dataset pending release, analysis ongoing, manuscript (<i>titled Seasonal behavior and response of waves on sediment resuspension in the Upper Mississippi River</i>) in early review with co-authors (June 2026)	nbuckley@usgs.gov	Nicole Buckley, Kristen Bouska	Ashley Johnson, Kathi Jo Jankowski, Jesse McNinch, Elizabeth Bruns

Ongoing	Buckley, N.R., Bouska, K.L., and Johnson, A., 2025, Semi-continuous pressure and water quality sensor data from 5 locations in Lower Pool 13 of the Upper Mississippi River from May - September 2024: U.S. Geological Survey data release, https://doi.org/10.5066/P13BYQEG .; Buckley, N.R., Bouska, K.L., and Johnson, A., 2026, Hydrodynamic and water quality time-series data from 6 locations in Lower Pool 13 of the Upper Mississippi River from April – October 2025: U.S. Geological Survey data release.	2024HARP2	Submit manuscript on resuspension and upstream delivery to local turbidity	30-Sep-2026	30-Nov-2026		2024 dataset published and 2025 dataset pending release, analysis ongoing, manuscript in preparation	nbuckley@usgs.gov	Nicole Buckley, Kristen Bouska	Ashley Johnson, Dave Bierman, Elizabeth Bruns, Kathi Jo Jankowski
Ongoing	Lower Pool 13 HARP	2024HARP3	Submit manuscript on spatial patterns and correspondence among wave dynamics, turbidity, and aquatic vegetation	30-May-2026	30-Sep-2027		aquatic vegetation dataset published (LTRM), FLAME and ADCP dataset in review, analysis on pause until pilot bathymetry and hydraulic model outputs are available in-house	kbouska@usgs.gov	Kristen Bouska, Nicole Buckley	Kathi Jo Jankowski, Seth Fopma, Danelle Larson, Jesse McNinch, Dave Bierman, Luke Loken
Ongoing	T.P. DuBose, J.M. Lipschultz, T.J. Newton, D.M. Larson, and K.L. Bouska. , 2026, Freshwater mussel, aquatic plants, and sediment characteristics associated with a habitat rehabilitation and enhancement project in Navigation Pool 13 of the upper Mississippi River, https://doi.org/10.5066/P14LUKFY	2024HARP4	Submit manuscript on linkages between native freshwater mussel assemblages and substrate stability	30-Sep-2026	30-Dec-2026		dataset published, analysis ongoing, manuscript in preparation. Slight delays due to temporary termination of staff and staff redirects.	tdubose@usgs.gov	Traci Dubose, Teresa Newton	
New	Aquatic Areas: Understanding, quantifying and forecasting associations among hydrogeomorphology, water chemistry, and the distribution and abundance of biota in the upper Mississippi river under Uncertain Future Conditions	2025AA	See Below	Multiple	Modified Target	Date Completed	Comments	ndejager@usgs.gov	ndejager@usgs.gov	Multiple
New	Future Hydro: Generating future hydrology and water temperature projections for the UMRS using hybrid deep learning	2025FH	See Below	Multiple	Modified Target	Date Completed	Comments	jdelaney@usgs.gov	jdelaney@usgs.gov	Multiple
Paused		2025FH03	Data release: Water temperature database submitted to IPDS	30-Sep-2025	31-Mar-2027		Delayed due to temporary reductions in personnel and funding shortfall. USACE has not provided water temperature data for all districts yet.	mtrumper@usgs.gov	jdelaney@usgs.gov	Matthew Trumper; Sawyer, Van Appledorn, Bouska, De Jager, Jankowski, Mueller, Rohweder, Schoenfield, Diaz, Schlifer
Paused		2025FH04	Manuscript: Water temperature historical trends submitted to IPDS	30-Sep-2026	30-Sep-2027		Delayed due to temporary reductions in personnel and funding shortfall. USACE has not provided water temperature data for all districts yet.	mtrumper@usgs.gov	jdelaney@usgs.gov	Matthew Trumper; Sawyer, Van Appledorn, Bouska, De Jager, Jankowski, Mueller, Rohweder, Schoenfield, Diaz, Schlifer
Ongoing		2026FH01	Draft report: UMR basin hydrologic raster set	30-Sep-2026			Nearing	jdelaney@usgs.gov	jdelaney@usgs.gov	Matthew Trumper; Sawyer, Van Appledorn, Bouska, De Jager, Jankowski, Mueller, Rohweder, Schoenfield, Diaz, Schlifer
Ongoing		2026FH02	Data release: UMR basin hydrologic raster set	30-Sep-2026			In progress	jdelaney@usgs.gov	jdelaney@usgs.gov	Matthew Trumper; Sawyer, Van Appledorn, Bouska, De Jager, Jankowski, Mueller, Rohweder, Schoenfield, Diaz, Schlifer
Ongoing		2026FH03	Code release: UMR basin hydrologic raster set	30-Sep-2026			In progress	jdelaney@usgs.gov	jdelaney@usgs.gov	Matthew Trumper; Sawyer, Van Appledorn, Bouska, De Jager, Jankowski, Mueller, Rohweder, Schoenfield, Diaz, Schlifer
Ongoing	Vital Rates: Investigating vital rate drivers of UMRS fishes to support management and restoration	2019VR	See Below	Multiple	Modified Target	Date Completed	Comments	kbouska@usgs.gov	kbouska@usgs.gov	Multiple

Ongoing	Bouska, K. L., L. Solomon, and J. Lamer. 2025. Upper Mississippi River System Vital Rate Data – Bluegill (<i>Lepomis macrochirus</i>) 2018-2020: U.S. Geological Survey data release. https://doi.org/10.5066/P14QWJF2 ; Bouska, K.L., Solomon, L., and Lamer, J., 2025, Upper Mississippi River System Vital Rate Data - Freshwater Drum (<i>Aplodinotus grunniens</i>) 1992-2020: U.S. Geological Survey data release, https://doi.org/10.5066/P1WU76A6 .; Bouska, K.L., Solomon, L., and Lamer, J., 2026, Upper Mississippi River System Vital Rate Data - Channel Catfish, Largemouth Bass, Orangespotted Sunfish, and Yellow Perch 2018-2020. U.S. Geological Survey data release	2019VR8	Data set complete and submitted to IPDS	30-Sep-2021	30-Sep-2028		Initial age estimates were unreliable. IRBS is re-estimating ages for all species. Ages will be submitted to IPDS one species at a time in the same library on ScienceBase with all species submitted by the modified target date. Age datasets have been submitted for 6 species, and an additional 6 species will be submitted when ready.	kbouska@usgs.gov	Kristen Bouska	Levi Solomon, Jim Lamer
Ongoing	Winter Limno: Understanding landscape-scale patterns in winter conditions in the Upper Mississippi River System	2021nn	See Below	Multiple	Modified Target	Date Completed	Comments	kjankowski@usgs.gov	kjankowski@usgs.gov	Multiple
Ongoing	Substantial variation in ice phenology and under ice conditions in backwater lakes of Upper Mississippi River	2021nn	Manuscript evaluating ice phenology and under ice conditions in backwaters	30-Sep-2023	30-Dec-2026		Manuscript in prep	kjankowski@usgs.gov		
New	Phytoplankton: Putting LTRM’s long-term phytoplankton archive to work to understand ecosystem transitions and improve methodological approaches	2023Phyto	See Below	Multiple	Modified Target	Date Completed	Comments	kjankowski@usgs.gov	kjankowski@usgs.gov	Multiple
Ongoing		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	30-Sep-2027			kjankowski@usgs.gov	James Larson and KathiJo Jankowski	
Ongoing	Phytoplankton: In-depth characterization of phytoplankton communities and toxicity across connectivity gradients along 450 miles of the Upper Mississippi River System	2025PC	See Below	Multiple	Modified Target	Date Completed	Comments	kjankowski@usgs.gov	kjankowski@usgs.gov	Multiple
Ongoing	Data Release	2025PC02	Data release of all phytoplankton community and cyanotoxin datasets	30-Sep-2025	30-Sep-26		All phytoplankton data generated by this project, including FlowCam, microscopy, cyanobacteria and cyanotoxin qPCR, and cyanotoxin data will be published on ScienceBase; partial data release occurred July 14, 2026 and remaining data in supervisory review as of July 15)	kjankowski@usgs.gov	lloken@usgs.gov	rkreiling@usgs.gov; kjankowski@usgs.gov; jhlarson@usgs.gov; LTRM Lower Trophic Level Specialist; Sophia Lafond-Hudson; Kenna Gierke; Carrie Givens; Hayley Olds; Leon Katona
Ongoing	Longitudinal, lateral, and temporal variability in phytoplankton and cyanobacteria across the upper Mississippi River using repeat, high-resolution spatial data	2025PCxx	Manuscript focused on results of FLAMe 2025PC01	30-Sep-2026			Analysis of spatial survey data collected during 2025PC01	kjankowski@usgs.gov	lloken@usgs.gov	lloken@usgs.gov
Ongoing	Cyanotoxin presence and production potential were widespread in a 600 km stretch of the upper Mississippi River during September, 2024	2025PCxx	Manuscript focused on occurrence and drivers of cyanobacteria and cyanotoxins from Pool 10-24	30-Sep-2026	30-Dec-26		Manuscript submitted July 14, 2026	kjankowski@usgs.gov	kjankowski@usgs.gov	kjankowski@usgs.gov
Ongoing	SAV: Submersed plant responses to physical forces of wind, waves, velocity, and shear stress	2025SP0	See Below	Multiple	Modified Target	Date Completed	Comments	dmlarson@usgs.gov		Multiple
Ongoing		2025SP01	Collect ACDP data	Spring 2026				dmlarson@usgs.gov		Jenny Hanson, Angus Vaughan, Julia Cogan
Ongoing		2025SP02	Collect plant and other habitat data	Summer 2026				dmlarson@usgs.gov		LTRM Aquatic Veg. Component
New		2025SP03	Collect ACDP data	Fall 2026				dmlarson@usgs.gov		Jenny Hanson, Angus Vaughan, Julia Cogan
New	Using sUAS to monitor and survey regeneration and recruitment in areas of forest canopy loss	2024UASFR0	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov	astrassman@usgs.gov	Multiple
Ongoing		2024UASFR2	Collection of ⅓ of field imagery	30-Sep-2024	30-Sep-2026		USFWS permits approved 4/24/2026. Flight planning underway. Some imagery received from USACE from 2025. Additional imagery collect by USACE planned on P17/18.	astrassman@usgs.gov	astrassman@usgs.gov	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
Ongoing	sUAS to monitor and survey regeneration and recruitment in areas of forest canopy loss	2025UASFR0	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov		Multiple
Ongoing		2025UASFR1	Processing of FY2024 (NOW FY2026) field imagery	31-Dec-2024	31-Dec-2026		Initial processing underway with ingestion of UAS imagery into ArcPro confirmed.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
Ongoing		2025UASFR2	Creation of “desktop” plot data for FY2024 (NOW FY2026) collected imagery	30-Mar-2025	31-Mar-2027		Planned for late FY2026.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy

Ongoing		2025UASFR3	Collection of remaining ⅓ of field imagery	30-Sep-2025	30-Sep-2027		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
Ongoing		2025UASFR4	Collection of field plots data	30-Sep-2025	31-Oct-2026		Underway.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
Ongoing	sUAS to monitor and survey regeneration and recruitment in areas of forest canopy loss	2026UASFR0	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov	astrassman@usgs.gov	Multiple
New		2026UASFR1	Processing of FY2025 (NOW FY2027) field imagery	31-Dec-2025	31-Dec-2026		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
New		2026UASFR2	Creation of “desktop” plot data for FY2025 (NOW FY2027) collected imagery	30-Mar-2026	31-Mar-2027		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
New		2026UASFR3	Analysis of data	31-Jul-2026	31-Jul-2027		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
New		2026UASFR4	Drafting of final report and submission to UMRR LTRM Science Director, Jeff Houser, for review	30-Sep-2026	30-Sep-2027		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
New		2026UASFR5	Creation of USGS data release products and entry into USGS FSP/IPDS	30-Sep-2026	30-Sep-2027		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
New	sUAS to monitor and survey regeneration and recruitment in areas of forest canopy loss	2027UASFR0	See Below	Multiple	Modified Target	Date Completed	Comments	astrassman@usgs.gov		Multiple
New		2027UASFR1	Completion of USGS FSP/IPDS process and final public dissemination	30-Dec-2026	31-Dec-2027		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
New		2027UASFR2	Presentation of final results at river-focused conference	30-Sep-2027	30-Sep-2028		Date cascade from project delay.	astrassman@usgs.gov	Andrew Strassman and Lyle Guyon	Andrew Meier, Tate Sattler, Marcella Windmuller-Campione, Shelby Weiss, Erin Hoy, Aaron Murphy
Ongoing	Understanding the role of surface-subsurface hydrology and soil characteristics on floodplain vegetation in the Upper Mississippi River System through space and time		See Below	Multiple	Modified Target	Date Completed	Comments	mvanappledorn@usgs.gov		Multiple
Ongoing			Hydrologic model mesh generation	31-Mar-2025	30-Sep-2026		Initial mesh generation complete and currently in refinement for MVP and MVR sites; mesh generation in progress for MVS			
Ongoing			Terrestrial vegetation sampling and soil collection, year 1: Blackhawk Island MVR	30-Sep-2025	30-Sep-2026		Well installation prioritized over veg/soil sampling; data collected at 6 of 18 plots; downed woody debris collected at 3 of 18 plots; no soil sampling			
Ongoing			Terrestrial vegetation sampling and soil collection, year 1: Reds Landing MVS	30-Sep-2025	30-Sep-2026		Well installation prioritized over veg/soil sampling; veg data collected at 18 plots; soil and downed woody debris sampling anticipated 2026 field season			

Ongoing			Terrestrial vegetation sampling and soil collection, year 2: Reno Bottoms MVP	30-Sep-2026			Underway			
Ongoing			Terrestrial vegetation sampling and soil collection, year 2: Blackhawk Island MVR	30-Sep-2026			Underway			
Ongoing			Terrestrial vegetation sampling and soil collection, year 2: Reds Landing MVS	30-Sep-2026			Underway			
Ongoing			Hydrologic model validation: Reno Bottoms MVP	31-Oct-2026			Underway with year 1 WSE data			
New			Hydrologic model validation: Blackhawk Island MVR	30-Sep-2027			Need WSE data being collected in 2026 field season			
New			Hydrologic model validation: Reds Landing MVS	30-Sep-2027			Need WSE data being collected in 2026 field season			
New			Stakeholder meeting	30-Sep-2027						
New			Evaluation of UMRS FIM performance	30-Sep-2027						
New			Draft data product	31-Dec-2028						
New			Draft hydrologic model manuscript	31-Dec-2027						
New			Draft veg-soil-hydro manuscript	31-Dec-2028						
New			Draft UMRS FIM manuscript	31-Dec-2028						
New			Final data product	31-Dec-2029						
New			Final hydrologic model manuscript	31-Dec-2028						
New			Final veg-soil-hydro manuscript	31-Dec-2029						
New			Final UMRS FIM manuscript	31-Dec-2029						

Upper Mississippi River Restoration Program Quarterly Meetings

Attachment D

Additional Items

Page Number	Document Title
D-1	Future Meeting Schedule
D-2 to D-8	Frequently Used Acronyms (4-29-2022)
D-9 to D-13	UMRR Authorization and Operating Approach (12-23-2024)

Upper Mississippi River Quarterly Meetings

Future Meeting Schedule

October 2026 — Quad Cities

October 13	UMRBA Quarterly Meeting
October 14-15	UMRR Coordinating Committee Quarterly Meeting
October 14-15	NESP Coordinating Committee Quarterly Meeting

February 2027 — Virtual

February 16	UMRBA Quarterly Meeting
February 17	UMRR Coordinating Committee Quarterly Meeting
February 18	NESP Coordinating Committee Quarterly Meeting

May 2027 — Minneapolis-St. Paul Metro

May 18	UMRBA Quarterly Meeting
May 19-20	UMRR Coordinating Committee Quarterly Meeting
May 19-20	NESP 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

Upper Mississippi River Restoration Program Authorization

Section 1103 of the Water Resources Development Act of 1986 (P.L. 99-662) as amended by Section 405 of the Water Resources Development Act of 1990 (P.L. 101-640), Section 107 of the Water Resources Development Act of 1992 (P.L. 102-580), Section 509 of the Water Resources Development Act of 1999 (P.L. 106-53), Section 2 of the Water Resources Development Technical Corrections of 1999 (P.L. 106-109), Section 3177 of the Water Resources Development Act of 2007 (P.L. 110-114), Section 307 of the Water Resources Development Act of 2020 (P.L. 116-260), Section 8345 of the Water Resources Development Act of 2022 (P.L. 117-263), and Section 1354 of the Water Resources Development Act of 2024 (P.L. 118-272).

Additional Cost Sharing Provisions

Section 906(e) of the Water Resources Development Act of 1986 (P.L. 99-662) as amended by Section 221 of the Water Resources Development Act of 1999 (P.L. 106-53).

SEC. 1103. UPPER MISSISSIPPI RIVER PLAN.

(a)(1) This section may be cited as the "Upper Mississippi River Management Act of 1986".

(2) To ensure the coordinated development and enhancement of the Upper Mississippi River system, it is hereby declared to be the intent of Congress to recognize that system as a nationally significant ecosystem and a nationally significant commercial navigation system. Congress further recognizes that the system provides a diversity of opportunities and experiences. The system shall be administered and regulated in recognition of its several purposes.

(b) For purposes of this section --

(1) the terms "Upper Mississippi River system" and "system" mean those river reaches having commercial navigation channels on the Mississippi River main stem north of Cairo, Illinois; the Minnesota River, Minnesota; Black River, Wisconsin; Saint Croix River, Minnesota and Wisconsin; Illinois River and Waterway, Illinois; and Kaskaskia River, Illinois;

(2) the term "Master Plan" means the comprehensive master plan for the management of the Upper Mississippi River system, dated January 1, 1982, prepared by the Upper Mississippi River Basin Commission and submitted to Congress pursuant to Public Law 95-502;

(3) the term "GREAT I, GREAT II, and GRRM studies" means the studies entitled "GREAT Environmental Action Team--GREAT I--A Study of the Upper Mississippi River", dated September 1980, "GREAT River Environmental Action Team--GREAT II--A Study of the Upper Mississippi River", dated December 1980, and "GREAT River Resource Management Study", dated September 1982; and

(4) the term "Upper Mississippi River Basin Association" means an association of the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, formed for the purposes of cooperative effort and united assistance in the comprehensive planning for the use, protection, growth, and development of the Upper Mississippi River System.

(c)(1) Congress hereby approves the Master Plan as a guide for future water policy on the Upper Mississippi River system. Such approval shall not constitute authorization of any recommendation contained in the Master Plan.

(2) Section 101 of Public Law 95-502 is amended by striking out the last two sentences of subsection (b), striking out subsection (i), striking out the final sentence of subsection (j), and redesignating subsection "(j)" as subsection "(i)".

(d)(1) The consent of the Congress is hereby given to the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, or any two or more of such States, to enter into negotiations for agreements, not in conflict with any law of the United States, for cooperative effort and mutual assistance in the comprehensive planning for the use, protection, growth, and development of the Upper Mississippi River system, and to establish such agencies, joint or otherwise, or designate an existing multi-State entity, as they may deem desirable for making effective such

agreements. To the extent required by Article I, section 10 of the Constitution, such agreements shall become final only after ratification by an Act of Congress.

(2) The Secretary is authorized to enter into cooperative agreements with the Upper Mississippi River Basin Association or any other agency established under paragraph (1) of this subsection to promote and facilitate active State government participation in the river system management, development, and protection.

(3) For the purpose of ensuring the coordinated planning and implementation of programs authorized in subsections (e) and (h)(2) of this section, the Secretary shall enter into an interagency agreement with the Secretary of the Interior to provide for the direct participation of, and transfer of funds to, the Fish and Wildlife Service and any other agency or bureau of the Department of the Interior for the planning, design, implementation, and evaluation of such programs.

(4) The Upper Mississippi River Basin Association or any other agency established under paragraph (1) of this subsection is hereby designated by Congress as the caretaker of the master plan. Any changes to the master plan recommended by the Secretary shall be submitted to such association or agency for review. Such association or agency may make such comments with respect to such recommendations and offer other recommended changes to the master plan as such association or agency deems appropriate and shall transmit such comments and other recommended changes to the Secretary. The Secretary shall transmit such recommendations along with the comments and other recommended changes of such association or agency to the Congress for approval within 90 days of the receipt of such comments or recommended changes.

(e) Program Authority

(1) Authority

(A) In general. The Secretary, in consultation with the Secretary of the Interior and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, may undertake, as identified in the master plan

- (i) a program for the planning, construction, and evaluation of measures for fish and wildlife habitat rehabilitation and enhancement; and
- (ii) implementation of a long-term resource monitoring, computerized data inventory and analysis, and applied research program, including research on water quality issues affecting the Mississippi River (including elevated nutrient levels) and the development of remediation strategies.

(B) Advisory committee. In carrying out subparagraph (A)(i), the Secretary shall establish an independent technical advisory committee to review projects, monitoring plans, and habitat and natural resource needs assessments.

(2) REPORTS. — Not later than December 31, 2004, and not later than December 31 of every sixth year thereafter, the Secretary, in consultation with the Secretary of the Interior and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, shall submit to Congress a report that —

- (A) contains an evaluation of the programs described in paragraph (1);
- (B) describes the accomplishments of each of the programs;
- (C) provides updates of a systemic habitat needs assessment; and
- (D) identifies any needed adjustments in the authorization of the programs.

(3) For purposes of carrying out paragraph (1)(A)(i) of this subsection, there is authorized to be appropriated to the Secretary \$75,000,000 for fiscal year 1999 and each fiscal year thereafter.

(4) For purposes of carrying out paragraph (1)(A)(ii) of this subsection, there is authorized to be appropriated to the Secretary \$25,000,000 for fiscal year 1999 and each fiscal year thereafter.

(5) Authorization of appropriations.—There is authorized to be appropriated to carry out paragraph (1)(B) \$350,000 for each of fiscal years 1999 through 2009.

(6) Transfer of amounts.—For fiscal year 1999 and each fiscal year thereafter, the Secretary, in consultation with the Secretary of the Interior and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, may transfer not to exceed 20 percent of the amounts appropriated to carry out clause (i) or (ii) of paragraph (1)(A) to the amounts appropriated to carry out the other of those clauses.

(7)(A) Notwithstanding the provisions of subsection (a)(2) of this section, the costs of each project carried out pursuant to paragraph (1)(A)(i) of this subsection shall be allocated between the Secretary and the appropriate non-Federal sponsor in accordance with the provisions of section 906(e) of this Act; except that the costs of operation and maintenance of projects located on Federal lands or lands owned or operated by a State or local government shall be borne by the Federal, State, or local agency that is responsible for management activities for fish and wildlife on such lands and, in the case of any project requiring non-Federal cost sharing, the non-Federal share of the cost of the project shall be 35 percent.

(B) Notwithstanding the provisions of subsection (a)(2) of this section, the cost of implementing the activities authorized by paragraph (1)(A)(ii) of this subsection shall be allocated in accordance with the provisions of section 906 of this Act, as if such activity was required to mitigate losses to fish and wildlife.

(8) None of the funds appropriated pursuant to any authorization contained in this subsection shall be considered to be chargeable to navigation.

(f) (1) The Secretary, in consultation with any agency established under subsection (d)(1) of this section, is authorized to implement a program of recreational projects for the system substantially in accordance with the recommendations of the GREAT I, GREAT II, and GRRM studies and the master plan reports. In addition, the Secretary, in consultation with any such agency, shall, at Federal expense, conduct an assessment of the economic benefits generated by recreational activities in the system. The cost of each such project shall be allocated between the Secretary and the appropriate non-Federal sponsor in accordance with title I of this Act.

(2) For purposes of carrying out the program of recreational projects authorized in paragraph (1) of this subsection, there is authorized to be appropriated to the Secretary not to exceed \$500,000 per fiscal year for each of the first 15 fiscal years beginning after the effective date of this section.

(g) The Secretary shall, in his budget request, identify those measures developed by the Secretary, in consultation with the Secretary of Transportation and any agency established under subsection (d)(1) of this section, to be undertaken to increase the capacity of specific locks throughout the system by employing nonstructural measures and making minor structural improvements.

(h)(1) The Secretary, in consultation with any agency established under subsection (d)(1) of this section, shall monitor traffic movements on the system for the purpose of verifying lock capacity, updating traffic projections, and refining the economic evaluation so as to verify the need for future capacity expansion of the system.

(2) Determination.

(A) In general. The Secretary in consultation with the Secretary of the Interior and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, shall determine the need for river rehabilitation and environmental enhancement and protection based on the condition of the environment, project developments, and projected environmental impacts from implementing any proposals resulting from recommendations made under subsection (g) and paragraph (1) of this subsection.

(B) Requirements. The Secretary shall

- (i) complete the ongoing habitat needs assessment conducted under this paragraph not later than September 30, 2000; and
- (ii) include in each report under subsection (e)(2) the most recent habitat needs assessment conducted under this paragraph.

(3) There is authorized to be appropriated to the Secretary such sums as may be necessary to carry out this subsection.

(i) (1) The Secretary shall, as he determines feasible, dispose of dredged material from the system pursuant to the recommendations of the GREAT I, GREAT II, and GRRM studies.

(2) The Secretary shall establish and request appropriate Federal funding for a program to facilitate productive uses of dredged material. The Secretary shall work with the States which have, within their boundaries, any part of the system to identify potential users of dredged material.

(j) The Secretary is authorized to provide for the engineering, design, and construction of a second lock at locks and dam 26, Mississippi River, Alton, Illinois and Missouri, at a total cost of \$220,000,000, with a first Federal cost of \$220,000,000. Such second lock shall be constructed at or in the vicinity of the location of the replacement lock authorized by section 102 of Public Law 95-502. Section 102 of this Act shall apply to the project authorized by this subsection.

SEC. 906(e). COST SHARING.

(e) In those cases when the Secretary, as part of any report to Congress, recommends activities to enhance fish and wildlife resources, the first costs of such enhancement shall be a Federal cost when--

(1) such enhancement provides benefits that are determined to be national, including benefits to species that are identified by the National Marine Fisheries Service as of national economic importance, species that are subject to treaties or international convention to which the United States is a party, and anadromous fish;

(2) such enhancement is designed to benefit species that have been listed as threatened or endangered by the Secretary of the Interior under the terms of the Endangered Species Act, as amended (16 U.S.C. 1531, et seq.), or

(3) such activities are located on lands managed as a national wildlife refuge.

When benefits of enhancement do not qualify under the preceding sentence, 25 percent of such first costs of enhancement shall be provided by non-Federal interests under a schedule of reimbursement determined by the Secretary. Not more than 80 percent of the non-Federal share of such first costs may be satisfied through in-kind contributions, including facilities, supplies, and services that are necessary to carry out the enhancement project. The non-Federal share of operation, maintenance, and rehabilitation of activities to enhance fish and wildlife resources shall be 25 percent.

EMP OPERATING APPROACH

2006 marks the 20th anniversary of the Environmental Management Program (EMP). During that time, the Program pioneered many new ideas to help deliver efficient and effective natural resource programs to the Upper Mississippi River System (UMRS). These included the creation of an effective partnership of five states, five federal agencies, and numerous NGOs; a network of six field stations monitoring the natural resources of the UMRS; and the administrative structure to encourage river managers to use both new and proven environmental restoration techniques.

EMP has a history of identifying and dealing with both natural resource and administrative challenges. The next several years represent new opportunities and challenges as Congress considers authorization of the Navigation and Environmental Sustainability Program (NESP), possible integration or merger of EMP with NESP, and changing standards for program management and execution.

We will continue to learn from both the history of EMP and experience of other programs. Charting a course for EMP over the next several years is important to the continued success of the Program. EMP will focus on the key elements of partnership, regional administration and coordination, LTRMP, and HREPs.

The fundamental focus of EMP will not change, however the way we deliver our services must change and adapt. This will include:

- further refinements in regional coordination and management,
- refinement of program goals and objectives,
- increased public outreach efforts,
- development and use of tools such as the regional HREP database and HREP Handbook,
- exploring new delivery mechanisms for contracting,
- continued refinement of the interface between LTRMP and the HREP program components, and
- scientific and management application of LTRMP information and data.

The focus of these efforts must benefit the resources of the UMRS through efficient and effective management.