Upper Mississippi River Basin Association

177th Quarterly Meeting

February 24, 2026

Virtual

Agenda with
Background and Supporting Materials

UMRBA
Upper Mississippi River Basin Association

177th Quarterly Meeting
Virtual

Agenda
February 24, 2026

Time	Topic	Page	Presenter
9:00 a.m.	Call to Order and Introductions		Wade Strickland, Wisconsin DNR *UMRBA Board Chair*
9:10	Approval of Minutes of November 18, 2025 Meeting	A1-10	
9:20	Executive Director's Report	B1-17	Kirsten Wallace, UMRBA
10:00	Interbasin Diversion Consultation Annual Reporting	C1-5	UMRBA Board Members
10:10	Federal Ecosystem Program Planning ▪ Upper Mississippi River Restoration Program ▪ Navigation and Ecosystem Sustainability Program	D1-10	Marshall Plumley, USACE
10:40 a.m.	Future of FEMA: Potential Implications for Interstate Flood Planning on the Upper Mississippi River System	E1-15	TBD, Association of State Floodplain Managers and Chuck Chaitovitz, U.S. Chamber of Commerce
11:10	Break		
11:30	Mississippi River Watershed Partnership	F1-34	Kim Lutz, America's Watershed Initiative
12:00 noon	Lunch		
1:00 p.m.	State Policy Options for Risk Reduction and Resilience in the Mississippi River Watershed	G1-17	Kim Tyrell and Tom Klein, National Conference of State Legislators
1:30	Federal Agency Fiscal and Organizational Reports	H1-3	UMRBA Federal Liaisons
2:45	Administrative Issues ▪ Election of Officers ▪ Future Meeting Schedule	I1-8	Wade Strickland, Wisconsin DNR
3:00 p.m.	Adjourn		

Upper Mississippi River
Quarterly Meetings

Attachment A

Minutes

Draft Minutes of the
176th Quarterly Meeting of the
Upper Mississippi River Basin Association

November 18, 2025
Virtual

Wade Strickland called the meeting to order at 10:00 a.m. on November 18, 2025.

Participants were as follows:

UMRBA Representatives and Alternates

Rick Pohlman	Illinois Department of Natural Resources
Jake Hansen	Iowa Department of Agriculture and Land Stewardship
Kirk Hansen	Iowa Department of Natural Resources
Grant Wilson	Minnesota Department of Natural Resources
Matt Vitello	Missouri Department of Conservation
Chris Wieberg	Missouri Department of Natural Resources
Erin Fanning	Missouri Department of Natural Resources
Chris Klenklen	Missouri Department of Agriculture
Levi Woods	Missouri Department of Transportation
Wade Strickland	Wisconsin Department of Natural Resources

Federal UMRBA Liaisons:

Brian Chewning	U.S. Army Corps of Engineers, MVD
Travis Black	U.S. Department of Transportation, MARAD
Sabrina Chandler	U.S. Fish and Wildlife Service
JC Nelson	U.S. Geological Survey, Midcontinent Region

Others In Attendance:

Chad Craycraft	Illinois Department of Natural Resources
Terra McParland	Illinois Department of Natural Resources
John Seitz	Illinois Department of Natural Resources
Ken Lubinski	Illinois Water Resources Center
Ryan Hupfled	Iowa Department of Natural Resources
Caleb Whitehouse	Iowa Department of Transportation
Liz Scherber	Minnesota Department of Natural Resources
Neil Rude	Minnesota Department of Natural Resources
Ken Henderson	Missouri Department of Agriculture

Dru Buntin	Missouri Department of Natural Resources
Erin Fanning	Missouri Department of Natural Resources
Billy Hackett	Missouri Department of Natural Resources
Chrystel Hillier	Missouri Department of Natural Resources
Colby Thrash	Missouri Department of Natural Resources
Michael Weller	Missouri Department of Natural Resources
Noah Cadwell	Missouri Department of Natural Resources
Sam Clary	Missouri Department of Conservation
Molly Sobotka	Missouri Department of Conservation
Vanessa Perry	Wisconsin Department of Natural Resources
Sammi Boyd	Wisconsin Department of Natural Resources
Partrick Kelly	Wisconsin Department of Natural Resources
Chris Olds	Wisconsin Department of Natural Resources
Kat McCain	U.S. Army Corps of Engineers, Headquarters
Kelly Keefe	U.S. Army Corps of Engineers, MVD
Thatch Shepard	U.S. Army Corps of Engineers, MVD
Jim Cole	U.S. Army Corps of Engineers, MVD
Samantha Thompson	U.S. Army Corps of Engineers, MVD
Kat McCain	U.S. Army Corps of Engineers, MVD
Karl Jansen	U.S. Army Corps of Engineers, MVP
Jill Bathke	U.S. Army Corps of Engineers, MVP
Brad Houzenga	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Davi Michl	U.S. Army Corps of Engineers, MVR
Shawn Sullivan	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
Joze Lopez	U.S. Army Corps of Engineers, MVS
Shane Simmons	U.S. Army Corps of Engineers, MVS
Steve Winter	U.S. Fish and Wildlife Service, UMR Refuges
Matt Mangan	U.S. Fish and Wildlife Service, Ecological Services
Jon Amberg	U.S. Geological Survey, UMESC
Jim Fischer	U.S. Geological Survey, UMESC
Jeff Houser	U.S. Geological Survey, UMESC
John Delaney	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Andrew Strassman	U.S. Geological Survey, UMESC
David Pratt	U.S. Environmental Protection Agency
Jared Schmalstieg	U.S. Environmental Protection Agency, Region 7
Amy Shields	U.S. Environmental Protection Agency, Region 7
Madeleine Castle	Senator Josh Hawley Office
Kim Lutz	America's Watershed Initiative
Brent Newman	Audubon
Alicia Vasto	Audubon
Alexandra Campbell-Ferrari	Center for Water Security and Cooperation

Nancy Guyton	Friends of the Mississippi River
Ken Lubinski	Illinois Water Resources Center
Angela Grett	Ingram Marine Group
Barry Draskowski	Izaak Walton League
Mike Klingner	Klingner and Associates
Susan Russell Freeman	League of Women Voters, Upper Mississippi River Region
Karl Jefferson	LiUNA
Madeline Heim	Milwaukee Journal Sentinel
Colin Wellenkamp	Mississippi River Cities and Towns Initiative
Nicole Kach	National Waterways Conference
Nancy Guyton	Neighbors of the Mississippi
Kelly McGinnis	One Mississippi
Jill Crafton	Riley-Purgatory-Bluff Creek Watershed District
Christine Favilla	Sierra Club, Illinois Chapter
Andrew Stephenson	The Nature Conservancy
Aaron Field	Theodore Roosevelt Conservation Partnership
Melissa Kenney	University of Minnesota
Kirsten Wallace	Upper Mississippi River Basin Association
Brian Stenquist	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Tyler Leske	Upper Mississippi River Basin Association
Henry Hansen	Upper Mississippi River Basin Association
Natalie Lenzen	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

Minutes

Grant Wilson moved and Rick Pohlman seconded a motion to approve the draft minutes of the August 5, 2025 meeting. The motion carried unanimously.

Executive Director's Report

Kirsten Wallace pointed to the Executive Director's report in the agenda packet for a summary of the Association's work efforts since the August 2025 meeting.

Wallace reported the following Association personnel changes:

- Lauren Salvato, Ken Peterson, and Sam Hund departed UMRBA. The latter two departures were a result of limited reimbursable funds to support UMRBA's hazardous spills planning.
- Sadie Nueman was appointed to serve as Acting Water Quantity Program Director.
- Josh Wolf was appointed to serve as Acting Water Quality Program Director.

Wallace thanked Nueman and Wolf for stepping into new roles and performing so well.

Wallace also expressed appreciation to Mark Ellis for assuming project coordinator for the Exchange Network Grant as well as for his supervision of the geospatial program team, particularly when funding has been limited and unknown.

Wallace elaborated on meetings with leaders of the Department of the Interior, USFWS, USGS, USEPA, and USACE. Wallace acknowledged, and expressed appreciation for, the participation of members of the Agricultural Nutrient Policy Council in meetings with USEPA and the Department of the Interior; the latter being in support of the UMRR long term resource monitoring.

UMRBA continues to coordinate a one-year project to implement the fixed site monitoring component of its UMR Interstate Water Quality Monitoring Plan. Monthly sampling began October 2025, continuing as planned through the federal government shutdown. Wallace applauded the work of Wolf and the U.S. Environmental Protection Agency and the state agency personnel to coordinate their abilities to maintain their abilities to implement their roles in the monitoring. This includes continuing to operates laboratories. In particular, Wallace pointed out that the Illinois Environmental Protection Agency volunteered to conduct the sampling that the U.S. Environmental Protection Agency would not be able to perform during the shutdown.

Wallace pointed to the UMRBA financial statements for July 2025 through September 2025 as provided on pages B-6 to B-14 of the agenda packet. Chris Wieberg moved and Rick Pohlman seconded the motion to accept the Association's budget report and balance sheet as included in the agenda packet. The motion was approved unanimously.

Water Availability

UMRBA Water Availability Project

Sadie Neuman reported on the status and future plans for implementing a hydrologic flow analysis for the Upper Mississippi River Basin, including project team members, project objectives, and anticipated project timeline.

The project objectives are to:

1. Estimate the existing hydrologic flows from the HUC-6 basin watersheds into the Upper Mississippi River System navigation channel
2. Explore how diversions and consumptive uses might affect the hydrologic flows from the basin watersheds into the Upper Mississippi River System navigation channel
3. Determine the thresholds of discharge in various reaches at which negative impacts may occur to the Upper Mississippi River System navigation channel (including duration and frequency of occurrence)
4. Scope follow-on research goals for assessing the implications of limited water availability for river products and services beyond the Upper Mississippi River System navigation channel
5. Convene interstate conversations among Illinois, Iowa, Minnesota, Missouri, and Wisconsin technical experts and agency leaders to:
    - Evaluate the research findings
    - Related the research findings to management and policy decision making

— Recommend principles and policies for cooperative and effectively managing water resources of the Upper Mississippi River Basin

The University of Minnesota is a partner in this project, developing the models and information in project objectives one, two, and three. Neuman reviewed initial results provided by the University of Minnesota and provided a high level summary of the observations and input received from the technical project team members with respect to the initial results.

Proposal for Mississippi River Interstate Compact

Mississippi River Cities and Towns Initiative

Colin Wellenkamp reported on the Mississippi River Cities and Towns Initiative's (MRCTI's) efforts to a) support Congress' efforts to pass legislation developing a disaster mitigation fund and b) compel the Mississippi River border states to enter into a interstate water compact.

Center for Water Security and Cooperation

Alexandra Campbell-Ferrari provided an overview of the Center for Water Security and Cooperation (CWSC) and its efforts to develop a multi-state water compact for the Mississippi River border states. Campbell-Ferrari shared the CWSC's efforts to build a network of local and Tribal leaders who share a commitment to watershed-level collaboration, named the Mighty Mississippi Leaders Network. Campbell-Ferrari suggested that this Network will help persuade state Governor offices to issue an executive order or other means for engaging in interstate water security agreements.

Pointing to the geographic scope of the 10 states bordering the Mississippi River, Chris Wieberg underscored the importance of flows from the Missouri River Basin and encouraged efforts to expand the geographic scope.

Navigation and Ecosystem Sustainability Program

Brad Houzenga announced that Marshall Plumley will serve as the Program Manager for the Navigation and Ecosystem Sustainability Program (NESP) for the foreseeable future while also maintaining the role of Program Manager for the Upper Mississippi River Restoration (UMRR) Program.

L&D 25 1,200-Foot Chamber Project

Jose Lopez provided a status update of the NESP project to construct a second, 1,200-foot chamber at L&D 25. Lopez described the phases of construction, the status in implementing those phases, and outlooks for program implementation per fiscal year quarter.

A new lock wall was completed in March 2024. Fabrication of bulkheads is progressing on schedule. The St. Louis District plans to award a contract for lock foundation and site prep likely in spring 2026, but no later than September 2026. The last phase of the project is the construction of the main lock. The District is employing its final reviews of the design prior to initiating the solicitation phase. The Corps has approved the project's acquisition plan, which is contingent on the St. Louis District receiving an allocation of $250 million in FY 2027.

In response to a question from Christine Favailla, Lopez confirmed that USACE completed the environmental compliance documents for the L&D 25 project, including purchasing mitigation credits related to the direct impacts of the project construction.

Floodplain Reach Ecosystem Planning

U.S. Army Corps of Engineers Report

Jill Bathke described the NESP reach planning as a collaborative approach for envisioning and outlining a road map for where NESP projects and adaptive management will be planned and completed. NESP reach planning will offer watershed needs and goals that will inform the priorities.

Bathke reported that the Corps convened multiple meetings and workshops in each of the four floodplain reaches. The workshops were held in-person and involved nearly 30 federal and state agencies, local governments, and non-governmental organizations. Through the workshops, partners identified discrete locations for consideration as priority restoration areas, which are currently being reviewed, refined, summarized, and analyzed. The Corps is currently reach plans, which are anticipated to be shared with partners for review.

Bathke reported on the results of a Mississippi River and Illinois River Experience Tool, which is a survey mechanism to receive stakeholder input about the problems in the river and their views on how investment could improve the river's ecological health. So far, there have been 182 submissions of input to the Tool. The intention is to use the information from the submissions to inform NESP science efforts and project planning.

In response to a question from Wade Strickland, Bathke will use the input received through the Mississippi River and Illinois River Experience Tool in the development of NESP Floodplain Reach Plans and in scoping individual projects as well as future reach plans.

Public Engagement Workshops

Brent Newman provided an overview of a series of three public engagement workshops hosted by Audubon in summer 2025 regarding the NESP floodplain reach ecological planning. A primary purpose was to provide affected communities an opportunity to inform reach planning and future investments in their respective communities. In particular, Audubon's objectives for the public engagement sessions were to:

1. Widen the net for public input into NESP reach planning
2. Gain a sense of local communities' knowledge and aspirations regarding NESP and other USACE programs on the Upper Mississippi River System
3. Offer several different "avenues of interest" for residents who would like to stay engaged and learn more about NESP reach planning and operations and issues generally affecting management of the Upper Mississippi River System
4. Share the NESP River Experiences Tool

Each meeting used the same set of guided discussion prompts, including questions related to participants' interest in the Mississippi River, what they believe is working well, what they would want to protect about the Mississippi River, and actions they believe would improve the Mississippi River.

Newman said the engagement sessions received strong interest from the public, with participants generally underscoring the value of the opportunity and requesting more opportunities in the future. Newman summarized common input related to fish and wildlife habitat, flooding, navigation, recreation, and people and communities. A few highlights include species and habitat diversity, sedimentation, invasive species, high frequent areas of flooding (bottlenecks), beneficial reuse of dredged material, and public engagement and education.

Newman acknowledged the contributions and resources of other partner non-governmental organizations in convening the sessions and state and federal agencies, including UMRBA, for their time in informing the agenda and participating in the public engagement sessions.

UMRBA Advocacy

Kirsten Wallace reported that UMRBA is planning to advocate for $350 million in FY 2027 appropriations for NESP, including $250 million for the 1,200-foot lock at L&D 25 and $100 million for ecosystem integrity improvements.

Flood Risk Reduction and Resilience Planning

Lower Missouri River Flood Risk Reduction and Resiliency Study

System Plan

Missouri DNR personnel Erin Fanning, Billy Hackett, Chrystal Hillier, Colby Thrash, and Michael Weller provided a progress update on the Lower Missouri River Flood Risk Reduction and Resiliency Study (LOMO Study).

Erin Fanning recalled the origins and purpose of the LOMO Study. In response to the 2019 flood event, through Executive Order, Missouri Governor Mike Parson established the Flood Recovery Advisory Working Group, which issued the following recommendations:

1. States should have a leadership role in implementing improvements to flood protection infrastructure and management of major river systems
2. Flood protection programs should prioritize long term and systemic solutions
3. Flood recovery programs should offer timely, common-sense solutions
4. Investment in flood and navigation infrastructure
5. The State of Missouri should develop flood recovery strategies

Fanning said state and Congressional leadership quickly responded to the recommendations by securing a new authority for the LOMO Study. The purpose of the study is to create a vision for a more resilient future on the Lower Missouri River with a focus on flood risk management and evaluate reach and system

specific alternatives and provide recommendations of future spin-off studies and proposed implementation approaches.

Fanning announced that the LOMO Study partners have drafted the Lower Missouri River Flood Risk and Resiliency Comprehensive Study. The study partners anticipate releasing the draft report in the near future with a request for input and a series of public meetings. Missouri DNR is planning to coordinate with its state Congressional delegation to secure authorities in WRDA 2026 related to the spin-off studies.

Spin-Off Studies

Fanning explained that four spin-off studies began prior to having completed the system plan, providing in-depth analyses to formulate local, problem-specific solutions. Missouri DNR has served as the non-federal sponsor, coordinating potential implementation sponsors and leveraging state funds, technical expertise, and communications and logistical capacity.

Fanning underscored that success only occurs if consensus is built among impacted stakeholders. Early, extensive, frequent, and intentional stakeholder engagement with impacted stakeholders is necessary to achieve solutions. The process for stakeholder engagement must involve a feedback loop with positive intention. Engagement should begin without a plan but with clarity for what is possible and not feasible in the project process and scope.

The Missouri DNR personnel team provided information about challenges, lessons, and project details related to spin-off studies at Jefferson City, Brunswick, Holt County, and Atchison County.

Michael Weller listed a set of implementation challenges experienced through the LOMO study process and policy recommendations to improve or address the challenges, as follows:

Challenges:

1. Feasibility studies result in unimplementable or unaffordable projects
2. USACE has a tendency to scope larger projects than communities can implement
3. A sufficiently high benefit-to-cost ratio is difficult to achieve in rural areas
4. Costs are high for federal levees
5. Projects need local support to be implemented
6. One person's flood risk improvement in another person's induced flood impact

Policy recommendations:

1. Develop a new continuing authorities program (CAP) specifically for levee setbacks not associated with flood damage repairs
2. Create a program to help potential sponsors with repair, replacement, and rehabilitation costs
3. Allow P.L. 84-99 to repair levees better than they were
4. Enable USACE to make flood resiliency improvements to non-federal levees in the P.L. 84-99 program without making the entirety a federal levee

5. Make it standard practice to include comprehensive benefits in benefit-to-cost ratio calculations

Chris Wieberg acknowledged the significant amount of staff personnel invested in the LOMO study and recognized that similar levels of effort would be required in the Upper Mississippi River System Flood Risk Reduction and Resiliency Study. Wieberg stated his assessment that the investment is worthwhile given the positive outcomes associated with the system plan and spin-off studies.

Upper Mississippi River System Study: Long Term Hydrologic Projections and Engaging Hard-to-Reach Communities

Melissa Kenney said that, in an effort to support regional resilience through projects focused on community involvement, NOAA funded pilot projects in seven regions across the country. In the Upper Mississippi River Basin, NOAA partnered with the University of Minnesota and UMRBA to estimate hydrologic risk of future floods and droughts and resilience opportunities for at-risk communities in the Upper Mississippi River Basin. Project components included hydrologic modeling, stakeholder engagement, community conversations, and community-led approaches to address flood risk and enhance flood resilience.

Kenney provided an overview of the modeling process and an example of the analysis of results. The University of Minnesota is preparing to submit the data and an associated paper with more comprehensive analyses for publication in spring 2026. Kenney concluded that this study should form the basis of future work and more detailed site-scale investigations, using more climate projections with different downscaling methods and higher spatial resolution.

Kenney explained that, as part of the project, the project research combines usability, visualization, and equity to improve decision support products, including products supporting hard-to-reach communities.

The University of Minnesota created a visualization of the information supply chain framework and developed actionable recommendations for reaching hard-to-reach communities, as follows:

1. Hazard and weather services should co-design warnings and preparedness messages with communities, deliver them through trusted insiders, and embed outreach in familiar settings such as schools, churches, shelters, and workplaces
2. Hazard and weather services should design technology systems that are co-created with users, integrated into daily workflows, and complemented by offline support to ensure access for all
3. Hazard and weather services should establish multi-sector coalitions that pool expertise, resources, and credibility to coordinate hazard communication and resource distribution
4. Hazard and weather services should design communication strategies that proactively include socially vulnerable and hard-to-reach groups by tailoring content, addressing layered barriers, and embedding services in accessible spaces
5. Hazard and weather services should decentralize communication and preparedness by delivering resources directly into neighborhoods, workplaces, and community hubs
6. Hazard and weather services should design communication strategies that explicitly address social and economic conditions that shape the ability to act on warnings

Administrative Matters

Future Meeting Schedule

February 2026 to be held virtually

- UMRBA Quarterly Meeting – February 24
- UMRR Coordinating Committee quarterly meeting – February 25

May 2026 to be held in the Twin Cities Metro Area

- UMRBA Quarterly Meeting – May 19
- UMRR Coordinating Committee quarterly meeting – May 20

August 2026 in St. Louis Metro Area

- UMRBA Quarterly Meeting – August 4
- UMRR Coordinating Committee quarterly meeting – August 5

With no further business, the meeting adjourned at 2:48 p.m.

Upper Mississippi River
Quarterly Meetings

Attachment B

Executive Director's Report

Executive Director's Report
February 2026

Administration

UMRBA Nondiscrimination Policies and Procedures

UMRBA has created policies and documents for ensuring that UMRBA's programs and policies fully comply with federal government nondiscrimination laws. UMRBA has also created routine practices for public engagement and communication, as provided in the draft UMRBA Public Participation Plan and Standard Operating Procedures for UMRBA Quarterly Meetings and Other Public Meetings. On January 8, 2026, UMRBA disseminated an email to its broadest distribution list seeking input on these new documents by March 6, 2026. UMRBA is also asking for input on a Language Accessibility Plan and an Accessibility Plan for Hearing, Visual, Speech, and Other Physical Disabilities.

UMRBA published on its website a new Nondiscrimination Notice and Grievance Procedures. The policies and procedures are available on UMRBA's website at https://umrba.org/nondiscrimination-notice.

Advocacy

Gulf Hypoxia Program

On December 2, 2025, UMRBA joined 63 organizations, representing agricultural, navigation, and conservation organizations, across the Mississippi River Basin, in a letter to Congress requesting FY 2027 funding for the Gulf Hypoxia Program. The letter is provided on pages B-6 to B-8 of the agenda packet.

With funding through the U.S. Environmental Protection Agency, the Gulf Hypoxia Program supports collaborations among state governments, tribal governments, and agricultural, municipal, conservation, and other stakeholders in their collective, voluntary efforts to reduce nutrient runoff from nonpoint sources in ways that also have many supplemental national benefits such as waterways transportation reliability, water storage, and habitat.

USACE Project Partnership Agreements

On January 12, 2026, UMRBA submitted to Congress a letting requesting to reform the liability terms of the U.S. Army Corps of Engineers' (USACE) project partnership agreements (PPAs). UMRBA is requesting that Congress direct the reform through authorization language in WRDA 2026. The letter is provided on pages B-9 to B-10 of the agenda packet.

The key impediments under the existing terms are the requirements that the non-federal sponsor to assume 1) complete liability for constructed projects (except for when fault or negligence is proven) and 2) operations, maintenance, repair, replacement, and rehabilitation (OMRR&R) in perpetuity.

FY 2026 USACE Work Plan Priorities

Following the enactment of the FY 2026 energy and water spending measure, on February 3, 2026, UMRBA submitted a letter to the ASA(CW) requesting allocations through the discretionary appropriations. The letter is provided on pages B-11 to B-12 of the agenda packet.

In the letter, UMRBA respectfully requested continued investment in the Upper Mississippi River System Flow Frequency Study and a new study start for the Upper Mississippi River System Flood Risk Reduction and Resiliency Study as well as any additional funding to advance projects under the Navigation and Ecosystem Sustainability Program (NESP). UMRBA also applauded the President's inclusion of $52 million for the Upper Mississippi River Restoration Program in the FY 2026 budget request that was supported by Congress and provided in the FY 2026 appropriations measure.

Commercial Navigation

National Waterways Foundation

Kirsten Wallace serves as a Trustee of the National Waterways Foundation, and participated in its December 8, 2025 meeting in Nashville and February 3, 2026 meeting in Washington, D.C. In addition to routine business, the Foundation discussed ongoing projects related to workforce development, modal comparisons, and state-specific economic value of river transportation, as well as future research opportunities.

On December 17, 2024, the Foundation published a study that it commissioned evaluating employment by inland waterways operators. A video and brochure that highlight the advantages of working in the inland waterways industry were also developed in conjunction with the study and will be provided to school guidance counselors around the country. The report, video, and brochure are available here:

- Report: https://www.nationalwaterwaysfoundation.org/file/78/Inland%20Waterways%20Workforce%20Study%20Final%20Report.pdf
- Video: https://www.nationalwaterwaysfoundation.org/news-and-updates/news/article/2025/07/employment-opportunities-within-the-inland-waterways-industry
- Brochure: https://www.nationalwaterwaysfoundation.org/file/80/Employment%20in%20the%20Inland%20Waterways%20FINAL%20brochure.pdf

Waterways Council, Inc.

The Waterways Council held its Annual Waterways Symposium on December 8-9, 2025 in Nashville and its Capitol Hill Fly-In on February 3-4, 2024 in Washington, D.C. The agendas included Waterways Council's priorities and accomplishments and political and financial briefings.

Ecosystem Health

Policy and Programmatic Interagency Coordination

UMRR Coordinating Committee Meeting

The UMRR Coordinating Committee met virtually on November 19, 2025. The agenda involved programmatic briefings regarding accomplishments and progress related to habitat rehabilitation and enhancement projects (HREPs), long term resource monitoring, and communications. Following the enactment of the FY 2025 Continuing Resolution Authority, in which the Corps construction program was nearly reduced by half, the Administration allocated $13.5 million to UMRR, requiring it to halt most programmatic work and prioritizing active HREP construction contracts and LTRM base

monitoring. UMRR Program Manager described the implications to the program's implementation in FY 2025 as well as the uncertainty facing the program during the FY 2026 continuing resolution authority, which is requiring the program to assume full-year appropriations at the FY 2025 enacted level – i.e., following the "least of" rule.

NESP Coordinating Committee Meetings

The Navigation and Ecosystem Sustainability Program (NESP) Coordinating Committee convened a quarterly meeting on December 10, 2025. The meeting was held virtually. The quarterly meeting included reports on routine program management as well as focused briefings on reach-based planning and ecosystem and navigation project implementation. In addition to this public-facing session, the Committee also convenes monthly meetings to advance programmatic priorities. Recent discussions have focused mostly on reach planning.

Programmatic Strategic Planning

UMRR Long Term Resource Monitoring Planning

As explained earlier, UMRR federal and state agencies were faced with significant uncertainty as they approached decision timelines related to implementing long term resource monitoring in 2026. UMRBA convened and facilitated the UMRR partnership's evaluation of the fiscal context and agency's personnel management needs and deliberations about how to implement long term resource monitoring in 2026 as a partnership. The UMRR Coordinating Committee met on December 11, 2025, December 17, 2025, and January 12, 2026. Throughout the last quarter, the UMRR Coordinating Committee members, agency leaders, and LTRM field station leaders coordinated extensively on an ongoing basis to align their respective monitoring approaches into a programmatic strategy.

Hazardous Spills Emergency Management

Oil Pollution Act (OPA) Planning and Mapping

UMRBA incorporated updates to the Inland Sensitivity Atlas (ISA) for Minnesota and Wisconsin into the regional database as well as updates received from the Great Lakes Commission (GLC) for Indiana, Ohio, and bordering counties in Kentucky. The new data was delivered to USEPA on February 9, 2026.

UMRBA staff participated in monthly Mapping Group meetings on December 1, 2025 and February 2, 2026. The monthly meeting for January 2026 was canceled.

UMRBA supported spill response planning in the Minneapolis/St. Paul Sub-area, including by updating the contact information associated with the Sub-area contingency plan. On February 2, 2026, staff took part in a planning call for a functional exercise simulating a fuel release to the St. Croix River, tentatively scheduled for May 11-12, 2025.

Upper Mississippi River Hazardous Spills Coordination Group (UMR Spills Group)

UMRBA staff hosted the UMR Spills Group virtual fall meeting on December 18, 2025. Topics included impacts of the fall 2025 federal government shutdown, a recap of 2025 planning work, recent spills, and potential 2026 work. Participants expressed interest in developing response plans for UMR Pools 17-18 and the lower Minnesota River.

The group plans to hold its spring meeting on April 21, 2026. The location has not yet been chosen.

Water Quality

Interstate Water Quality Monitoring Program

UMRBA is coordinating a one-year project to implement the fixed site monitoring component of its UMR Interstate Water Quality Monitoring Plan. Monthly sampling began in October 2025. UMRBA is convening regular planning sessions among the state agency staff involved in implementing the fixed site monitoring.

USEPA Region 5 Water Quality Managers' Meeting

The USEPA Region 5 Water Quality Managers' Meeting was held December 2-4, 2025 in Chicago, Illinois. The annual meeting allows managers the opportunity to collaborate, share progress from the 2025 year, and recommend regional-level initiatives. Select topics discussed were state- and Region 5-specific programmatic updates, monitoring initiative proposals, and the water quality-related research and monitoring efforts of data centers.

Hypoxia Task Force Coordinating Committee

UMRBA staff participated in meetings of the Hypoxia Task Force, convened by USEPA on February 5, 2026 in Washington, D.C. USEPA facilitated discussion regarding various the progress, products, and future direction of the Hypoxia Taks Force Coordinating Committee as well as the values realized from the Gulf Hypoxia Program.

In conjunction, UMRBA participated in meetings of the Hypoxia Task Force Coordinating Committee and SERA-46 on February 4, 2026.

Integrated River Projects

Water Resources Database Development

Per resources from the USEPA Exchange Network grant, UMRBA continues to develop a water resources database to house water quantity and water quality data that will support interstate collaboration efforts. The two central purposes of the project are to build the infrastructure needed to house UMRBA's water resource datasets and to increase the Association's future capacity for supporting interstate data collection and data sharing efforts. UMRBA staff are currently working with the contractor to build out the database as well as a web-based app to support the states' input of water quality monitoring data.

Communications and Partnership Collaboration

Meetings, Events, and Partnership Collaborations

UMRBA staff participated in national and regional collaborations through the following forums:

- NatCap TEEMs (Natural Capital Project: Earth-Economy Modelers) Research Center Watershed Democracy Dialogue meeting on December 3, 2025
- Minnesota DNR Roundtable on December 9, 2026 in Brooklyn Center, Minnesota

- University of Illinois Urbana–Champaign Stakeholder Working Group meeting on January 16, 2026 in Urbana, Illinois through a hybrid forum regarding the development of the Climate–Event Framework For Analysis of Macro–Environmental Systems (C–FrAMES)
- Agricultural Nutrient Policy Council Phosphorus Pools and Fluxes Research Updates and Roundtable Discussion on Friday, February 6 in Washington, D.C.

Financial and Administrative Report

UMRBA Financial Report

Attached as page B-13 is UMRBA Treasurer Jason Tidemann's statement regarding his review of UMRBA's financial statement for the period of October 1, 2025 to December 31, 2025.

Attached as pages B-14 to B-18 are UMRBA's 2026 budget report and balance sheet. As of February 9, 2026, ordinary income for FY 2026 totaled $857,197.96 and expenses totaled $812,299.36 for net ordinary income of $44,898.60. As of this date, UMRBA's cash assets totaled $161,795.80.

December 2, 2025

The Honorable Susan Collins, Chair
The Honorable Patty Murray, Ranking Member
U.S. Senate
Appropriations Committee
S-128, The Capitol
Washington, D.C. 20510-6025

The Honorable Tom Cole, Chair
The Honorable Rosa DeLauro, Ranking Member
U.S. House of Representatives
Appropriations Committee
H-307, The Capitol
Washington, D.C. 20515

The Honorable Lisa Murkowski, Chair
The Honorable Jeff Merkley, Ranking Member
U.S. Senate
Appropriations Subcommittee on Interior, Environment, and Related Agencies
S-125, The Capitol
Washington, D.C. 20510-6025

The Honorable Mike Simpson, Chair
The Honorable Chellie Pingree, Ranking Member
U.S. House of Representatives
Appropriations Subcommittee on Interior, Environment, and Related Agencies
2007 Rayburn House Office Building
Washington, D.C. 20515

Dear Chair and Ranking Member:

The undersigned organizations collectively represent a broad array of state governments and agricultural, navigation, and conservation interests, aligned in support of the Gulf Hypoxia Program, the Hypoxia Task Force partnership, and the states' nutrient reduction strategies. Together, we are writing to respectfully request ample funding in FY 2027 for the Gulf Hypoxia Program.

The Gulf Hypoxia Program advances the implementation of nutrient reduction solutions, including the construction of conservation projects, monitoring, and additional strategic planning. The state nutrient reduction strategies are used to inform the allocation of investments. Because of the extensive involvement of farmers, municipalities, conservation interests, and scientists, we are pleased to convey our shared position that the state nutrient reduction strategies provide the optimal approaches for allocating the Gulf Hypoxia Program resources in the best interests of the nation.

The undersigned organizations believe that the state nutrient reduction strategies are designed to improve the health, function, and viability of the Mississippi River basin's waterbodies. While important strides in conservation practices and point and nonpoint source loading reductions have been achieved over the past two decades, attaining the goals we have collectively set for reducing nutrient loading through the Gulf Hypoxia Action Plan will require acceleration of its implementation.

The Gulf Hypoxia Program supports collaborations among state governments, tribal governments, and agricultural, municipal, conservation, and other stakeholders, including through the Hypoxia Task Force. Together, the undersigned organizations believe that the Hypoxia Task Force's state-federal infrastructure allows for multi-disciplinary collaborations to generate comprehensive approaches for reducing nutrient runoff from nonpoint sources in ways that also have many supplemental national benefits such as waterways transportation reliability, water storage, and habitat.

We thank you for your consideration of our request and hope that you will support the Gulf Hypoxia Program as a priority in the FY 2027 interior appropriation measure.

Sincerely,

Agricultural Drainage Management Commission
American Farm Bureau Federation
American Farmland Trust
American Society of Agronomy
American Soybean Association
America's Watershed Initiative
Applied Ecological Institute, Inc.
Association of Illinois Soil and Water Conservation Districts
Clean Wisconsin
Crop Science Society of America
Ducks Unlimited
Environmental Defenders of McHenry County
Freshwater Society
Friends of the Fox River
Friends of the Mississippi River
Green Lands Blue Waters
Heartland Co-Op
Illinois Environmental Council
Illinois Land Improvement Contractors Association
Illinois Soybean Growers
Indiana Association of Soil and Water Conservation Districts
Indiana Sportsmen's Roundtable
Iowa Environmental Council
Iowa Farm Bureau Federation
Iowa Wildlife Federation
Izaak Walton League of America
Izaak Walton League of America – Bill Cook Chapter (Stevens Point, WI)
Izaak Walton League of America – Chapter 1 (Chicago, IL)
Izaak Walton League of America – Chapter 85 (Havana, IL)
Izaak Walton League of America – Des Plaines Chapter
Izaak Walton League of America – Geneseo Chapter
Izaak Walton League of America – Illinois Division
Izaak Walton League of America – Indiana Division
Izaak Walton League of America – Iowa Division
Izaak Walton League of America – Minnesota Division
Izaak Walton League of America – Nebraska Division
Izaak Walton League of America – Ohio Division
Izaak Walton League of America – Wisconsin Division
Louisiana Hypoxia Working Group
Minnesota Farm Bureau Federation
Minnesota Agricultural Water Resource Center
Missouri Association of Soil and Water Conservation Districts
National Association of Conservation Districts
National Corn Growers Association
National Milk Producers Federation
National Pork Producers Council

National Wildlife Foundation
Ohio AgriBusiness Association
Ohio Corn and Wheat Growers Association
Ohio Pork Council
One Mississippi
Prairie State Conservation Coalition
River Action
Soil and Water Conservation Society
Soil Science Society of America
The Fertilizer Institute
The Nature Conservancy
Theodore Roosevelt Conservation Partnership
The Water Collaborative of Greater New Orleans
Trout Unlimited
Tulane ByWater Institute
Upper Mississippi River Basin Association
United Egg Producers

cc: The Honorable Russell Vought, Director, Office of Management and Budget
The Honorable Lee Zeldin, Administrator, U.S. Environmental Protection Agency

January 12, 2026

The Honorable Sam Graves, Chair
The Honorable Rick Larsen, Ranking Member
U.S. House of Representatives
Transportation and Infrastructure Committee
2165 Rayburn House Office Building
Washington, D.C. 20515-6256

The Honorable Shelley Moore Capito, Chair
The Honorable Sheldon Whitehouse, Ranking Member
U.S. Senate
Environment and Public Works Committee
410 Dirksen Senate Office Building
Washington, D.C. 20510-6175

The Honorable Mike Collins, Chair
The Honorable Frederica Wilson, Ranking Member
U.S. House of Representatives
Transportation and Infrastructure Committee
Water Resources and Environment Subcommittee
2165 Rayburn House Office Building
Washington, D.C. 20515-6256

The Honorable Kevin Cramer, Chair
The Honorable Angela Alsobrooks, Ranking Member
U.S. Senate
Environment and Public Works Committee
Transportation and Infrastructure Subcommittee
410 Dirksen Senate Office Building
Washington, D.C. 20510-6175

Dear Representatives Graves, Larsen, Collins, and Wilson and Senators Moore Capito, Whitehouse, Cramer, and Alsobrooks:

We are very pleased to understand that you are beginning to formulate the 2026 Water Resources Development Act (WRDA). As Congress develops its priorities for the authorizing legislation, I am writing to respectfully request the inclusion of a provision to reform the U.S. Army Corps of Engineers' (USACE) project partnership agreements (PPAs).

UMRBA is the Governor-established forum for interstate water resource planning and management on the Upper Mississippi River System, representing its member states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin. Formed in 1981, UMRBA represents its member states' common water resource interests and works collaboratively with Upper Mississippi federal and state agencies as well as other non-federal partners. In advancing our shared commitment to multi-use management, the states and USACE work collaboratively to develop solutions through sound water resource projects. In addition, local communities and nonprofit organizations also serve as key partners in sponsoring water resource solutions constructed by USACE. However, implementing the solutions that involve the states or other non-federal entities serving as cost-share sponsors is impeded, or is dramatically slowed, by the terms required in the cost-share project partnership agreements (PPAs).

The key impediments include the terms requiring the non-federal sponsor to assume complete liability for constructed projects (except for when fault or negligence is proven) and operations, maintenance, repair, replacement, and rehabilitation (OMRR&R) in perpetuity. These terms are simply not reasonable and are not acceptable to many states, local communities, and nonprofit organizations. At a fundamental level, the current PPA terms conflict with many states' constitutions and tort law.

Specifically, UMRBA respectfully requests the following provisions be included in WRDA 2026:

1) *Indemnification* – Replace the hold and save clause with a more equitable, shared approach to liability that does not extend beyond the liabilities that already exist under applicable constitutions and laws.

   USACE requires that non-federal sponsors indemnify the federal government for all damages except for fault or negligence. Indemnifying a third party (including the federal government) is in direct conflict with many states' constitutions and laws. It requires the non-federal party to promise financial resources for an indeterminate liability that might occur at an unknown time, at an unknown cost, and for an unknown reason. Many state constitutions preclude agencies from obligating funds without an encumbrance against an appropriation and do not allow for incurring any indebtedness of any nature on behalf of the state until an appropriation for it has been made by the legislature. In addition, indemnification requires a state to assume liability beyond the extent to which many states' tort law permits. Non-federal sponsors are required to execute the PPAs with the liability clause early in the planning stage and before the designs are complete. USACE takes full control of the land, design of the project, and agreements with the construction contractors. USACE is also the only point-of-contact to the construction contractors. This results in a completely one-sided approach to project design, implementation, and assumption of risk that favors the federal government.

2) *Operations, Maintenance, Repair, Replacement, and Rehabilitation* – Establish a defined cap on operations, maintenance, repair, replacement, and rehabilitation (OMRR&R) obligations.

   Currently, USACE legally obligates non-federal sponsors to undefined and unbounded operations, maintenance, repair, replacement, and rehabilitation (OMRR&R) obligations for the water resource project. This policy essentially creates a permanent federal hold on non-federal property. USACE requires the non-federal sponsor to *forever* maintain the project features as prescribed in the project O&M manuals. That is unreasonable, particularly in dynamic coastal and riverine systems.

   Historically, USACE has required OMRR&R obligations for 50 years to match the expected life of a constructed project. USACE changed this policy in 2012 and now requires non-federal sponsors to perform OMRR&R obligations in perpetuity. This shift has resulted in the loss of interested cost-share partners and unnecessarily stymies non-federal investments in national water interests.

Thank you for your consideration of this request. Please do not hesitate to contact me at 651-224-2880 or kwallace@umrba.org if you have questions or would like to discuss UMRBA's position in further detail.

Sincerely,

Kirsten Wallace
Executive Director
Upper Mississippi River Basin Association

cc: Upper Mississippi River Delegation

February 3, 2026

Mr. Adam Telle
Assistant Secretary of the Army (Civil Works)
108 Army Pentagon
Room 3E446
Washington, D.C. 20310-0108

Dear Secretary Telle:

As the Administration develops its funding allocations for the U.S. Army Corps of Engineers with the discretionary monies provided through the FY 2026 energy and water appropriations measure, I am writing on behalf of the Upper Mississippi River Basin Association (UMRBA) to respectfully request the following priorities related to USACE's programs and projects on the Upper Mississippi River System:

- $1 million for the Upper Mississippi River System Flow Frequency Study

  In FY 2026, the U.S. Army Corps of Engineers will complete the hydraulic routing model and associated flow and climate assessments, employ the analyses, and develop a report of the findings. Flood risk assessments and forecasting capabilities are necessary to reduce damages and loss of life associated with increasingly frequent and major flood events in the Upper Mississippi River. Accurate and accessible information will improve our ability to develop a systemic flood plan and improve management capabilities.

- $1 million for the Upper Mississippi River System Flood Risk Reduction and Resiliency Study

  In FY 2026, the U.S. Army Corps of Engineers, the five Upper Mississippi River states, and UMRBA will develop a scope and schedule for implementing the Upper Mississippi River System Flood Risk Reduction and Resiliency Study, and design and begin employing a public participation and engagement strategy.

- Available funds for the Navigation and Ecosystem Sustainability Program (NESP)

  In FY 2026, NESP has built capacity to implement ecosystem projects as well as implement forest stewardship activities and stands ready to efficiently and effectively execute available funds for ecosystem restoration.

UMRBA is pleased that the FY 2026 energy and waters appropriations measure sustains the President's budget request of $52 million for the Upper Mississippi River Restoration (UMRR) Program as well as funding for the operations and maintenance of the Upper Mississippi River System's 9-foot navigation channel.

UMRR increases the quantity and quality of habitat on the Upper Mississippi River System through habitat rehabilitation and enhancement projects, and UMRR enhances systems-level knowledge of the Upper

Mississippi River System by assessing the status and trends of the river ecosystem through long term resource monitoring.

By way of background, UMRBA is the Governor-established forum for interstate water resource planning and management on the Upper Mississippi River System, representing its member states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin. Formed in 1981, UMRBA represents its member states' common water resource interests and works collaboratively with Upper Mississippi federal and state agencies as well as other non-federal partners. UMRBA and USACE as well as other federal agency partners enjoy a long history and strong partnership in our shared commitment to multi-use management of the Upper Mississippi River System.

We appreciate your consideration of this request. Please contact me at 651-224-2880 or kwallace@umrba.org to arrange an opportunity to discuss our request in more detail.

Sincerely,

Kirsten Wallace
Executive Director
Upper Mississippi River Basin Association

cc: Upper Mississippi River Congressional Delegation
U.S. Army Corps of Engineers, Headquarters

Natalie Lenzen, UMRBA

From: Tidemann, Jason (DNR) <jason.tidemann@state.mn.us>
Sent: Friday, February 6, 2026 3:00 PM
To: Natalie Lenzen, UMRBA
Subject: RE: UMRBA Oct 1 - Dec 31 Treasurer Report

Hello,

As Treasurer, I have reviewed the monthly financial statements for the period 10/1/25-12/31/25. Activity reported on the Balance Sheet, Profit/Loss Budget Overview, Check Register, Visa statements and Open Invoices Report provide a reasonable and consistent representation of the monthly financial activity for the referenced period.

Jason Tidemann

From: Natalie Lenzen, UMRBA <nlenzen@umrba.org>
Sent: Thursday, February 5, 2026 2:38 PM
To: Tidemann, Jason (DNR) <jason.tidemann@state.mn.us>
Subject: UMRBA Oct 1 - Dec 31 Treasurer Report

Jason –

I would like to request your statement of review of our October 2025 through December 2025 financials for the Treasurer's report in the February 24, 2026 UMRBA Board meeting packet.

Please let me know if you have any questions or need any further information.

Thank you,
Natalie

Natalie Lenzen
Operations Manager | Upper Mississippi River Basin Association (UMRBA)
7900 West 78th Street, Suite 380, Edina, MN 55439
651-224-2880 (*main office*) | 763-349-2049 (*direct*)
Find us online at www.umrba.org or Facebook

Upper Mississippi River Basin Association

FY 2026 Profit & Loss Budget Overview

July 2025 - June 2026

	TOTAL		
	ACTUAL	BUDGET	OVER BUDGET
Revenue			
4000 State Dues			
Illinois Dues	70,350.00	70,350.00	0.00
Iowa Dues	52,762.50	70,350.00	-17,587.50
Minnesota Dues	52,762.50	70,350.00	-17,587.50
Missouri Dues	62,611.50	70,350.00	-7,738.50
Wisconsin Dues	70,350.00	70,350.00	0.00
WQ Assessment	68,040.00	113,400.00	-45,360.00
Total 4000 State Dues	**376,876.50**	**465,150.00**	**-88,273.50**
4100 Contracts and Grants			
Exchange Network Grant (IL)	31,322.61	210,000.00	-178,677.39
Interstate Monitoring (Mult)	39,089.96	55,000.00	-15,910.04
Interstate WQ Pilot	9,837.92		9,837.92
UMN CIROH	110,827.38	230,000.00	-119,172.62
USACE (NESP)	96,888.76	72,000.00	24,888.76
USACE (UMRR)	20,322.05	210,000.00	-189,677.95
USEPA (HTF)	69,599.96	133,000.00	-63,400.04
USEPA (OPA)	100,992.76	250,000.00	-149,007.24
Total 4100 Contracts and Grants	**478,881.40**	**1,160,000.00**	**-681,118.60**
4200 Interest Income			
Short Term Interest			
Short Term (Brokerage Account)		20,000.00	-20,000.00
Short Term (CD)	794.98	1,500.00	-705.02
Short Term (Checking)	511.22	4,500.00	-3,988.78
Short Term (Sweep)	19.19	500.00	-480.81
Total Short Term Interest	**1,325.39**	**26,500.00**	**-25,174.61**
Total 4200 Interest Income	**1,325.39**	**26,500.00**	**-25,174.61**
4300 Other Income			
Meeting Meals Income	114.67		114.67
Total 4300 Other Income	**114.67**		**114.67**
Total Revenue	**$857,197.96**	**$1,651,650.00**	**$ -794,452.04**
GROSS PROFIT	**$857,197.96**	**$1,651,650.00**	**$ -794,452.04**
Expenditures			
5001 Payroll Expenses			
Benefits	-9,983.93		-9,983.93
ICHRA	10,334.23		10,334.23
Salary	575,361.41	1,037,571.11	-462,209.70
SocSec Company	-3,309.67		-3,309.67
Taxes	47,586.05	81,954.19	-34,368.14
Total 5001 Payroll Expenses	**619,988.09**	**1,119,525.30**	**-499,537.21**
5002 Benefits Administration	1,530.00	1,958.00	-428.00
5100 Space Rental			

Upper Mississippi River Basin Association

FY 2026 Profit & Loss Budget Overview

July 2025 - June 2026

	TOTAL		
	ACTUAL	BUDGET	OVER BUDGET
Office Rental	44,525.42	70,000.00	-25,474.58
Total 5100 Space Rental	**44,525.42**	**70,000.00**	**-25,474.58**
5101 Legal and Financial			
Bank Charges		25.00	-25.00
Insurance	7,973.26	8,000.00	-26.74
Legal and Tax Services		3,000.00	-3,000.00
Total 5101 Legal and Financial	**7,973.26**	**11,025.00**	**-3,051.74**
5102 Telephone/Communications	8,894.98	12,000.00	-3,105.02
5103 Communications/Publications	36,688.00	20,000.00	16,688.00
5104 Equipment			
Equipment (Maint./Rental)	1,661.51	3,000.00	-1,338.49
Total 5104 Equipment	**1,661.51**	**3,000.00**	**-1,338.49**
5105 Supplies	1,769.92	5,500.00	-3,730.08
5106 Postage	78.00	100.00	-22.00
5107 Other Services	4,500.00	7,500.00	-3,000.00
5200 Meeting Expenses	3,905.35	12,000.00	-8,094.65
5201 Travel	8,264.23	40,000.00	-31,735.77
5202 State Travel Reimbursement			
Illinois	227.36	5,000.00	-4,772.64
Iowa		5,000.00	-5,000.00
Minnesota		5,000.00	-5,000.00
Missouri		5,000.00	-5,000.00
State WQ Travel		3,500.00	-3,500.00
Wisconsin		5,000.00	-5,000.00
Total 5202 State Travel Reimbursement	**227.36**	**28,500.00**	**-28,272.64**
5300 OPA Expenses			
Equipment (Maint./Rental) OPA	500.00	1,000.00	-500.00
Equipment OPA		500.00	-500.00
Other OPA	450.00	1,000.00	-550.00
Travel OPA	196.63		196.63
Total 5300 OPA Expenses	**1,146.63**	**2,500.00**	**-1,353.37**
5304 USEPA Gulf Hypoxia			
Contractual	4,500.00	5,300.00	-800.00
Supplies		1,050.00	-1,050.00
Travel	6,904.35	2,500.00	4,404.35
Total 5304 USEPA Gulf Hypoxia	**11,404.35**	**8,850.00**	**2,554.35**
5305 USACE NESP			
Other NESP	9,150.00	12,000.00	-2,850.00
Travel	3,702.65	2,500.00	1,202.65
Total 5305 USACE NESP	**12,852.65**	**14,500.00**	**-1,647.35**
5306 CIROH UMRS			
Contractual	21,129.10	74,000.00	-52,870.90

Upper Mississippi River Basin Association

FY 2026 Profit & Loss Budget Overview

July 2025 - June 2026

	TOTAL		
	ACTUAL	BUDGET	OVER BUDGET
Other CIROH		3,500.00	-3,500.00
Supplies		740.00	-740.00
Travel	5,829.98	400.00	5,429.98
Total 5306 CIROH UMRS	**26,959.08**	**78,640.00**	**-51,680.92**
5307 Exchange Network			
Contractual	7,560.00	145,000.00	-137,440.00
Supplies		250.00	-250.00
Travel	173.52	1,000.00	-826.48
Total 5307 Exchange Network	**7,733.52**	**146,250.00**	**-138,516.48**
5308 Interstate WQ Monitoring			
Communications	1,650.00		1,650.00
Other	703.14		703.14
Shipping	8,905.49		8,905.49
Supplies	938.38		938.38
Total 5308 Interstate WQ Monitoring	**12,197.01**		**12,197.01**
Total Expenditures	**$812,299.36**	**$1,581,848.30**	**$ -769,548.94**
NET OPERATING REVENUE	**$44,898.60**	**$69,801.70**	**$ -24,903.10**
NET REVENUE	**$44,898.60**	**$69,801.70**	**$ -24,903.10**

Upper Mississippi River Basin Association

Balance Sheet

As of February 9, 2026

	TOTAL
ASSETS	
Current Assets	
Bank Accounts	
Checking HT 2732	161,795.80
Investment	
Brokerage Account	309,558.23
CD_2 HT	53,334.14
Sweep HT 5401	-5.20
Total Investment	**362,887.17**
Total Bank Accounts	**$524,682.97**
Accounts Receivable	
Contract/grants	0.00
Invoiced/Billable	111,304.79
Total Contract/grants	**111,304.79**
Total Accounts Receivable	**$111,304.79**
Other Current Assets	
Payroll Refunds	1.33
Prepaid Expense	8.00
Office Rental Prepaid Expense	-3,876.01
Total Prepaid Expense	**-3,868.01**
Total Other Current Assets	**$ -3,866.68**
Total Current Assets	**$632,121.08**
Fixed Assets	
604(b) Equipment	3,683.12
Accum. Deprec. 604(b)	-1,520.51
Accum. Deprec. OPA	-22,941.95
Accum. Deprec. STC	-3,885.00
Accum. Deprec. UMRBA	-33,424.52
Accum. Deprec. WQ	-1,290.00
OPA Equipment	27,744.64
STC Equipment	4,332.67
UMRBA Equipment	94,681.64
WQ Equipment	1,290.00
Total Fixed Assets	**$68,670.09**
TOTAL ASSETS	**$700,791.17**

Upper Mississippi River Basin Association

Balance Sheet

As of February 9, 2026

	TOTAL
LIABILITIES AND EQUITY	
Liabilities	
Current Liabilities	
Credit Cards	
Visa Chase 5294	1,733.34
Total Credit Cards	**$1,733.34**
Other Current Liabilities	
Deferred MO DoC (WLM) Revenue	4,206.05
Office Expense Liabilities	0.00
Travel Expense	1,619.60
Total Office Expense Liabilities	**1,619.60**
Payroll Liabilities	0.00
Accrued Vacation	80,869.17
Accrued Vacation FICA	6,186.50
Federal Withholding	189.00
Medicare	
Medicare Company	39.17
Medicare Employee	39.17
Total Medicare	**78.34**
MN Income Tax	1,206.17
MN Paid Family and Medical Leave SUI	653.46
MN Unemployment Taxes	778.80
Social Security	
SocSec Company	167.50
SocSec Employee	167.50
Total Social Security	**335.00**
SUTA (Minnesota UC)	325.51
Workforce Enhancement Fee	334.97
Total Payroll Liabilities	**90,956.92**
Total Other Current Liabilities	**$96,782.57**
Total Current Liabilities	**$98,515.91**
Total Liabilities	**$98,515.91**
Equity	
Retained Earnings	557,412.39
Net Revenue	44,862.87
Total Equity	**$602,275.26**
TOTAL LIABILITIES AND EQUITY	**$700,791.17**

Upper Mississippi River
Quarterly Meetings

Attachment C

Annual Consultation on Interbasin Diversion Requests

Annual Consultation on Interbasin Diversion Requests
Background

In October 1989 the five basin Governors signed "The Upper Mississippi River Basin Charter" which sets forth a notification and consultation process for any new or increased water diversion out of the basin that will exceed an average of 5 million gallons per day during any 30 day period. (See Charter on pp. C-2 to C-5.) Item 6 of the Notification and Consultation Guidelines states that "at each annual meeting of the Upper Mississippi River Basin Association each state shall report on its involvement with diversion requests."

Since 1991, UMRBA's Annual Meetings have provided an opportunity for the States to fulfill their notification responsibilities under the Charter. For the past 31 years, none of the States have reported any diversion requests. Despite the fact that there has been no activity under the terms of the charter, a letter has typically been sent to each of the Governors indicating that fact.

At UMRBA's 2023 Annual Meeting on February 28, each UMRBA Board member should be prepared to report on any diversion requests within the last 12 months that would fall within the confines of the Charter.

THE UPPER MISSISSIPPI RIVER BASIN CHARTER

PRINCIPLES FOR THE MANAGEMENT OF UPPER MISSISSIPPI RIVER BASIN WATER RESOURCES AND NOTIFICATION AND CONSULTATION PROCESS GUIDELINES

FINDINGS

The Governors of the signatory Upper Mississippi River Basin States jointly find and declare that:

The water resources of the Upper Mississippi River Basin are precious natural resources. The Basin's water uses include municipal, industrial, and agricultural water supply; navigation; hydroelectric power and energy production; recreation; mining; and the maintenance of fish and wildlife habitat. The Basin States have a duty to protect, conserve, develop, and manage the water resources of the Basin.

The water resources of the Upper Mississippi River Basin comprise a valuable regional and national resource. The Upper Mississippi river system is a multi-purpose system with two Congressional mandates; it is managed both for commercial navigation and as a national wildlife refuge. The States in partnership with the federal government of the United States share a continuing and abiding responsibility to maintain and enhance all aspects of this multipurpose system. Without careful and prudent management, future diversions of the water resources of the Upper Mississippi River Basin may have significant adverse impacts on the environment, economy, and welfare of the region.

Management of the water resources of the Upper Mississippi River Basin is subject to the jurisdiction, rights, and responsibilities of each Basin State. Effective management of the water resources of the Basin requires the Basin States to exercise their jurisdiction, rights, and responsibilities in the interest of all of the people of the region through a continuing spirit of comity and mutual cooperation.

A preferred means to achieve effective management of the water resources of the Upper Mississippi River Basin is through the joint pursuit of unified and cooperative principles and policies mutually agreed upon and adhered to by the States of the Upper Mississippi River Basin.

PURPOSE

The purposes of this charter are to conserve the levels and flows of the water resources; to protect the environmental ecosystem; to secure present development; to provide a foundation for future investment and development; and to assure all significant benefits and impacts are considered before a decision is made.

PRINCIPLES FOR THE MANAGEMENT OF THE UPPER MISSISSIPPI RIVER BASIN WATER RESOURCES

In order to achieve the purposes of this Charter, the Governors of the signatory Upper Mississippi River Basin States agree, subject to the laws of each state, that:

Principle I
Integrity of the Upper Mississippi River Basin

The water resources of the Upper Mississippi River Basin shall be managed for the wise use, benefit, and enjoyment of all citizens of the Basin. The planning and management of the water resources of the Upper Mississippi River Basin shall recognize that the water resources of the Upper Mississippi River Basin transcend political boundaries within the Basin and should be conserved and provided for beneficial uses including navigation, recreation, municipal and industrial water supply, irrigation, hydroelectric power and energy production, water quality, mining, maintenance of fish and wildlife habitat, aquatic ecosystem, and other instream and withdrawal uses.

Principle II
Notification and Consultation

The signatory states agree that it is the intent of the states that interbasin diversion of water resources will not be supported if individually or cumulatively they would have significant adverse impact on instream flows, in-basin uses, and the basin ecosystem.

Any state having knowledge of a proposal for a new or increased diversion of water which will exceed 5 million gallons per day average in any 30 day period from the waters of the Upper Mississippi River Basin to another basin shall notify and offer to consult with all signatory states in order to allow all signatory states to express their concerns, identify their interests, develop where possible mutually acceptable agreements, or take such other actions as they may find appropriate.

Principle III
Cooperation Among States

The Governors agree to pursue such additional agreements as may be necessary to promote greater cooperation with respect to any new or increased interbasin diversions of Mississippi River Basin waters.

Principle IV
Reservation of States Rights

The signatory States mutually recognize the rights and standings of each other to represent and protect the rights of their respective jurisdications. Each State reserves and retains all rights and authority to seek, in any state, federal, or other appropriate court or forum, adjudication or protection of their respective rights.

NOTIFICATION AND CONSULTATION PROCESS GUIDELINES

1) State Appointments

   - Each signatory state shall designate a contact person for the state's involvement in the notification and consultation process.
   - The Upper Mississippi River Basin Association shall compile and maintain a mailing list.

2) Notification

   - Notice shall be given to all signatory states of an anticipated diversion which exceeds 5 million gallons per day average in any 30 day period.
   - The notice shall include at a minimum:

     a) name, location, and sending and receiving waterbodies or basins

     b) list of applicable permits

     c) purpose of water use

     d) method of measurement

     e) request for comments

3) Comments/Objections

   Comments or objections from the signatory states:

   a) shall be submitted by the Governor or his representative within 45 days

   b) should be based on hydrologic, economic, or environmental concerns

   c) may include a request for a consultation meeting

4) Consultation

   - The originating state shall schedule and conduct a consultation meeting when a letter of objection has been received and a consultation meeting requested.
   - The originating state shall provide a minimum 30 day notice of the meeting to the Governors or their representatives.
   - The originating state shall be responsible for preparation of the agenda, chairing of the meeting, and preparation of notes of the meeting.
   - The consultation meeting shall include opportunities for description of the proposed diversion, presentation of basin states positions, and discussion.

5) Decision

- If no objections are received, the originating state shall make its decision on the proposed withdrawal and inform the signatory states.
- If objections are received, whether or not a consultation meeting is convened, the originating state shall:

  a) distribute to signatory states a summary of the consultation discussion and comments and a draft response to the diversion request.

  b) allow 30 days for comments from the signatory states.

  c) consider comments received.

  d) distribute the final disposition of the diversion request to all signatory states within 15 days after the final decision has been made.

6) Annual Review

At each annual meeting of the Upper Mississippi River Basin Association each state shall report on its involvement with diversion requests.

Signed at Milwaukee, Wisconsin this 2nd day of October, 1989.

Governor James R. Thompson
State of Illinois

Governor Terry E. Branstad
State of Iowa

Governor Rudy Perpich
State of Minnesota

Governor John Ashcroft
State of Missouri

Governor Tommy Thompson
State of Wisconsin

Upper Mississippi River
Quarterly Meetings

Attachment D

Federal Ecosystem Program Planning

Upper Mississippi River Restoration Program

Implementation Snapshot 2025 - 2027

Upper Mississippi River Restoration

Long Term Resource Monitoring
of the Upper Mississippi River System

The Upper Mississippi River System is changing for a variety of reasons, mostly because of **changing hydrology** and **invasive species**. Changing hydrology affects habitat quality and food sources for fish and wildlife.

We know these changes are occurring because of the **Long Term Resource Monitoring** (LTRM) in the Upper Mississippi River Restoration Program. The data collected for 35 years at six field stations has **produced many insights that would be otherwise unobtainable.**

Lake City Field Station
Monitored by the state of Minnesota. This station's findings illuminate how investing in nutrient reduction leads to a healthier ecosystem.

La Crosse Field Station
Monitored by the state of Wisconsin. Findings from this field station show the value of UMRR's habitat projects, particularly island and backwater restoration.

Bellevue Field Station
Monitored by the stateof Iowa. This station found that the Maquoketa River, which flows into Pool 13, contributes the most sediment out of the tributaries studied. This has led to a decline in aquatic plant diversity and abundance.

Havana Field Station
Monitored by the state of Illinois. The establishment of invasive carp in the La Grange Reach has led to a decrease in recreationally valued native fish populations at this field station .

Great Rivers Field Station
Monitored by the state of Illinois. Water levels at Pool 26 have been managed to expand the areas where native emergent plants can grow. The plants then help to limit sediment movement and enhance water clarity.

Open River Field Station
Monitored by the state of Missouri. In contrast to the Havana field station, recreationally valued native fish populations are stable in the Open River Reach despite the presence of invasive carp.

The six field stations collect data on **water quality, forests, aquatic vegetation, fish,** and other variables to measure the river's health. The six study reaches have different habitats, threats, and conditions.

Long Term Resource Monitoring
of the Upper Mississippi River System

For 35 years, UMRR's Long Term Resource Monitoring (LTRM) captures trends in nutrient concentrations, plant community changes, forest loss across the system, and the impacts from invasive carp expansion to the abundance and diversity of native fishes.

LTRM informs our understanding of the river's ecology and focuses investments for the greatest benefit of the river and the public .

What Does LTRM Tell Us?

There is **more water in the river more of the time.** High flows are lasting longer and occurring more frequently throughout the system. This is important because water flow is the primary driver affecting the quality and quantity of habitat.

Floodplain forest loss has occurred in nearly all study areas except south of the locked portion of the river. The forests may be responding to changes like increased flood inundation and invasive species.

In most of the river system, **water in main channel has become clearer** and **aquatic plants have become more abundant,** improving habitat for some fish and wildlife. Increased water clarity in the river allows sunlight to reach deeper into the water and promotes plant growth. These plants slow water flow and anchor the sediment, which further improves water clarity and triggers more plant growth.

Concentration of nutrients, notably nitrogen and phosphorus, remain high, exceeding U.S. Environmental Protection Agency benchmarks. However, total phosphorus concentrations have declined in many of the studied reach areas.

The river continues to support diverse and abundant fishes. Recreational fishes have increased in parts of the system. However, there have been substantial declines in forage fish, an important food source for larger fishes and animals, throughout the river network. Invasive carps have substantially affected the river ecosystem where they have become common.

How Does LTRM Benefit People Along the River?

In the 1980s, there was a massive collapse of vegetation on the Upper Mississippi River that increased sedimentation of the navigation channel, negatively impacting the river's ability to support navigation. The collapse was likely caused by poor water quality. Monitoring vegetation, sediment and water quality is important to maintaining reliable transportation of commerce.

UMRR long term monitoring of nutrients provides the agricultural community with long term information about trends, informing the success of past investments in nutrient management and informing decisions about future investments in conservation practices.

The Upper Mississippi River System is a treasured ecosystem abundant with fish and wildlife and a multi-billion-dollar economic engine. It plays a major role in local, regional, state, and national economies. LTRM works towards a healthier and more resilient ecosystem that supports these systems.

This information is available in greater detail in the following scientific publications:

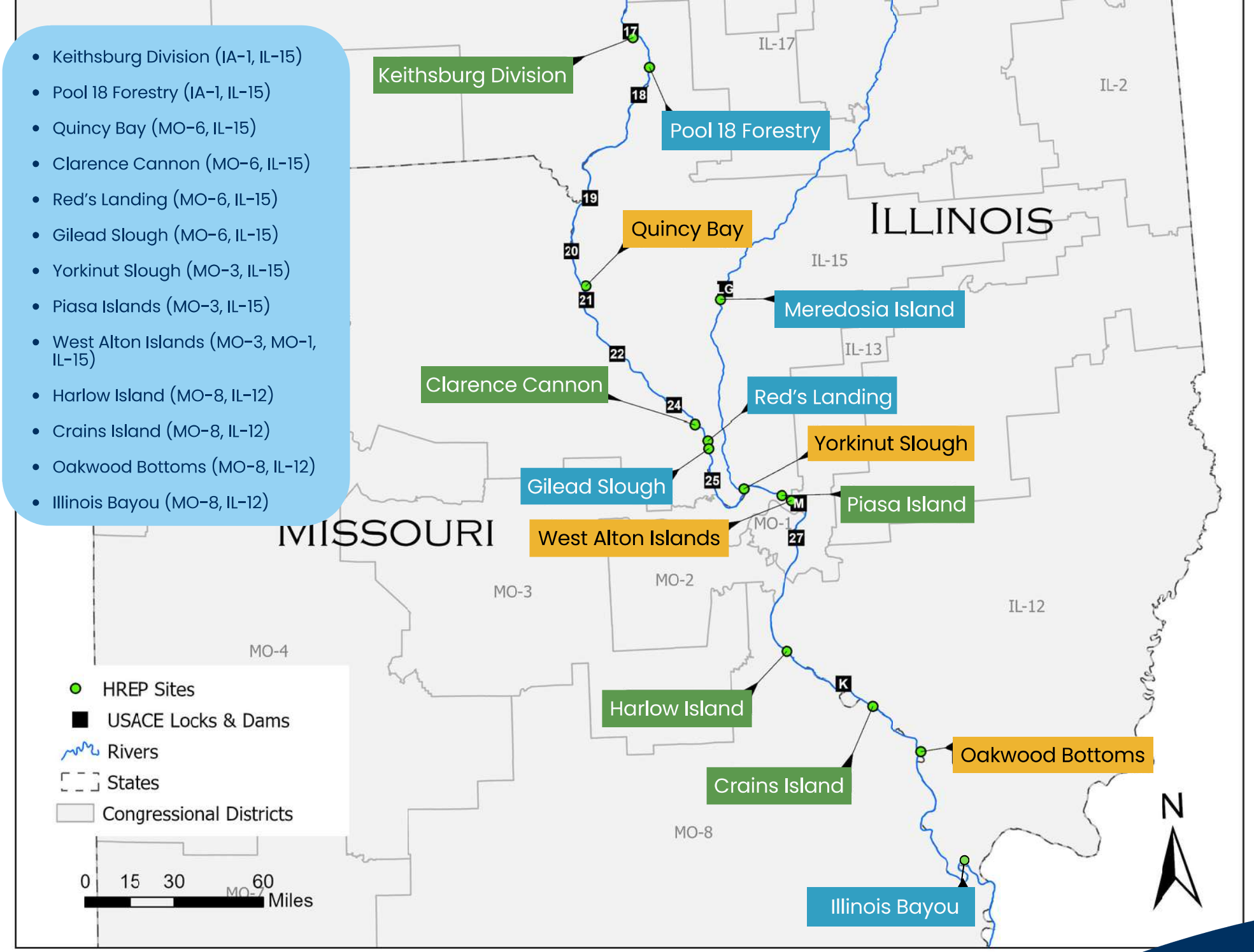
2022 Ecological Status and Trends ofthe Upper Mississippi and Illinois Rivers

2018 UMRR Habitat Needs Assessment II

Project Status, December 2025

- Bank Stabilization (MN-2)
- Big Lake (MN-1, WI-3)
- Robinson Lake (MN-1, WI-3)
- Reno Bottoms (MN-1, IA-2, WI-3)
- McGregor Lake (IA-2, WI-3)
- Lower Pool 10 (IA-2, WI-3)
- Lower Pool 11 (IA-2, WI-3)
- Pool 12 Forestry (IA-1, IA-2, WI-3, IL-16)
- Green Island (IA-1, IL-16)
- Lower Pool 13 (IA-1, IL-17)
- Beaver Island (IA-1, IL-17)
- Steamboat Island (IA-1, IL-17)

- Keithsburg Division (IA-1, IL-15)
- Pool 18 Forestry (IA-1, IL-15)
- Quincy Bay (MO-6, IL-15)
- Clarence Cannon (MO-6, IL-15)
- Red's Landing (MO-6, IL-15)
- Gilead Slough (MO-6, IL-15)
- Yorkinut Slough (MO-3, IL-15)
- Piasa Islands (MO-3, IL-15)
- West Alton Islands (MO-3, MO-1, IL-15)
- Harlow Island (MO-8, IL-12)
- Crains Island (MO-8, IL-12)
- Oakwood Bottoms (MO-8, IL-12)
- Illinois Bayou (MO-8, IL-12)



Restoring Complexes of Habitat: Portfolio of Projects in 2025 - 2027

Successful Implementation in FY 2025

- Initiate construction of Lower Pool 10 Islands in Iowa
- Completed feasibility plans for Pool 12 Forestry in Illinois
- Initiate planning for Bank stabilization, Minnesota River in Minnesota
- Continued construction of 7 projects, design of 9 projects, and planning of 6 projects

Ongoing Work in FY 2026

- Complete construction on McGregor Lake in Wisconsin
- Initiate construction of Reno Bottoms in Minnesota and Iowa
- Finish design of Swan Lake flood damage rehabilitation in Illinois
- Initiate design for Lower Pool 4, Robinson Lake in Minnesota
- Complete feasibility plans for
  - Lower Pool 13 Phase II in Iowa
  - Gilead Slough in Illinois
  - Reds Landing in Illinois
- Initiate planning for
  - Meredosia Island in Illinois
  - Illinois Bayou in Illinois
  - two new projects
- Continue construction of 7 projects, design of 8 projects, and planning of 3 projects

Planned Implementation for FY 2027

- Complete construction of Piasa and Eagles Nest, Illinois
- Initiate construction
  - Lower Pool 4, Big Lake in Wisconsin
  - Swan Lake flood damage rehabilitation in Illinois
- Finish design of
  - Oakwood Bottoms in Illinois
  - Yorkinut Slough in Illinois
  - Lower Pool 13 in Iowa
  - Quincy Bay in Illinois
- Initiate design of
  - Robinson Lake in Minnesota
  - Gleads Slough in Illinois
  - Reds Landing in Illinois
  - West Alton Islands in Missouri
- Completed feasibility plans for
  - Bank stabilization in Minnesota
  - Pool 18 Forestry in Iowa
- Initiate planning for Lower Pool 13 Phase II in Iowa
- Ongoing construction of 8 projects, design of 4 projects, and planning of 5 projects

McGregor Lake HREP (IA-2, WI-3)

Partnership Efforts 2025 - 2027

USACE, USFWS, USGS, state of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, the Upper Mississippi River Basin Association along with Tribal governments, conservation and navigation interests, and the public work collaboratively to achieve the goals and objectives of the 2025-2035 UMRR Strategic Plan.

The collective vision for UMRR is to rehabilitate the Upper Mississippi River System toward a healthier and more resilient state that supports the river's multiple uses.

Partnership Goals for the Upper Mississippi River Restoration Program

- Improve the understanding of the structure and function of the Upper Mississippi River for better management.
- Restore at least 60,000 acres of habitat within the river ecosystem.
- Support efficient, effective, and innovative habitat restoration through strengthened collaboration between restoration practitioners and scientists.
- Foster strong relationships among UMRR partners and stakeholders.

US Army Corps of Engineers ®

Upper Mississippi River Restoration

U.S. ARMY CORPS OF ENGINEERS ROCK ISLAND, ST. PAUL, AND ST. LOUIS DISTRICTS

U.S. Army Corps of Engineers, Rock Island District | P.O. Box 2004 | Clock Tower Building | Rock Island, Illinois 61204-2004

UMRR Website: www.mvr.usace.army.mil/Missions/Environmental-Protection-and-Restoration/Upper-Mississippi-River-Restoration

Navigation and Ecosystem Sustainability Program

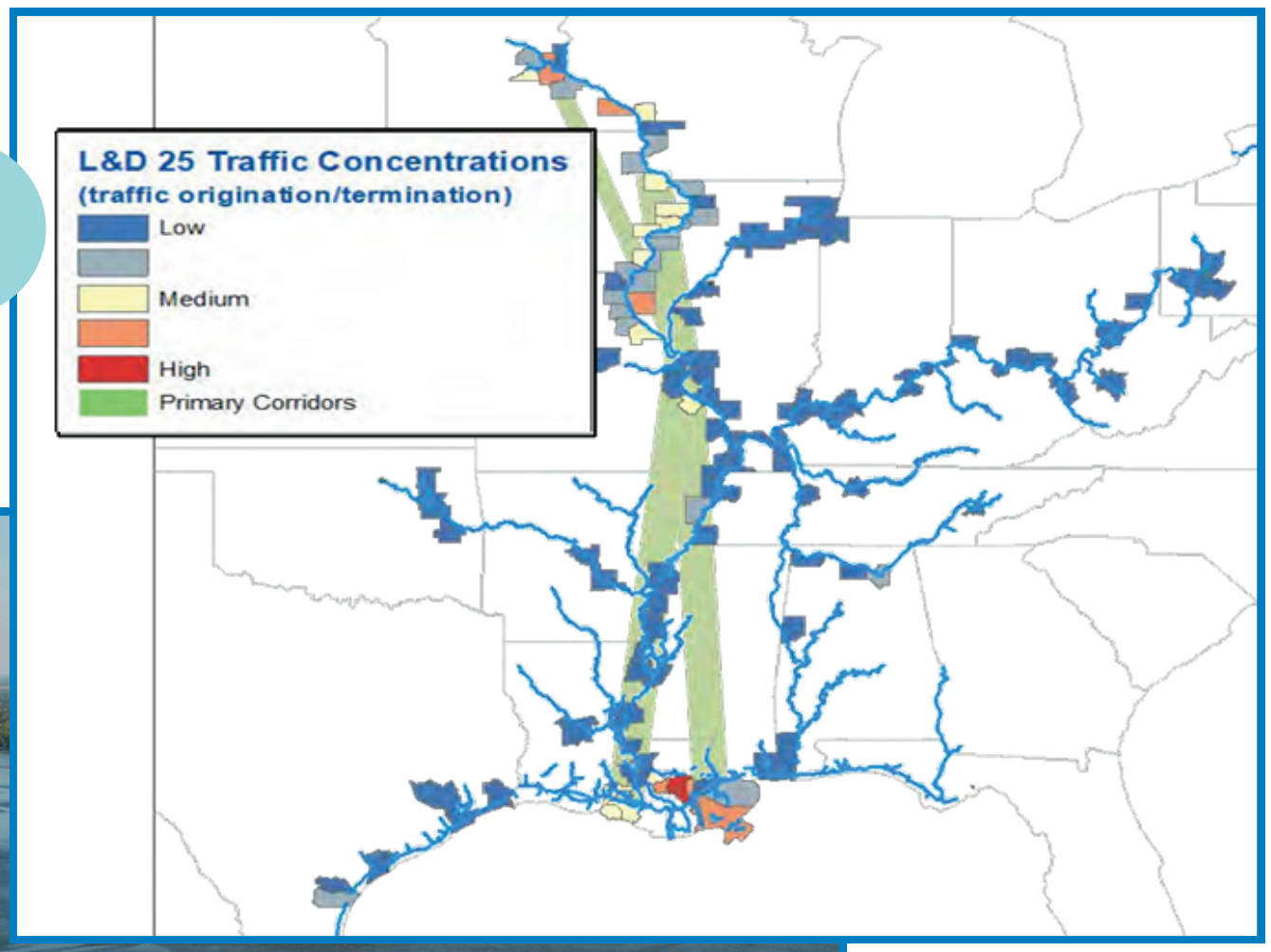
FY 2027 Appropriation Request of $350 Million

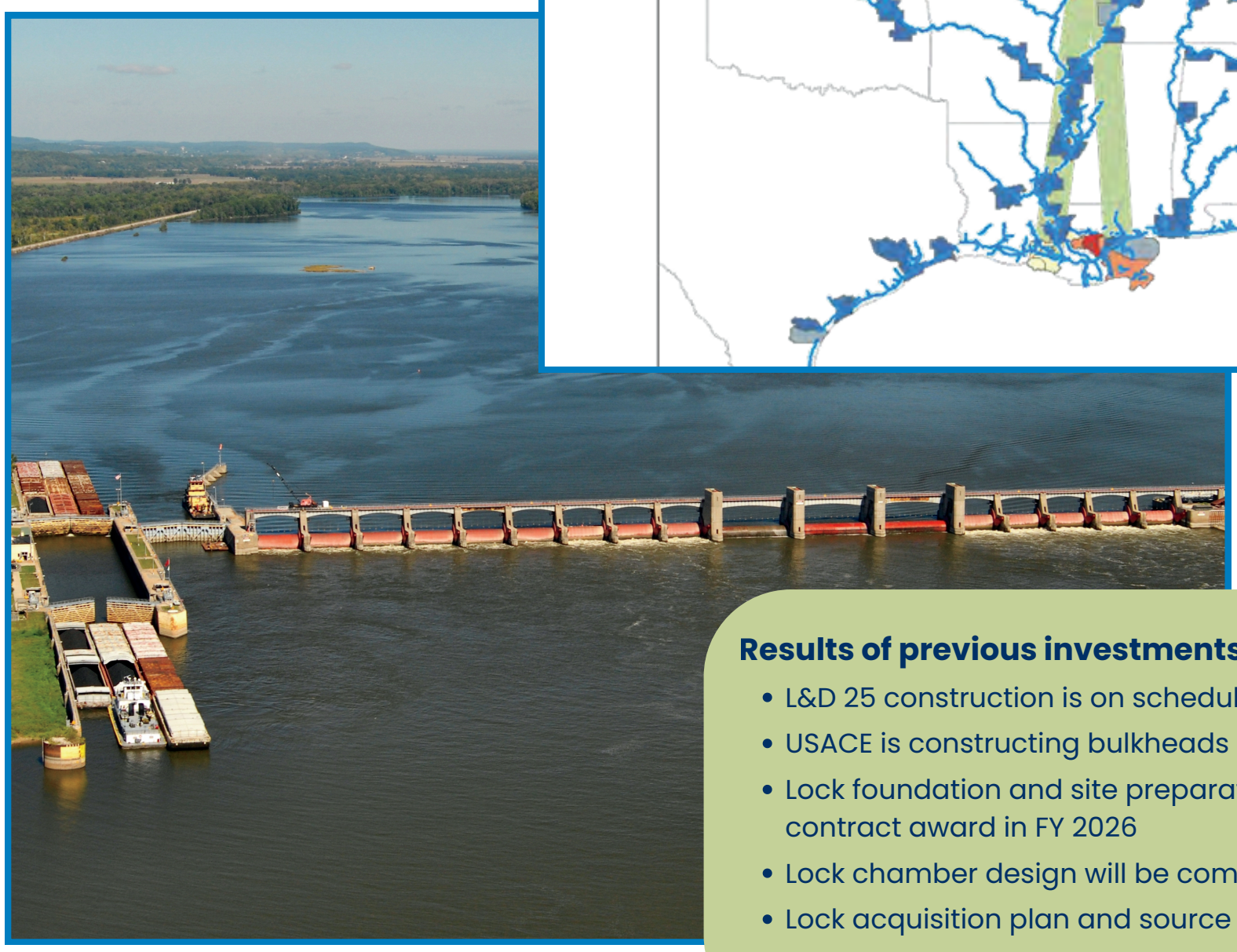
- **Advance construction of a 1,200-foot chamber at L&D 25**
- Construct, design, and plan projects that improve ecological integrity

An **appropriation of $250 million for L&D 25 construction** in FY 2027 will allow engineers to:

- Award lock chamber construction contract in 2027
- Maintain construction schedule
- Realize efficiencies with timely funding and potentially reducing contingency

L&D 25 is an important connector to U.S. transportation routes and international trade





Results of previous investments in L&D 25

- L&D 25 construction is on schedule
- USACE is constructing bulkheads and a downstream cell
- Lock foundation and site preparation is scheduled for contract award in FY 2026
- Lock chamber design will be complete in FY 2026
- Lock acquisition plan and source selection plan is final
- Navigation industry is frequently consulted

The new 1,200 lock chamber will result in more efficient and reliable navigation

The new lock, constructed alongside the existing 600-foot lock will enable the standard 1,200-foot tow to pass without separating its barges, **reducing passage time by 50 percent to 70 percent and reducing safety risks**.

The second lock will allow for two-way traffic, **keeping navigation moving** during maintenance and repair work.

Navigation and Ecosystem Sustainability Program

FY 2027 Appropriation Request of $350 Million

- Advance construction of a 1,200-foot chamber at L&D 25
- **Construct, design, and plan projects that improve ecological integrity**

An appropriation of $100 million for ecological projects in FY 2027 will allow for:

Crosby Farm (MN-4): Construct floodplain habitat for migratory birds and native fish using shoreline resloping, dredging, and forest enhancement

Wacouta Bay (WI-3, MN-1): Improve aquatic habitat, restore floodplain forests, protect shorelines

Schmokers Lake and Floodplain Forest (WI-3, MN-1): Return bathymetric and vegetation diversity to accommodate a range of inundation periods

L&D Sturgeon Spawning Reef (WI-3, MN-1): Create spawning habitat reefs to recover migrating populations of sturgeon and other large riverine fish currently blocked by dams

Johnson Island (WI-3, MN-1): Improve conditions for fish and wildlife

Sny Magill - Effigy Mounds (IA-2, WI-3): Reduce damages to shoreline at Effigy Mounds Nat'l Monument, protecting integrity of Native American burial and ceremonial mounds

Goetz Lake (IA-2, WI-3): Restore backwater geomorphology and minimize excess sedimentation to enhance local timber stands and over-wintering fish populations

Lee County Islands and Backwaters (IA-1, IL-15): Enhance diversity and abundance of aquatic vegetation, improve wildlife habitat

Fabius Chute (MO-6, IL-15): Restore water flow and depth diversity and habitat structure in a backwater side channel

Denmark and Drift Islands (MO-6, IL-15): Restore flow diversity, connectivity, and substrate diversity to improve forest resilience

Tisdel Towhead Island(MO-6, IL-15): Restore island and aquatic habitat that provides more natural flow for native fish and mussels

Willow Bar Island (MO-6, IL-15): Modify sediment deposition processes to naturally build islands

Lower Pool 25 Island Building (MO-6, IL-15): Restore island composition and alter adjacent dike to expand terrestrial and aquatic habitat

Stone Dike Alteration (IL-12, MO-8): Improve aquatic habitat for riverine fishes by adjusting hydraulic conditions and geomorphological features

MMR Natl Wildlife Refuge, Horse Island (IL-12, MO-8): Increase forest species richness by restoring topographic diversity and promoting native understory plant habitats

Middle Mississippi River Stone Dike Alteration (IL-12, MO-8): Improve aquatic habitat for riverine fishes

Pierce County Islands (WI-3, MN-1): Construct habitat for migratory birds and restore bathymetric and vegetation diversity to backwater lakes

Mertes Slough (WI-3, MN-1): Reduce algal blooms by reestablishing hydraulic connections to the floodplain and lentic backwaters

La Crosse Marsh (WI-3, MN-1): Enhance marsh hydrology and water quality through restoring flow connections and limiting inundation time

Sabula Lakes Island Complex (IA-1, IL-17): Improve water quality and structural diversity to ensure adequate habitat for aquatic and terrestrial organisms

Andalusia Island Complex (IL-17, IA-1) : Restore and protect habitat in the floodplain forests and side channel aquatic areas

Rice Lake (IL-17): Restore bathymetric diversity to a backwater lake, lateral connectivity in aquatic areas, and a large island complex

Liverpool Side Channel (IL-15): Create flowing side channel habitat to provide habitat and management benefits

Clarksville/Carrol Island Side Channel Restoration (IL-15, MO-6): Restore side channel connectivity and flow to benefit native riverine fish and wildlife

Hausgen Island (MO-6, IL-15): Improve side channel hydrology, enhance habitat for fish, wildlife, and native mussels

Stone Dike Alteration (IL-12, MO-8): Improve aquatic habitat for riverine fishes by adjusting hydraulic conditions and geomorphological features

Island Building (IL-12, MO-8): Reestablish terrestrial connectivity and flow patterns among an island complex of sandbars

Upper Mississippi River Quarterly Meetings

Attachment E

Fixing FEMA Act of 2025

COMMITTEE ON

TRANSPORTATION &INFRASTRUCTURE

SAM GRAVES, CHAIRMAN
RICK LARSEN, RANKING MEMBER

H.R. 4669 - *Fixing Emergency Management for Americans (FEMA) Act of 2025*

Bipartisan Section-by-Section

Sec. 1. Short title; Table of Contents.

This section provides that the Act may be cited as the "Fixing Emergency Management for Americans Act of 2025" or "FEMA Act of 2025." This section also includes the table of contents for the bill.

Division A – Establishment of FEMA as Cabinet-Level Independent Agency

Title I – Establishment of Federal Emergency Management Agency

Sec. 11. Establishment of Independent Agency.

This section re-establishes the Federal Emergency Management Agency as an independent agency under the direct oversight of the President and outlines its mission and specific activities.

Sec. 12. Administrator; Deputy Administrator; Other Officials of the Agency.

This section directs that Federal Emergency Management Agency is headed by an Administrator appointed by the President and confirmed by the Senate. This section also makes clear the Administrator shall report directly to the President and meet certain qualifications. This section also directs the appointment of a Deputy Administrator, by and with the consent of the Senate. Further, this section directs the appointment of Assistant Administrators.

Sec. 13. Authority and Responsibilities.

This section sets out the authority and responsibilities of the Administrator.

Sec. 14. Office of the Inspector General.

This section establishes an Inspector General (IG) for the Federal Emergency Management Agency, appointed by the President and confirmed by the Senate.

Sec. 15. Transfer of Functions.

This section details functions transferred to the independent Federal Emergency Management

Agency.

Sec. 16. Personnel and Other Transfers.

This section details the transfer of personnel and incidental functions.

Sec. 17. Saving Provisions.

This section details the continuing effect of legal documents, proceedings, and other actions.

Sec. 18. References.

This section directs that references in law, Executive order, rule, regulation, and other official documents to the Federal Emergency Management Agency, the Administrator, and to the IG shall be considered to refer to and apply to the respective entity and persons in the independent agency.

Sec. 19. Federal Emergency Management Agency Working Capital Fund.

This section establishes a revolving fund for the Federal Emergency Management Agency for operation of any headquarters, multi-discipline facility to provide for the collection of fees from other Federal agencies related to the Agency's mission to ensure continuity of government.

Sec. 20. Improving Disaster Assistance for Veterans.

This section establishes a Veteran's Advocate within the Federal Emergency Management Agency to help increase veteran recruitment for the Federal Emergency Management Agency reservist positions and advise the Administrator on the unique challenges facing veterans following a disaster.

Title II – Offices and Functions of Federal Emergency Management Agency

Sec. 21. National Emergency Management.

This section makes conforming changes to various sections of the *Homeland Security Act* (P.L. 107-296) and other laws to clarify the functions retained by the Administrator and the Federal Emergency Management Agency.

Title III – Related Matters

Sec. 31. Changes to Administrative Documents.

This section directs that certain administrative and policy documents are updated to reflect changes made by this Division.

Sec. 32. Recommended Legislation.

This section directs the Administrator of the Federal Emergency Management Agency to consult with Congress and recommend legislation containing additional technical and conforming amendments needed to reflect the changes made by this Division.

Division B – FEMA Reforms

Title I – Public Assistance Reforms

Sec. 101. Rebuilding Public Infrastructure.

This section amends the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (*Stafford Act*) to provide for the expedited repair, restoration, and replacement of disaster-damaged facilities. Grants would be provided on a per-project basis, without regard to prior condition, based on an estimated cost developed by an appropriately licensed professional. Funds would be authorized to repair, restore, reconstruct, or replace public or private nonprofit facilities damaged or destroyed by a major disaster, including incorporating mitigation measures. For open disasters, states would have the option to either move to the new expedited process or continue their projects under existing sections 406 or 428 procedures of the *Stafford Act* until those sections sunset in 2032.

Sec. 102. Task Force to Address the Backlog of Open Declared Disasters.

This section creates a temporary task force and process for closing out existing disasters that are not moved to the new process.

Sec. 103. Disaster Declaration Damage Thresholds.

This section directs the Federal Emergency Management Agency Administrator, when making recommendations to the President regarding the declaration of a major disaster or emergency or the proposed non-Federal share of disaster assistance, to give greater weight and consideration to disasters impacting economically distressed (13 C.F.R. 301.3(a)) or rural areas (7 U.S.C. 1991 (a)(13)).

Sec. 104. Federal Permitting Improvement.

This section aligns the Federal Emergency Management Agency's permitting processes with those of other Federal grant programs. This section directs the Federal Emergency Management Agency to streamline its permitting requirements under section 316 of the *Stafford Act* and provide clarity to subgrantees. The reforms would modify the existing language in statute to ensure that waivers for environmental and historic preservation for projects on already disturbed lands include building up to current code and mitigation measures.

Sec. 105. Unified Federal Review.

This section strengthens existing law for more complex projects to be managed by the state and strengthens the Federal Emergency Management Agency's unified review process under section 429 of the *Stafford Act* to bring it into conformity with One Federal Decision.

Sec. 106. Block Grants for Small Disasters.

This section provides alternate procedures for states to request lump sum payments for small disasters (defined as up to 125 percent of a state's per capita damage threshold).

Sec. 107. Common Sense Debris Removal.

This section clarifies removal of debris is in the public interest to support more expeditious recovery following a disaster.

Sec. 108. Disaster Management Costs Modernization.

This section authorizes the President to allow recipients of certain disaster relief assistance to use excess management cost funds across all open disasters.

Sec. 109. Streamlining and Consolidating Information Collection and Preliminary Damage Assessments.

This section requires the Federal Emergency Management Agency, the Small Business Administration (SBA), the Department of Housing and Urban Development (HUD), and the Disaster Working Group of the Council of Inspectors General on Integrity and Efficiency to study, develop, and implement a plan for streamlining the damage assessment process across agencies.

Sec. 110. Reasonable Incident Periods.

This section directs the Federal Emergency Management Agency to convene an advisory panel to review the process and procedures related to the determination of incident periods, provide a report, and implement.

Sec. 111. Fire Management Assistance Program Policy.

This section authorizes the Federal Emergency Management Agency to conduct assessments and emergency stabilization to protect public safety, including for fire management assistance grants.

Sec. 112. Indian Tribal Government Eligibility.

This section allows tribal governments to request fire management assistance directly to support expedited responses to fires on tribal lands.

Sec. 113. Strengthening Closeouts for Critical Services.

This section fixes the closeout procedures and timelines to clarify application to eligible private nonprofits responsible for critical services.

Sec. 114. Sheltering of Emergency Response Personnel.

This section amends section 403 of the *Stafford Act* to provide authority to reimburse states for costs to shelter emergency response personnel.

Sec. 115. Emergency Protective Measures to Fight Flooding Damage.

This section clarifies that owners or operators of stormwater pumping stations eligible for assistance to conduct emergency work shall be reimbursed based on applicable equipment rates.

Sec. 116. Fairness and Accountability in Appeals.

This section clarifies that the Federal Emergency Management Agency Administrator is

responsible for attorneys' fees in appeals cases if a decision is issued in favor of the applicant.

Sec. 117. Expedited Funding for Emergency Work.

This section provides a reimbursement timeline for emergency protective measures, including debris removal. Once 90 percent of costs are validated, the Federal Emergency Management Agency will have no more than 120 days to disburse the funds.

Sec. 118. Consistency in Procurement Practices.

This section clarifies that for the purposes of procurement regulations, local governments are treated similarly as state and Tribal governments.

Title II – Individual Assistance Reforms

Sec. 201. Information Sharing for Federal Agencies.

This section directs the Administrator of the Federal Emergency Management Agency to establish and maintain a web-based, interagency electronic information system called the "unified disaster application system" to support the development of the universal application authorized in section 202. This section also amends the *Stafford Act* by adding section 707, which streamlines information sharing authorities to ensure proper functioning of the application.

Sec. 202. Universal Application for Individual Assistance.

This section directs the Administrator of the Federal Emergency Management Agency to develop a universal application for Federal disaster assistance for individuals in areas impacted by emergencies or major disasters.

Sec. 203. Clarifying Duplication of Benefits.

This section describes what constitutes a duplication of benefits when it comes to the provision of disaster assistance to individuals, clarifying that receiving a loan is not duplicative of assistance and allowing for the receipt of charitable donations to cover disaster losses without an impact to Individuals and Households Program (IHP) eligibility.

Sec. 204. Crisis Counseling and Addiction in Disasters.

This section clarifies that substance abuse is covered under existing crisis counseling assistance.

Sec. 205. Repair and Rebuilding.

This section amends section 408(c) of the *Stafford Act* to allow for permanent repairs for homes, if it is more cost-effective than a temporary housing solution. This section amends section 408(b)(1) of the *Stafford Act* by removing the requirement that households must be rendered uninhabitable by a major disaster to be eligible for hazard mitigation assistance. Additionally, section 408 is amended by making households that have been damaged by a major disaster eligible for hazard mitigation assistance.

Sec. 206. FEMA Emergency Home Repair Program.

This section authorizes a permanent repair program of owner-occupied homes that have been damaged by a disaster.

Sec. 207. Direct Assistance.

This section amends section 408(c)(2) of the *Stafford Act* by authorizing the President to provide direct assistance to individuals and households if applicants are unable to make use of financial assistance for repairs and when there is a lack of available resources for the repair of owner-occupied residences. Direct assistance may be used to repair owner-occupied residences damaged by a major disaster and/or rendered inaccessible for individuals with disabilities, and to carry out eligible hazard mitigation measures that reduce the likelihood of future damage.

Sec. 208. Accurate Information to Disaster Victims.

This section prohibits the Federal Emergency Management Agency from issuing denial letters prior to final determinations on available insurance.

Sec. 209. Improved Notices for FEMA Assistance.

This section requires the Federal Emergency Management Agency to provide more detailed information to applicants for individual assistance who are appealing a determination of eligibility for assistance.

Sec. 210. Common Sense Displacement Assistance for Disaster Victims.

This section directs that the amount of displacement assistance immediately following a disaster for victims can provide for expenses such as hotel rooms, gas, and food for disaster survivors.

Sec. 211. State-Managed Disaster Housing Authority.

This section gives the Administrator of the Federal Emergency Management Agency the authority to implement the State-Managed Housing Pilot Authority until the issuance of final regulations. This program, created by the *Disaster Recovery Reform Act of 2018*, sunset in 2020. This section revives the program, removes burdensome requirements for states administering housing programs by striking section 408(f)(3)(F) of the *Stafford Act*, and implements a 25 percent non-Federal cost share to create consistency with other programs across disaster preparedness, response, recovery, and mitigation.

Sec. 212. Improved Rental Assistance.

This section authorizes the Administrator to account for local post-disaster rent rates.

Sec. 213. Online Guides for Postdisaster Assistance.

This section authorizes the Federal Emergency Management Agency to provide support to states for the creation of online guides to provide more detailed information for disaster victims.

Sec. 214. Clarifying Sheltering Assistance Eligibility.

This section clarifies that absence of a fixed address for a disaster victim does not impact

eligibility and directs the Federal Emergency Management Agency to provide alternative methods of determining eligibility.

Sec. 215. Access to Lifesaving Non-Congregate Sheltering.

This section clarifies for individual and households eligible for non-congregant sheltering that they are not required to provide a credit card or security deposit to access this sheltering assistance.

Sec. 216. Assistance for Total Loss.

This section directs that when a homeowner suffers a total loss from a disaster the Federal Emergency Management Agency is authorized to provide assistance to replace the home (reduced by insurance proceeds) if the cost of doing so is less than providing temporary housing units.

Title III – Mitigation Reforms

Sec. 301. Preapproved Project Mitigation Plans.

This section establishes a process for state mitigation project plans to be submitted and peer reviewed for approval. This peer review process will create additional staff capacity at the Federal Emergency Management Agency, streamline disbursement of funding, and speed implementation of mitigation projects by having a pre-approved list of projects. The new Public Assistance program, created by Section 101 of this Act, additionally incentives states to utilize non-Federal funding sources to complete peer reviewed mitigation projects by providing an increased Federal share.

Sec. 302. Reducing Disaster Costs and Protecting Lives

This section reforms the Federal Emergency Management Agency's pre-disaster mitigation program by restructuring it to be a formula-based grant to improve predictability. The formula implements the strategic allocation of resources: 40 percent will be available to be distributed equally among states to ensure baseline mitigation capacity; 20 percent of funding will be distributed based on each state's vulnerability to natural hazards, ensuring resources align with risk; 20 percent of funding will be distributed on a combination of population size and median income, targeting areas with greater potential impact and lack of available resources; and 20 percent of funding will be distributed to states with mitigation projects located in economically distressed or rural areas, to enhance resilience in communities with smaller tax bases.

This section also includes an **existing** statutory set-aside for Tribal community governments. Additionally, this section authorizes applicants to use pre-disaster mitigation funds disbursed via formula for the development of the project mitigation plans described in Section 301 and preserves the existing Direct Technical Assistance program.

Sec. 303. Resilient Buildings and Communities.

This section updates the definition for applicable building codes to include the latest two published editions with flexibility for states to account for specific hazards. This section would also establish a residential resilience pilot program.

Sec. 304. Strengthening Hazard Risk Reduction.

This section enables funds from the Federal Emergency Management Agency's hazard mitigation and pre-disaster mitigation programs to be combined for large and innovative projects. It also eliminates the requirement that homeowners bear the up-front costs of home retrofits funded through the Federal Emergency Management Agency's mitigation programs. By replacing the current reimbursement-based model with a direct funding structure to reduce financial barriers, the section removes uncertainty for homeowners and accelerates project implementation.

Sec. 305. Utility Resiliency.

This section incentivizes faster power restoration after a disaster by clarifying eligibility to build in mitigation.

Sec. 306. Additional Amendments to Hazard Mitigation Revolving Loan Fund.

This section improves the implementation of the *Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act* by increasing the administrative cost set-aside from two to four percent of a capitalization grant and allowing entities with relevant expertise, such as infrastructure banks or public finance authorities, to fully administer revolving loan funds by broadening the definition of eligible administering agencies beyond emergency management.

Sec. 307. Streamlined Hazard Mitigation Application Process.

This section directs the Federal Emergency Management Agency to develop a consolidated grant application for pre-disaster and post-disaster hazard mitigation funding, streamlining the application and review process to improve efficiency, reduce the administrative burden, and expedite access to mitigation resources.

Sec. 308. Study and Report on Mitigation Benefits.

This section directs the Federal Emergency Management Agency Administrator to conduct a study to evaluate the effectiveness, long-term cost savings, and strategic impact of the Federal Emergency Management Agency funded hazard mitigation activities across the United States. The findings are required to be reported to Congress, updated annually, and made available online in a searchable, user-friendly format.

Title IV – Transparency and Accountability

Sec. 401. GAO Review on the FEMA Transition.

This section directs the Government Accountability Office (GAO) to monitor and review the Federal Emergency Management Agency's transition to an independent agency.

Sec. 402. Transparency and Online Accountability.

This section improves transparency of disaster spending by requiring disaster assistance to be reported publicly by the Federal Emergency Management Agency, SBA, and HUD through a website developed and managed by Office of Management and Budget (OMB).

Sec. 403. Prohibition on Political Discrimination.

This section prohibits discrimination based on political affiliation in disaster assistance.

Sec. 404. Review of Burdensome Regulations and Policies.

This section directs a GAO review of the Federal Emergency Management Agency regulations and policies to determine their necessity, if they slow and increase costs for disaster assistance, whether they conflict with statute, or are obsolete.

Sec. 405. Report on Assistance to Individuals.

This section directs the Administrator of the Federal Emergency Management Agency to submit a report on the average amount of individual assistance received by households at various income levels.

Sec. 406. Individual Assistance Dashboard.

This section directs the Administrator to publish an online web tool that displays for each major disaster declaration the number of individual assistance applications received, the number of applications approved and denied, a ranked list of reasons for denials, the total dollar amount of assistance provided to property owners and renters, and the percentage of housing stock destroyed.

Sec. 407. GAO Report on Preliminary Damage Assessments.

This section directs the GAO to study the accuracy and fairness of the Federal Emergency Management Agency's practices when conducting preliminary damage assessments for the purposes of providing assistance under section 408 of the *Stafford Act*.

Sec. 408. Improved Rental Assistance.

This section directs the Federal Emergency Management Agency to review challenges renters face when seeking Federal disaster assistance and any disparities of assistance provided to homeowners and renters pursuant to section 408 of the *Stafford Act*. Further, the section requires the Federal Emergency Management Agency to develop a plan that addresses any identified challenges and disparities, including any recommendations for legislative action.

Sec. 409. GAO Assessment on Identity Theft and Disaster Fraud in Disaster Assistance Programs.

This section directs the GAO to assess issues of identity theft and fraud in disaster assistance.

Sec. 410. GAO Study on Insurance Utilization for Public Assistance-Eligible Facilities.

This section directs the GAO to study the effect of Public Assistance for public infrastructure on insurance utilization for eligible facilities.

Sec. 411. Study on Wildfire Management Plans.

This section directs the GAO to review the need for wildfire management plans and how or whether states with high risk of wildfires are producing and adhering to such plans.

Sec. 412. Effectiveness of Local, State, Territory, and Federal Alerting Systems.

This section directs GAO to review the effectiveness of alerting systems in disseminating timely and relevant information during weather-related emergencies to help communities develop better policies and procedures for emergency response and enhance public safety.

Sec. 413. GAO Review of Management Costs.

This section directs GAO to review the actual management costs provided to states and local governments pursuant to section 324 of the *Stafford Act*.

Sec. 414. Report on Coordination of Disaster Assistance to Individuals.

This section requires the Federal Emergency Management Agency to provide a report to Congress, in coordination with other relevant agencies, to improve the comprehensive delivery of disaster assistance to individuals.

Sec. 415. GAO Review of Cost Savings Associated with Repair and Rebuilding Reforms.

This section directs GAO to complete a study on the repair and rebuilding reforms included in the Act.

Sec. 416. Transparency for Disaster Declarations.

This section requires the President to provide an explanation upon the approval or denial of disaster declaration requests.

Sec. 417. Fast-Moving Disasters Working Group.

This section directs the Federal Emergency Management Agency Administrator to convene a working group to develop best practices for preparing for, mitigating against, public alerting, and responding to fast-moving disasters.

Sec. 418. Public Assistance Dashboard.

This section directs the Administrator to publish an online web tool that displays information for each major disaster declaration on cost estimates, the status of Agency review and approval, project-level progress updates, and other relevant information.

Sec. 419. Improving Disaster Workforce Retention.

This section directs the Federal Emergency Management Agency Administrator to study the existing workforce challenges to hire and retain Federal employees in Hawaii, Alaska, and the United States territories and identify solutions to address these shortages.

Graves, Transportation Committee Leaders Introduce Bipartisan Bill to Dramatically Reform FEMA

July 24, 2025 **Press Release**

WASHINGTON, DC – Transportation and Infrastructure Committee leaders introduced legislation in the U.S. House that would provide the most robust legislative reform of the Federal Emergency Management Agency (FEMA) and federal disaster assistance programs in decades.

The *Fixing Emergency Management for Americans (FEMA) Act of 2025* (H.R. 4669) was introduced by Transportation and Infrastructure Committee Chairman Sam Graves (R-MO); Transportation and Infrastructure Committee Ranking Member Rick Larsen (D-WA); former Economic Development, Public Buildings, and Emergency Management Subcommittee lead Republican Daniel Webster (R-FL); and Economic Development, Public Buildings, and Emergency Management Subcommittee Ranking Member Greg Stanton (D-AZ). The *FEMA Act* was introduced following Graves' and Larsen's release of a discussion draft bill on May 8, 2025, and the subsequent feedback the Committee received on the draft from Members of Congress and the emergency management stakeholder community.

The *FEMA Act* streamlines the federal government's disaster response and recovery programs while also making FEMA a cabinet-level agency once again that is directly accountable to the President. The bill rewards effective state and local preparedness, protects taxpayers, cuts red tape, and ensures that relief efforts are fast, fair, and free from political bias.

"The American people need an emergency management system that works quickly and effectively, not one that makes disaster recovery more difficult," said **Chairman Graves.** "But time and time again, we've heard the same story from state and local officials, emergency managers, and disaster victims: the federal process is too slow, complicated, and disconnected from the realities on the ground. Communities trying to rebuild are forced to navigate a maze of complicated rules, conflicting timelines, and mountains of

burdensome paperwork. FEMA is in need of serious reform, and the goal of the *FEMA Act of 2025* is to fix it. This bill does more than any recent reforms to cut through the bureaucracy, streamline programs, provide flexibility, and return FEMA to its core purpose of empowering the states to lead and coordinating the federal response when it's needed."

"Billion-dollar disasters—like the devastating 2021 flooding in Skagit and Whatcom counties – threaten the safety and livelihood of communities in Washington and across America as the severity of disasters increase," **Ranking Member Larsen** said. "This bipartisan bill will make FEMA stronger and more efficient, giving it the tools it needs to provide relief to disaster-impacted communities like those in my district hit by the 2024 Bomb Cyclone. Thank you to my counterpart, Chairman Sam Graves, for partnering on this bipartisan solution."

"As a Floridian, I know firsthand the damage that hurricanes and natural disasters bring, and how important effective preparation, response and relief is when tragedy strikes," said **Rep. Webster**. "Florida has set the gold standard for disaster mitigation and emergency response, and this legislation builds on that success at the national level. By streamlining FEMA and cutting red tape, we ensure that federal disaster response is faster, more efficient, and accountable to the American people."

"FEMA's mission is to help Americans in their darkest hour. The agency isn't perfect, and its job is getting harder as disasters grow more frequent and more severe. But the solution is not to tear FEMA down – it's to work across the aisle to build FEMA up," said **Ranking Member Stanton**. "This bipartisan bill takes common-sense steps to streamline the agency and make sure communities get disaster assistance quickly, efficiently and fairly."

The text of the *FEMA Act of 2025* is available here.

A section-by-section summary of the *FEMA Act* is available here.

Summary of the *FEMA Act of 2025*

The *FEMA Act of 2025* restores FEMA's original status as an independent agency, reporting directly to the President and overseen by its own inspector general.

- This structure mirrors the *Stafford Act*, which authorizes the President to direct federal disaster response efforts through the Disaster Relief Fund.
- Returning FEMA to a Cabinet-level agency will empower the Administrator to lead a coordinated, government-wide response to disasters.
- FEMA will become more agile and focused on helping Americans – not bogged down by having its resources and personnel diverted to support non-*Stafford Act* disasters.

The *FEMA Act of 2025* puts disaster-impacted states in the driver's seat, helps dollars reach communities faster, injects common sense, and cuts red tape that can drag out disaster recovery for decades.

- By replacing the slow and bureaucratic rebuilding process with faster, project-based grants, states will be able to set the pace of recovery, reduce their dependence on costly consultants, and prioritize the highest need projects, without having to take out expensive loans or wait years for reimbursement.
- For the first time, states are incentivized to make their own investments in mitigation, robust state rainy day funds, and private insurance policies.
- This legislation also makes critical reforms to federal permitting and procurement processes to speed up rebuilding projects and eliminate unnecessary delays.
- In addition, the *FEMA Act of 2025* establishes a Recovery Task Force charged with closing out more than 1,000 lingering disaster declarations dating back to Hurricane Katrina and directs FEMA to improve coordination across all federal agencies involved in disaster recovery.

The *FEMA Act of 2025* makes commonsense changes to help disaster aid work better for survivors, while saving taxpayer dollars.

- Disaster survivors will complete a single, streamlined application when applying for assistance, significantly reducing the paperwork burden.
- FEMA must provide clear, understandable notices to disaster survivors, ending the confusion caused by complex and jargon-filled denial letters.

support is available for disaster survivors.
- States are given more flexibility to determine the best emergency housing solution for a particular disaster.

The *FEMA Act of 2025* strengthens efforts to protect communities before a disaster occurs.

- The *FEMA Act 2025* overhauls FEMA's existing mitigation framework to accelerate project timelines, reduce long-term disaster costs, and ensure greater coordination across federal funding streams, so states can more effectively leverage resources.
- States can pre-vet mitigation projects through a peer-review process to speed up funding when disaster strikes and combine funds from federal programs to expedite the completion of critical projects.
- The *FEMA Act of 2025* clarifies building code requirements, ensuring states retain the flexibility to tailor standards to the hazards they face.
- The legislation also supports homeowners as they invest in cost-effective mitigation improvements, reducing long-term disaster costs.

The *FEMA Act of 2025* prevents the politicization of disaster aid and demands greater transparency and accountability from FEMA.

- The *FEMA Act of 2025* strictly prohibits any political discrimination in providing disaster recovery assistance. It directs the Office of Management and Budget to establish a centralized public website that tracks disaster assistance funding across the federal government.
- The bill mandates a full Government Accountability Office review of all FEMA regulations and policies to eliminate outdated, conflicting, and unnecessary rules.
- It also requires an assessment of identity theft and disaster fraud risks, and directs reviews related to insurance coverage, the effectiveness of public alerting systems, and cost savings associated with the reforms in the discussion draft.

July 14, 2025

The Honorable Sam Graves
Chairman
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

The Honorable Rick Larsen
Ranking Member
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

RE: Comments on FEMA reform discussion draft, the FEMA Act of 2025

Dear Chairman Graves and Ranking Member Larsen:

The undersigned organizations are pleased to provide feedback to the discussion draft FEMA reform legislation. Building smart, modern, resilient infrastructure as among our top priorities. We applaud the Committee for providing a framework for community preparedness going forward. Congress has a critical role to play.

The economics of resilience are an important catalyst in ensuring we are preparing ahead of the next crises. The U.S. Chamber together with the Chamber Foundation and Allstate released *The Preparedness Payoff*, showing that for every $1 invested in predisaster mitigation and resilience projects and measures, there are $13 in reduced losses and economic savings. Resilience is simply put, good public policy.

We agree with the provisions in the bill streamlining the permitting process in particular for waivers for projects that prioritize improved building codes and predisaster mitigation, which can be key contributors to economic growth.

As you advance this important legislation, we offer recommendations for your consideration:

1. Ensure a strong federal role . There is a clear federal role and need for assisting states and communities preparing for and responding to disasters. Therefore, we support the Committee's recognition for the continued existence for FEMA. While we agree with the Committee's support to make FEMA an independent agency, we remain willing to explore alternatives that have comparable or improved outcomes that maintain the federal role in reducing risks that communities and companies face from disasters.

2. **Broaden stakeholders consulted as part of the advisory panel.** In addition to engaging government experts at all levels to align approaches to preparation, response, and recovery, we believe the legislation should include relevant members of the private sector and other stakeholders, who are often on the frontlines for community resilience and provide important perspectives on business continuity and community engagement measures and efforts.

3. **Offer flexible block grants weighted toward predisaster mitigation.** We support a unified and streamlined disaster application system, including web-based interagency information sharing to catalyze cooperation and efficiency. We urge, however, that states be encouraged to prioritize projects focusing on predisaster mitigation and resilience results (including the highest risk communities). The legislation should authorize meaningful funding for projects and measures that help prepare for the next crises.
    a. **Change "may" to "shall" when providing postdisaster funding for predisaster mitigation.** Under Section 203 of the Stafford Act, the President "may" establish a program to provide technical and financial assistance to states and local governments to assist in the implementation of predisaster mitigation measures, allowing an administration to optionally forgo implementation. In order to provide states and local governments with consistent, reliable hazard mitigation grants, the FEMA Act should amend subsections (b) and (c) of Section 203 of the Stafford Act, by striking "may" and inserting "shall" in both subsections. This funding should be a component of the block grant approach.

4. **Provide additional tools and incentives** . Your legislation should continue to capitalize the resilience revolving loan program, established under the Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM Act), which provides low interest loans to local governments for disaster mitigation projects. We ask that the Committee offer increased administrative set aside to assist in incentivizing state implementation.

    We support efforts to incentivize states, federally recognized tribes, and territories to invest in cost-effective predisaster mitigation measures, including the adoption and effective implementation of consensus-based building/construction codes. We commend the draft legislation for including a provision "facilitating the adoption and enforcement…" of building codes as an incentive to increase the federal share of Public Assistance funding. We also

suggest that the federal cost share for predisaster mitigation projects, such as the adoption and enforcement of building codes, be included on a sliding scale of up to 85% to incentivize these approaches. Finally, we recommend that the FEMA Act of 2025 direct the Agency to obligate previously appropriated funds to existing predisaster mitigation awardees upon the bill's enactment.

5. **Include a multi-hazard approach.** The legislation should enable an integrated all hazard approach, including droughts – in addition to earthquakes, flooding, tornados, wildfire, and other severe storms contained in the draft.

6. **Promote public-private partnerships.** While the Stafford Act does allow public-private partnerships under certain conditions, more flexibility should be provided especially for implementation of predisaster mitigation projects and the inclusion of philanthropy, foundations, and donor-advised funders to maximize federal programs and dollars.

FEMA is critical to ensuring the resilience of communities and companies across the U.S. Your Committee can help facilitate a national dialogue to help gather constructive ideas to achieve that objective. We stand ready to assist you.

Sincerely,

Alliance for Global Water Adaptation
American Property Casualty Insurance Association
American Society of Civil Engineers
American Society of Landscape Architects
Future Proofing America
Insurance Institute of Business & Home Safety
International Association of Plumbing and Mechanical Officials
International Code Council
National Association of Flood and Stormwater Management Agencies
National Association of Mutual Insurance Companies
National Hazard Mitigation Association
Precovery Labs
Reinsurance Association of America
Theodore Roosevelt Conservation Partnership
U.S. Chamber of Commerce
World Ocean Council

Upper Mississippi River
Quarterly Meetings

Attachment F

Perceptions, Engagements, and Values of the Mississippi River

Investigating the Mississippi River:

A qualitative analysis of perceptions, engagement, and values

September 2025

Authors: Natalie Warren, Bonnie Keeler

Center for Science, Technology, and Environmental Policy

Humphrey School of Public Affairs

University of Minnesota

This work is part of a three-year project (2022-2025) called "Investigating the distribution and value of water quality benefits along the Mississippi River" funded by the Environmental Protection Agency (EPA) to research the value of a cleaner Mississippi River with the goal of informing federal water policy. This $742,000 project is in collaboration with researchers from Michigan State University and the University of Washington deploying multiple methods to better understand how different communities perceive the benefits and costs of a changing Mississippi River.

CENTER FOR SCIENCE, TECHNOLOGY, AND ENVIRONMENTAL POLICY

UNIVERSITY OF MINNESOTA

Abstract

This report analyzes pre-existing interviews with residents along the Mississippi River from the headwaters to the Gulf of Mexico. Our goal is to provide qualitative data on respondent's perceptions, values, and engagement with the river to better inform federal policy decisions on water quality investments and support government and nonprofit communications and strategic planning efforts along the river. Our guiding research questions were:

1. How do resident's perceptions, engagement, and values of the river differ throughout the diverse geophysical regions of the Mississippi River corridor?
2. What correlations emerge between how people engage with the river and how they talk about the river throughout the regions?

This work summarizes data into a table to compare geographic features, river access, engagement, perceptions, values, and threats across the nine qualitative regions outlined by the Relay of Voices project. We incorporated respondent quotes in a narrative about the ways in which perceptions, engagement, and values differ throughout the regions and distilled key takeaways from the interview data to provide insight into the varied relationships people hold with the river throughout its diverse regions.

Subject Keywords: Recreation & Engagement, Water Values, River Perceptions, Qualitative Analysis

Project Description

This research explores how people who live along the Mississippi River perceive, engage with, and value the river throughout its diverse geophysical regions. We found that relationships with the river vary throughout the 2,300-mile corridor and that engaging with the Mississippi River helped respondents build a relationship with the water and sustain important generational place-based relationships that are under threat from changing climate, river infrastructure, and degrading water quality. This report is part of a larger research project funded by the Environmental Protection Agency (EPA) to deploy a diversity of valuation instruments, applied across varying social, ecological, and economic characteristics to investigate how insights from different methods at different scales lead to alternative policy conclusions. The broader research project considers diverse ways of knowing and integrates place-based social-ecological research with more traditional modeling and quantitative assessments (Balvanera et al. 2017). This work analyzes qualitative data in the form of pre-existing interviews with residents along the Mississippi River to capture localized and place-based relationships across varied social and geophysical regions of the river. By pairing diverse perspectives and interdisciplinary research methods, we hope to better understand and communicate complex water values along the Mississippi River.

Importance

Over the next several decades billions of public and private dollars will be invested in conservation and restoration activities aimed at improving water quality, upgrading infrastructure, and restoring floodplain habitat along the Mississippi River. Proposed legislation to establish the Mississippi River Restoration Resilience Initiative—focused on habitat conservation, ecosystem services, and water quality improvements—and groups working to improve the river like the Mississippi River Cities and Towns Initiative, One Mississippi, America's Watershed Network, The Nature Conservancy, Friends of the Mississippi River, and the Lower Mississippi River Foundation, among many others, would direct additional funding to these aims. Future investments will intersect with existing landscapes of inequality along the river with differential outcomes for people and nature, and there isn't enough information on river-wide water values to sufficiently inform policy. For example, the push to increase connectivity of land and water to ease flood events could lead to the decertification of levees, harming some communities while helping others. There is ongoing tension between economic growth and environmental health in poor communities as petrochemical plants expand operations near Baton Rouge. Communities in North Minneapolis are concerned about how a planned river park will affect local property values. A river restoration project near the confluence of the Minnesota and Mississippi Rivers was completed in a way that restricted native peoples access to Dakota sacred sites. Residents of St. Louis, MO face health threats due to inadequate sewer and stormwater infrastructure exacerbated by climate change, and communities in New Orleans and surrounding parishes struggle to maintain connections with lands and livelihoods in the face of subsidence, harmful algal blooms, and a threatened local fish and shellfish economy. Local, state, and federal actors trying to address challenges on the river need information on perceptions, uses, and values of the people who live along its banks in

order to more strategically and equitably prioritize investments in watershed management and incentive programs.

While many projects have elevated the voices and stories of people living along the river in smaller geographical regions there has not been an analysis of qualitative data to identify perceptions, engagement, and values throughout the entire river across its diverse social and biophysical gradients. The Mississippi River is federally managed by Upper River and Lower River, but the river holds multitudes of perspectives and invites different interactions in much smaller regions that need to be accounted for to better inform federal policy decisions and water quality investments. Policymakers often struggle to interpret ecosystem services research that makes generalized claims about efficiency at larger scales and sociological research that sees values as contextual, embedded, and socially constructed (Wegner and Pascual 2011, Hausman et al. 2016). As the nation considers a federal Mississippi River program and other legislative initiatives it is vital to look beyond political boundaries to understand different ways of knowing the river across its social and geophysical gradients.

Theoretical Context

The value of a place is mediated by human experience and interaction. How communities are oriented to land and water facilitates what relationships are possible. What and who people encounter as they interact with a landscape not only “impacts what becomes observable and present for meaning making” but shapes their identities through repetition and time (Marin and Bang, 2018). Access to nature significantly shapes values, preferences, and behaviors through its physical, psychological, and cultural impacts. Regular exposure to natural environments fosters a deeper appreciation for the beauty, complexity, and interconnectedness of ecosystems, often leading to stronger pro-environmental values and a sense of stewardship. Individuals who engage with nature may develop a heightened responsibility to protect and preserve the environment (Nisbet et al., 2009). Human-nature interactions also shape preferences, influencing recreational choices, lifestyle priorities, and aesthetic inclinations.

The formation of spatial and geographic knowledge is a constitutive process by which individuals, groups, and institutions generate, share, and institutionalize values. Individual and community perceptions of a place are grouped spatially based on geophysical attributes, accessibility, and historical and cultural contexts. For example, urban environments with limited green spaces can lead to "nature-deficit disorder," diminishing opportunities for these beneficial connections and environmental values to develop (Louv, 2008). Conversely, communities with greater access to natural spaces tend to see stronger commitments to sustainability, improved well-being, and greater community cohesion, fostering values and behaviors that align with long-term ecological and social health (Hartig, et al., 2014). Historical and cultural contexts also shape local discourses. Environmental justice scholars and other social scientists have demonstrated that cultural associations with water bodies are deeply influenced by historical context, including legacies of racist and exclusionary policies that shape exposure to water-related benefits or harms, and societal norms that contribute to the formation of water values (Taylor, 2014).

The Mississippi River has varied geophysical attributes and diverse opportunities for interaction across a connected geography and is a prime place to research how geophysical attributes influence discursive formations. Most research aggregates geophysical features into broad categories like forests or mountains, but there is little exploration of smaller-scale features, such as the changing landscape across one river from its headwaters to its delta. In the case of the Mississippi River, some communities are divided from the river through the construction of levees while others readily access and recreate in the river and its backwaters. As a result, for someone who lives near the headwaters, the river may be a place of spiritual renewal and recreation, while someone living closer to the river's delta may consider the water as a threat to their livelihood due to increased flooding and pollution. Understanding localized relationships with place is the first step in analyzing how coalitions are formed and environmental issues are defined. It is important to study localized needs and wants for places as local discourses become motives for conduct and policy (Littlejohn, 1977).

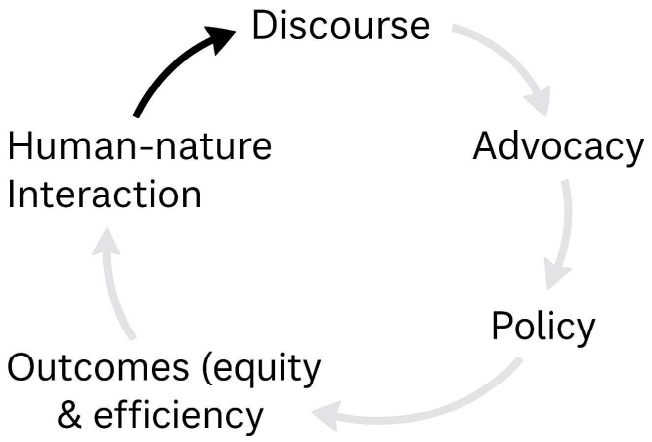


Figure 1. *Theory of Change.*

Figure 1 shows the theory of change grounding our research. For this project, we will focus on the first interaction—how human-nature interactions (engagement) influence discourse (articulations of values and perceptions)— centering the Mississippi River corridor as an ideal geographic location to investigate these complex relationships. Our guiding research questions are (1) How do people's perceptions, engagement, and values of the river differ throughout the diverse geophysical regions of the Mississippi River corridor? And (2) What correlations emerge between human-nature interactions and discourse throughout the regions?

About the Mississippi River

The Mississippi River stretches over 2,300 miles from Lake Itasca in northern Minnesota to the Mississippi River Delta in the Gulf of Mexico. The river either borders or passes through the states of Minnesota, Wisconsin, Iowa, Illinois, Missouri, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana. The corridor also represents notable diversity in race, income, and education of residents, with northern counties tending to be white, well-educated, and affluent relative to southern counties and parishes (Figure 2).

Agriculture has a dominant role in the quality and quantity of water in the Mississippi River which receives water from tributaries draining 32 states, including Midwestern grain-producing regions. Agriculture contributes nutrient pollution in the form of nitrogen and phosphorus that

drive the formation of the Gulf of Mexico hypoxic zone. Protecting existing croplands from flooding has led to investments in levees and flood control structures, disconnecting the main channel from the floodplain. Water quality and conservation goals also vary across the river, with the upper reaches struggling with excess sediment that threatens infrastructure and recreational activities, while dams and flood control structures prevent sediment from reaching the lower sections of river, contributing to land loss and subsidence. There are 250 industrial facilities along the river, with the most-polluting industries largely located in the southern states. Over 20 million people get their drinking water from the river, with headwaters cities like Minneapolis enjoying relatively high quality water that declines in quality as the river flows south to New Orleans (National Research Council 2008). Management of the Mississippi is complicated by a network of overlapping jurisdictions, conflicts over property rights, and tradeoffs between recreation, fishing, shipping, and agricultural sectors. Current efforts to restore the river focus on invasive species management, adopting best management practices on croplands, floodplain reconnection and wetland restoration, and sediment diversions, among other tactics. States have varied approaches to water quality monitoring and water policy implementation and enforcement across this shared geography.

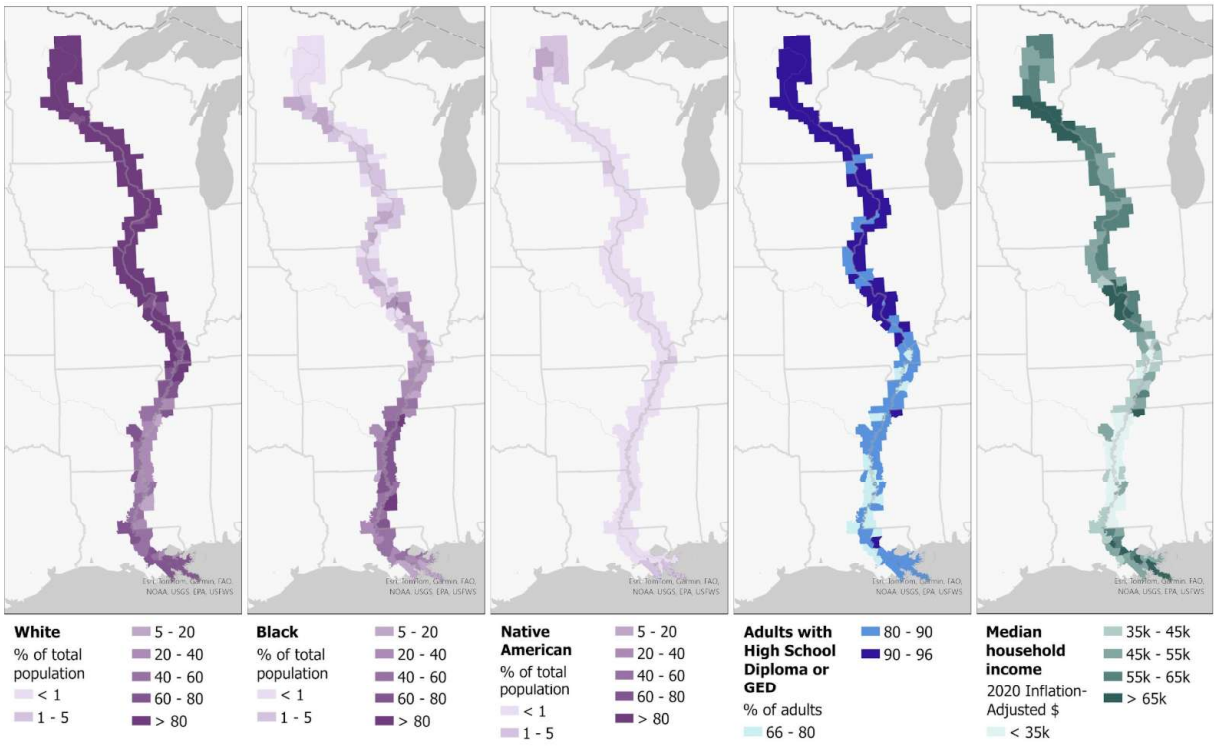


Figure 2: *Demographics along the Mississippi River.* Demographics along the Mississippi River corridor by county (Manson, Schroeder, Van Riper, Kugler, & Ruggles, 2024, ACS 2016–2020 block groups).

Methods

This research is an analysis of the interviews conducted by Relay of Voices in 2019 with people who live along the Mississippi River. Victoria Bradford Styrbicki and Tom Styrbicki ran and biked

the length of the Mississippi River under the name “Relay of Voices” to listen to and learn from communities about their relationship with the river. During their expedition they recorded over 600 interviews with people who live, work, and play along the river. The interviews the Relay of Voices team conducted were unstructured, generally asking people about why they make this place home with open-ended questions, sometimes through one-on-one conversations and sometimes in a group. This method provided flexibility and allowed for respondents to follow insightful and unfolding conversations based on participant comments (Young et al., 2018). The Relay of Voices team synthesized their interviews and conversations into an online storytelling platform to share stories of people along the river in various regions throughout the 2,300-mile corridor. They describe the project as “a collection of voices depicting how the Mississippi River shapes a nation and how we shape the Mississippi” (Relay of Voices, 2019). They shared their data with our research team and gave us access to the text documents of their website content, which we imported into the qualitative data analysis software NVivo to code. We used their synthesized stories with quotes instead of the raw interview data in our qualitative analysis. This allowed us to take into account their commentary and observations along the route alongside the direct quotes from respondents.

We first coded the Relay of Voices summaries broadly to pull out when people were talking about the river and then went back through to code specifically for threats, engagement, perceptions, and values. Before coding, we generated a list of interpretive codes (Miles & Huberman, 1994) and condensed them into a hierarchical set of categories and codes following the work of Johnny Saldaña (2013). Our coding scheme was as follows:

- General perceptions
- Perceived threats
    - Water quality
    - Water levels
    - River infrastructure
- Engagement with the river
    - On-water
    - River-adjacent
- River Values
    - Personal/spiritual
    - Family
    - Cultural

After coding each interview, we used key-words in context analysis to identify and summarize interview content relevant to our research questions and pulled quotes from the coded data to create the comparative summaries below. For their project, the Relay of Voices team divided the river into nine smaller regions on the Mississippi River based on biophysical characteristics that influenced how people talked about the river differently in those regions. This research follows the qualitative regions developed by the Relay of Voices project (Figure 3).

Region	Geography
Headwaters	Lake Itasca to Little Falls, MN
Gorge	Little Falls, MN to Bay City, WI
Driftless	Bay City, WI to Clinton, IA
Working River	Clinton, IA to Elsberry, MO
Confluence	Elsberry, MO to Hickman, KY
Chickasaw Bluff	Hickman, KY to Randolf, TN
Delta	Randolf, TN to Vicksburg, MS
Lower Miss	Vicksburg, MS to St. Francisville, LA
Gulf South	St. Francisville, LA to Gulf of Mexico

Figure 3: *Qualitative Regions.*

Qualitative Region Summaries

How do perceptions of the river differ throughout the qualitative regions?

Water Quality

People in the Headwaters Region (Lake Itasca to Little Falls, MN) generally report that the river is safe for fishing and swimming but not safe for drinking. People in the Gorge Region (Little Falls, MN to Bay City, WI) also report that the river is clean, with a slight increase in water quality concerns from the Headwaters Region: one interviewee noted that the water is still clean in Monticello because they are close to the headwaters, saying "the water still flows from the source and can be felt." Another person in the Gorge region stated there is poor water quality, saying "it just sucks we're so close to the beginning, the headwaters, I wouldn't get in this water…it's already so discolored, and you hear stories…" Concerns about water quality increase in the Driftless Region (Bay City, WI to Clinton, IA) where many interviewees report that the river is polluted: "There used to be lily pads and frogs, and now we just have blue green algae, which I mean isn't anything you want to interact with." Throughout the interviews for the Driftless Region people reflected on how the river has changed in their lifetime, sharing stories about swimming beaches that were now closed or animal species that they no longer see, like water snakes, mussels, and certain birds, often blaming pesticides, invasive species, and increased environmental degradation for their decline. Sediment filling in backwater channels important for fishing was the biggest water quality concern in the Driftless Region: "The River is changing…I've heard some of the guys say because of the siltation, the bottom's getting ever closer to the top, the habitat is changing."

Residents along the river in the Working River Region (Clinton, IA to Elsberry, MO) reported that the Mississippi River is "a big gross river," it's "dangerous and dirty," and reflected that "we have some pretty terrible water quality in our county"; "I know it's dirty." Interviewees in this region

Table 1. *Qualitative Data Summary Chart*.

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
Headwaters Region Lake Itasca to Little Falls, MN 376 River Miles	The Mississippi River starts its journey as a small stream that flows from Lake Itasca. It travels through large lakes, open wetlands, and dense forests—diverse habitats ideal for fishing, hunting, and recreation. The river eventually deepens and widens slightly as it flows through rural towns and small cities that rely on the river for tourism and recreation. Canoe-in campsites are abundant and managed by the Minnesota Department of Natural Resources along the state water trail. The Mississippi Headwaters Board preserves and protects these first 400 miles of the river from erosion and development.	River access sites: 73 River access/mile: .19	People are immersed in the river and engage with it directly through kayaking, swimming, hiking, running, fishing, hunting, trapping, ricing, photographing, painting, disc-golfing, snowshoeing, mountain biking, camping, and just being by the water. Some enjoy the rural lifestyle and endless outdoor opportunities in this area.	In the Headwaters Region, people expressed that the river is clean, a place for interaction, “magic,” culturally significant, something to fight for, not against, a site of economic renewal, and a place that locals interact with often and know well. The interviewees in this region believe the water is safe for fishing and swimming but not safe for drinking.	The river is “magic,” culturally significant, something to fight for, and a site of economic renewal. Interviewees showed a reverence and deep love for the river, it is “in their blood,” and embedded into a way of life that centers family land, childhood memories, and spiritual renewal.	Pipelines, invasive species, mining, big industry, flooding, unpredictable weather, periods of flood and drought, increased smoke from wildfires

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
Gorge Region Little Falls, MN to Bay City, WI 177 River Miles	The river continues to widen as it flows downstream through small towns and more populated urban areas like the city of St. Cloud and the metropolis of Minneapolis/St.Paul. Industry along the river increases in some sections while in others the river flows through conservation areas and state-designated wild and scenic stretches. The river through the Twin Cities is managed by the National Park Service as part of the Mississippi National River and Recreation Area. Starting in St. Paul, the river becomes a place for global commerce and navigation. River users multiply—tugboats, barges, paddlers, pleasure craft, and houseboats—and navigate larger river infrastructure like lock and dams and wing dams along the sides of the river.	River access sites: 79 River access/mile: .45	The river is a place for recreation and interaction. Interviewees trap, hunt, canoe, fish, tube, bike, swim, forage, bird, camp, paint, photograph, and "just hang out" on the river.	The river is overall clean—but there are mixed perceptions of water quality and some concerns about water pollution and dangerous currents during high water	The river is culturally significant, a place for healing and spiritual renewal. Generational land and deep lineages permeated through the interviews as people described family ties to the land and water that "runs deep in their blood." Someone remarked that the cultural significance of the river expands beyond just the people living along it but through stories and books that, in turn, made them feel proud to live on its banks.	Agricultural runoff, sedimentation, more frequent and sustained flooding, unpredictable weather patterns

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
Driftless Region Bay City, WI to Clinton, IA 231 River Miles	The valley widens as the river flows through large lakes and wetland areas with braided backwater channels ideal for fishing, hunting, and recreation. Scenic bluffs line the river through this region, lined with state parks and protected natural areas. The US Fish and Wildlife Service manages the Upper Mississippi River National Wildlife and Fish Refuge that stretches 261 river miles from Wabasha, Minnesota to Rock Island, Illinois, and protects more than 240,000 acres of Mississippi River floodplain. Diverse river users navigate river infrastructure like lock and dams and wing dams managed by the Army Corps of Engineers.	River access sites: 223 River access/mile: .97	People living along the river in the Driftless Region regularly interact with the water to fish, boat, hunt, tube, swim, hike, bird, canoe, and kayak. There is a large sailing community on Lake Pepin, houseboat communities in LaCrosse and Winona, and this region is sprinkled with state parks “hopping with campers and canoers.” People fish and trap on the river year-round, and large fishing and boating events are common. Infrastructure like wing dams and lock and dams can pose a challenge to recreationalists. Many people expressed that they get on the river often, but you have to know the river to safely interact with it. While people get out on the main stem of the river often, side channels, backwaters, islands, and sandbars are important spaces outside of the shipping channel for diverse users to safely recreate and interact with the river.	There are mixed perceptions of water quality, interviewees expressed that the water is both relatively clean and polluted. It is a site of economic renewal, a way of life, a scenic place, and a paradise for outdoor activities. Interviewees reflect on how the river has changed in their lifetime, sharing stories about swimming beaches that were now closed or animal species that they no longer see, like water snakes, mussels, and certain birds, often blaming pesticides, invasive species, and increased environmental degradation for their decline.	People have strong emotional and cultural ties to the river and People shared that the river is “heaven”, it “gets in your blood,” and it “slows you down.” The cultural significance of the river is tied to family land, generational connections, and a sense of pride for river traditions. Family ties to land and the river were passed down through the generations; river life is “an art you have to learn…that needs to be taught through the generations.”	Sedimentation and backwaters silting in, trash, invasive species, agricultural runoff, general environmental degradation, lock and dams and wing dams complicate recreation, dredging operations and river infrastructure can harm commercial and recreational fishing

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
Working River Region Clinton, IA to Elsberry, MO 269 River Miles	The river continues south through limestone bluffs and forested hills into flatter terrain with expansive floodplains, levees, and bottomlands. Land along the river in the Working River Region is less protected than upstream regions—apart from smaller pockets of wildlife areas, state forests, and conservation areas with backwater areas for recreation—and industry becomes more common along the riverbank.	River access sites: 80 River access/mile: .3	There is a trend toward "looking at" the river and river-adjacent interaction instead of engaging directly with the river. Recreational uses varied, some people saying the river is too dangerous to interact with and others saying they regularly recreate on the river, saying they would go on a boat on the river but they would not get in the water. People expressed that there has been a decrease in recreation on the river over time, sharing stories of growing up ice skating and having bonfires on the river in the winter paired with a sadness that the river no longer freezes over due to warmer temperatures.	There were mixed perceptions of water quality but generally people expressed the river is "a big gross river," "dangerous and dirty," with "terrible water quality." People perceived the river to be a powerful waterbody that warranted their respect and caution.	Despite perceptions of the river being dirty and dangerous, people still expressed a connection to the river as a healing and magical place that draws them in. In urban areas the river can go unnoticed but it is still a way of life in more rural areas where people regularly fish and hunt on the water. Connection to the river is intertwined with family land and childhood memories on the water. The river is culturally significant through celebrations like Mark Twain festivals and in stories of old river life passed down and sustained by people with deep roots in the valley. People talked about how riverfronts have changed, remembering things like big beautiful shade trees along the riverbank that have been lost due to flooding over time.	Agricultural run-off, industrial chemicals, sedimentation, increased flood events, unpredictable weather, river infrastructure and management decisions, invasive species, warming waters. People shared stories of communities that used to be on the river that no longer exist due to flooding.

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
Confluence Region Elsberry, MO to Hickman, KY 286 River Miles	The river flows through high bluffs and rolling hills before the Missouri River joins its waters just north of St. Louis, MO. After the final lock and dam on the Mississippi River in Alton, IL the river flows uninterrupted to the sea, increasing in speed and volume as it enters the alluvial plain—relatively flat land in the valley with rich soils good for farming. The Army Corps' levee system begins just before the Ohio River joins the Mississippi River at Cairo, IL and levees line the river valley from there on south, physically separating communities from the river. As a result, interconnected backwater channels are less common in this region.	River access sites: 35 River access/mile: .12	Some interviewees shared that they boat, swim, duck hunt, water ski, kayak, and just spend the day "drinking and having a good time" on the river. While some people engage in on-water activities, most people interact with the river through river-adjacent recreation like biking, walking, birding, camping, and riding ATVs. Paths along the river—often on top of levees—provide a space for people to see, enjoy, and engage with the river. Some people engage with the river daily through work.	The river is "treacherous and dirty"—has a dangerous current that is "not something to mess with." Interviewees expressed they wouldn't eat the fish or canoe on the river. Perceptions of the river are dependent on if communities are rural or urban and what level of flooding they experience. Reflecting on the role of the river in their community, one interviewee said, "I don't think the river affects us on a day to day basis."	The river holds strong emotional and personal significance, people saying that "it just calls you," and that the river has a certain healing power and energy. Childhood memories center the river as people shared stories of life in the bottomlands and even memories of before the levees were built. One interviewee reminisced about her youth fishing and squirrel hunting in "the bottoms" and shared stories of fishing and partying by the water in a time when people had easier access to the river.	More frequent and sustained flooding, boils, seepage, river infrastructure and management decisions (including certification and decertification of levees), unpredictable weather. Floods are so strong and destructive in this region that towns are regularly impacted by high water events and in some cases have been completely wiped off the map.

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
Chickasaw Bluff Region Hickman, KY to Randolph, TN 151 River Miles	Bluffs rise 50-200ft above the water, protecting communities from flooding and providing long scenic views of the valley below. The river flows through rural communities, a state park, and two wildlife refuges, agricultural lands, and industrial sites.	River access sites: 17 River access/mile: .11	The river and the bluffs in this region provide beautiful views and people enjoy watching the river and boats go by. Despite water quality concerns, a few people still interact with the river through boating, water skiing, commercial and recreational fishing, hunting, and trapping. People largely engage with the river through work—moving barges up and down the river or working directly with industries along the water.	Interviewees tell a story of decreasing water quality as the river continues south, often comparing their stretch of river to upstream sections, saying it is “nice and clean” further north but they wouldn’t eat the fish or canoe on the river where they are.	Ties to the river are through family land and river traditions passed down through generations. Childhood memories center stories of commercial fishing as early as eight years old and spending time with family outdoors in this “sportsman’s paradise.”	Unpredictable weather, invasive carp, sewage overflows into the river during floods. The geophysical features of the Chickasaw Bluff Region generally protect communities from floodwaters unless they are in the bottomlands, but someone in the region noted that the “water level goes up faster these days when it rains” and there was mention of the dangerous droughts communities have faced, too.
Delta Region Randolph, TN to Vicksburg, MS 333 River Miles	Bluffs taper off before the river enters the urban metropolis of Memphis, TN where industry, development, and urban parks line the river. South of Memphis, rolling hills and large oxbow lakes create river-adjacent recreational spaces.	River access sites: 54 River access/mile: .16	Hunting clubs are prevalent in the bottomlands and people fish, hunt, trap, have bonfires, kayak, canoe, and enjoy the scenic views on the Mississippi River. Many people engage with the river through work—moving barges up and down the river or working directly with industries along the water.	Perceptions of the river are mixed, but many interviewees believe the river is dirty and unsafe for fishing, swimming, or drinking. The river is a place for industry and global commerce. There is a general understanding that fighting the river with flood mitigation infrastructure was a “losing battle.” The river is a source of economic vitality as	Stories illuminated people's first memories on the river sitting around a campfire or fishing and were often tied to adventurous family trips boating up the Mississippi and Arkansas Rivers. People told tales of how things used to be, lamenting the decline of commercial fishing and the changes in land use and agriculture throughout the decades their families had been there.	Flooding, flood mitigation infrastructure and river management decisions, unpredictable weather, more sustained flooding, increased flooding, droughts, sewage overflows into the river during floods

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
				some communities are "selling the southern experience" to steamboat and cruise ship passengers.		
Lower Mississippi Region Vicksburg, MS to St. Francisville, LA 172 River Miles	The river continues through the alluvial plain with low-lying floodplains, agricultural fields, bottomland hardwood forests, expansive sandbars during low water, islands with meandering river channels, wetlands/bayous, river-adjacent oxbow lakes, and industrial sites. The Army Corps of Engineers manages the river for commercial navigation and flood control structures and levees continue to line the river valley. The river here is part of the Lower Mississippi Wild Miles where large stretches look and feel wild despite extensive flood mitigation infrastructure, port facilities, and barge terminals to support industry and commercial uses of the river.	River access sites: 17 River access/mile: .09	A strong "redneck culture" was present in this region as people regularly engaged in activities in the river, bayou, bottomlands, and backwaters. Outdoor outfitters are common and there are organized groups working to bring more people out on the river to increase recreation and change perceptions of a dangerous and polluted river.	Perceptions of the river are mixed, some people noting that it is "thriving and doing great" while others perceive the river as dangerous and the water as "polluted sewage."	The river is a place for interaction, a way of life, and a place of healing that has spiritual significance. People are drawn to the "beauty and magic" of the river, some making a living as outdoor outfitters and tour guides. Interviewees in this region felt called to the river and held deep place-based knowledge, and reflected on the cultural significance of the river in their communities.	Increased flooding, more sustained flooding, drought, flood mitigation infrastructure and river management decisions, sediment/land loss, agricultural runoff, upstream impacts, poor water quality, floods so extreme that entire communities have been displaced/ relocated
Gulf South Region St. Francisville, LA to Gulf of Mexico 265 River Miles	The river flows through levees and river control structures as commercial navigation diversifies with larger ocean-going ships navigating the river south of Baton Rouge. The delta opens into expansive wetlands/bayous including fresh, brackish, and saltwater marshes as the river disperses into the Gulf of Mexico. This region is home to "cancer alley" or the "chemical corridor" on the Mississippi River, an	River access sites: 12 River access/mile: .04	Some people expressed their communities were disconnected from the river by the levee system (generally urban areas) and others were deeply embedded in a river way of life (generally rural areas). River-adjacent recreation was common—people enjoyed views of the river and utilized the levee trails	Some people said their communities were disconnected from the river by the levee while others were deeply embedded in a river way of life. The river is a hard place to live that requires a certain adaptability and resilience of river communities.	People are drawn to the delta and have strong place-based knowledge, especially of the bayou. Hunting, fishing, trapping, and crawfishing are a way of life for some people. The river is culturally significant, closely intertwined with family and childhood memories, and long-standing traditions centering the river, like having bonfires along the levees, were passed down through the generations. Stories	Changing salinity levels, erosion and sediment/land loss, aquatic invasive species, malfunctioning wastewater systems, sinking land, flood mitigation infrastructure and river management decisions, hurricanes

Qualitative Region	Description	~# of Public Access Sites	Engagement	Perceptions	Values	Threats
	85-mile stretch from Baton Rouge to New Orleans with over 200 petrochemical plants and refineries.		for walking, running, and biking. There is a local tradition where communities make bonfires on the levee near their homes and some create boat-in campsites on the river run by local families. People mostly accessed the water through yacht clubs and marinas where they had boats to access the river, ocean, and bayous. On-water recreation is common in the bayous and backwaters more so than in the main channel of the river. River infrastructure, refineries, barges, and ocean-going ships pose a challenge to recreation and engagement with the main channel.	Interviewees expressed deep roots and love for the river, while sharing the reality of living with the boom and bust industries along the river that create challenges for public health, economic stability, and land loss. There is a perception that "we treat the river wrong" and a recognition that how the river was and is managed has unintended consequences.	illuminated how people used to engage with the river more than they do now.	creating the "perfect storm," plastic pollution, point source pollution. Boils, seepage, sustained high water levels, and flooding (dependent on whether or not people were protected by the levee system).

Table 1. *Qualitative Data Summary Chart*. Region descriptions in Table 1 were informed by federal, state, and local government and nonprofit agencies' fact sheets and descriptions of the river throughout its diverse regions (Army Corps of Engineers, MN DNR, WI DNR, US Fish and Wildlife, National Park Service, Mississippi Headwaters Board, Lower Mississippi River Foundation, Wild Miles Blog), descriptions of the regions from interview content, and the author's own knowledge from paddling the length of the Mississippi River. To calculate river access points for each region in Table 1 we used state and federal maps (MN DNR, U.S.Fish and Wildlife, U.S. Army Corps of Engineers) as well as local recreation maps and blogs (Wild Miles, GPS Navigational Charts) and confirmed their locations on Google Maps. The engagement, perceptions, values, and threats sections in Table 1 were derived solely from the interview content.

stated that they would go on a boat on the river but they would not get in the water, and one person who waterskis on the river said he can feel his skin burn from the chemicals in the river, which he remarked was "just not natural," but still skis even though he is aware of the "stuff that's in there." Similar to the Driftless Region, people in the Working River Region shared how the river is filling in with sediment—"what used to be 20 foot, now there's two foot." In regard to water quality, one interviewee shared that "there was a period for five years when they did not allow you to take any bottom feeders from the Mississippi River because of all the heavy metals."

Interviewees in the Confluence Region (Elsberry, MO to Hickman, KY) reported that the river is "treacherous and dirty," and some compared their region to upstream sections, saying it is "nice and clean" further north but they wouldn't eat the fish or canoe on the river in their region: "Up north the river is nice and clean…but you get down here, and it's treacherous and it's dirty and it's big." People in the Chickasaw Bluff Region (Hickman, KY to Randolph, TN) told a story of decreasing water quality as the river continues south, again comparing their stretch of river to upstream sections, saying it is "nice and clean" further north but they wouldn't eat the fish or canoe on the river where they are.

One interviewee's father-in-law who fishes the river regularly and sells fish in front of grocery stores said of the Delta Region (Randolph, TN to Vicksburg, MS): "the farther south that you go it's always been like tainted water, and I don't know if they've had leakage from Memphis or what, but for a while, the word out here was you just don't eat fish from there." They also expressed concerns about raw sewage being dumped into the river near Memphis. An interviewee in the Delta Region expressed concern about "agricultural drift," where chemicals from agricultural fields were negatively impacting public health, water quality, and even people's ability to safely grow their own food. When asked about their thoughts on water quality, someone said, "I couldn't tell a whole lot that it's [changed]; looks about the same to me. I'm looking at it every day, you know?"

In the Lower Mississippi Region (Vicksburg, MS to St. Francisville, LA) interviewees expressed frustration with upstream practices that were negatively impacting water quality: "The reason that a lot of the commercial fishermen failed in the '50s was pesticides dumped on the farms up north and coming down the River. It killed off the shrimp." Respondent's perceptions of water quality in this region were mixed; one interviewee stated that "we could definitely go towards a better river and microplastics and nutrients and stuff like that, but…everything that lives out here on the Mississippi River is thriving and doing great" while another interviewee reported that people think "you're going to die if you come out here, and…it's a polluted sewage."

In the Gulf South Region (St. Francisville, LA to the Gulf of Mexico), people remembered back when "everyone had shrimp boxes to catch river shrimp." Where upstream regions interviewees talked about too much sediment, near the mouth of the river respondents reported that land loss was one of their biggest issues: "When you get to Empire and you go over the bridge and you see nothing but water, that was all land 40–50 years ago." Respondents reported that changing salinity levels is also a big concern—"The ecosystem has swapped over from a saltwater marsh to this freshwater wetland"—and has negatively impacted fisheries and commercial and

recreational fishing. One interviewee stated that “it’s just sad, it’s sad that we used to sit on, you know, that was the gold in the mine…we used to sit on top of the best oyster area, oyster resource in the world, I’m telling you, in the world,” and “we haven’t had oysters over here since Katrina. The biggest oyster growing area in the United States is in Black Bay, for Louisiana, right here. None. Done and done.”

Flooding and Climate Change

In upstream regions (Headwaters to Driftless, Lake Itasca to Clinton, IA) respondents report that high waters generally impacted recreation and tourism on the river—flooding out campgrounds and triggering a “no wake” zone for boating—whereas respondents in lower regions (Working River to Gulf South, Cline, IA, to the Gulf of Mexico) state that flood waters in communities further downstream have more devastating impacts on homes, farms, and vital infrastructure. In the Gorge Region (Little Falls, MN to Bay City, WI), people shared stories about their homes flooding—”it shows you the power of the river”—and began to talk about the dangerous current during high water. One interviewee who has worked on the river for decades said, “the biggest change is in the weather. That’s the big change. The water is too damn high. Everywhere you go, any involvement with infrastructure connected to water, you’ll learn that sentiment, and it’s sort of a slow moving shock that’s deeply felt by old and middle-aged and maybe young people alike that are involved in the industry. I’ve never seen anything like it.”

In the Working River Region (Clinton, IA to Elsberry, MO), people expressed they don’t go out on the river because it is dangerous, especially during high water—“the current is a dangerous thing on the river and you either respect it or you’re gonna get hurt from it.” Several people said that they’ve heard stories of people going on the river dying or getting into accidents, one interviewee saying they were “terrified of going on the Mississippi for recreation…you couldn’t pay me to get on the Mississippi in a kayak or probably even like a pontoon.” In this region, people shared stories of ice skating and having bonfires on the river in the winter paired with a sadness that the river no longer freezes over due to warmer temperatures. There was some nostalgia for how the river used to be as people shared how riverfronts have changed, remembering things like big beautiful shade trees along the river that have been lost due to flooding over time. This was the first region where people shared stories of communities that used to be on the river that no longer exist due to flooding—“Elsberry was the place to be…at least before all the flooding started.”

Respondents in the Confluence Region (Elsberry, MO to Hickman, KY) reported that the river is “treacherous” and not something to “mess with.” They shared that floods were happening more frequently than they used to, detailing abnormal rain events, water levels, and temperatures—“The climate is changing…I don’t care what anybody says, you know, it’s—we’re having more flooding events.” Floods were so strong and destructive in this region that people told stories of towns that have been greatly impacted by floods and in some cases even wiped completely off the map. Interviewees stated that the geophysical features of the Chickasaw Bluff Region (Hickman, KY to Randolph, TN)—towns up on the bluff largely protected from extreme flooding—meant that people were less impacted by floodwaters unless they had land in the bottomlands. However, someone in the region noted that the “water level goes up faster these days when it rains.” While the conversation was generally flooded with talk of high water levels,

there was some mention of the dangerous droughts these communities have faced, too, and how they've had to tap into their groundwater source for agriculture, threatening the aquifer's supply.

In the Lower Mississippi Region (Vicksburg, MS to St. Francisville, LA), interviewees echoed that floods were not just more frequent but more sustained, with high water not going down for several months. In conversation about this, two respondents agreed they'd "never had this problem [before],"; "we've had the water up that high before, higher, but it goes back down," and "we had a flood here for six months…it didn't go down until the first of August." Another stated, "My father's 82 years old, still farms. He's seen the highest flood in the Mississippi in the history of the world. He's seen the longest lasting flood in the history of this thing. He's seen the most floods in one year that there's ever been. He's seen a 500 year flood. He's seen 2 or 300 year floods. He's got a 10 year old grandson that's seen all that too. He's got a 10 year old grandson that's seen all that too. This river is changing. It's changing. It's not like it used to be." Stories of relocation and displacement—"so now there's nobody, nobody lives down here"—due to intensified flooding continued as people reported changes over time. One interviewee had grown up in the now non-existent "Old Vidalia" and documented the stories of the relocated houses and their residents.

In the Gulf South Region (St. Francisville, LA to Gulf of Mexico) flooding and sustained high water levels remained an issue, but was dependent on if people were in the bottomlands or protected by the levee system. When talking about flooding by the mouth of the river, respondents also spoke about storms and hurricanes; "perfect storms" where they are battered both from the river and the ocean. "I would say one more terrible hurricane though and Delacroix Island would be gone." One of the interviewees stated that the Army Corps couldn't "keep building levees to the moon" and had told her children to come get her furniture before the next flood comes.

River Infrastructure and Management

Some interviewees in the Headwaters Region (Lake Itasca to Little Falls, MN) reported that dams pose a threat to recreationalists, but conversations about river infrastructure and management become more prominent once the river becomes a place for commercial navigation in St. Paul, MN. In the Driftless Region (Bay City, WI to Clinton, IA), many people expressed that they get on the river often, but you have to know the river to safely interact with it, one of them saying "you do have to worry about the wing dams, and I guess it's kind of also knowing the river a little bit…even if I think I know what I'm doing, I have to be cautious." Another interviewee commented that "it does take some trick in navigating the Mississippi wing dams that you don't see," and expressed it takes a seasoned canoeist to navigate things like dredging operations, too. Respondents reported that infrastructure like wing dams pose a challenge to recreationalists: "The water's super crazy out here…it swirls, so it's like thirteen foot, and it just drops straight off."

Interviewees in the Driftless and Working River Regions (Bay City to Elsberry, MO) stated that they wanted the Army Corps of Engineers to consider fishing and recreation in their decisions to dump dredge material in certain locations or hold back water at different times, recognizing that

“the purpose of this river is for transportation, for the barges up and down. They don’t care if you catch a fish. They keep it at a nine-foot channel, and they gonna see it so these barges can sail fully loaded.” Some people shared that they want state and federal agencies to not just focus on commercial navigation and wildlife preservation but on sustaining people and river economies by doing things like creating sandbars for people to pull up their boats and fish: “When we were kids…there were huge sandbars up here, and they won’t put sand anywhere anymore for the boaters on the channel. And I totally understand where they’re coming from because they have to dredge, but it also makes it hard for families and people like us who are trying to make a living off this river…because obviously they’re not going to go out if there’s nowhere to go.” Interviewees in the Driftless Region (Bay City, Wi to Clinton, IA) shared that people who are trying to make a living off the river are “collateral damage” and “getting wiped off the map,” in regard to government agencies prioritizing their needs over the public uses of the river. In the Working River Region (Clinton, IA to Elsberry, MO), someone reminisced about growing up boating hanging out on a sandbar on the river they called “the beach,” that is no longer there due to changes in dredging operations.

In the Confluence and Chickasaw Bluff Regions (Elsberry, MO to Randolph, TN) interviewees made a distinction between “before the levee” and “after the levee” and the difference of living “inside the levee” and “outside the levee”—“I was born and raised on the other side of the levee.” Respondents reported that levees impacted how people thought about and interacted with the river: “in many of the communities, the larger ones at least, the individuals…they don’t really even know that it’s there, they don’t care that it’s the Mississippi,” whereas in so many of the smaller communities, “the river is very much a lifestyle.”

One interviewee reminisced about her youth squirrel hunting in “the bottoms” and shared stories of fishing and partying by the water in a time when people had easier access to the river before the levees were built. Some people in the Gulf South Region (St. Francisville, LA to Gulf of Mexico) stated that their communities were disconnected from the river by the levee while others were deeply embedded in a river way of life. In some areas, respondents reported that the river is taken for granted, and “until the news tells you the river’s up within a foot of the top of the levee, nobody pays attention.” In places in and around Baton Rouge, for example, people talked about the disconnect from the river, saying “a lot of people living along the river now don’t have anything much to do with the river because of the levee. There’s no immediate interaction. Some people still fish in the river, but there are very few people that get out in their little boats.” Throughout the lower regions (Delta, Lower Mississippi, Gulf South, from Randolph, TN to the Gulf of Mexico), people talked in great detail about how the Army Corps’ flood mitigation tactics and flood mitigation infrastructure is vital to “holding our ecosystem together by a multitude of threads.” But they also reported that “we treat the river wrong” and state that how the river was and is managed has unintended consequences, saying “look what’s happening when the river is not allowed to flow like it used to, so it’s gonna choke up, so we gonna have this problem from here on all these years, who knows.”

How does engagement with the river differ throughout the qualitative regions?

Respondents in the Headwaters Region (Lake Itasca to Little Falls, MN) reported that they engage with the river directly through kayaking, swimming, hiking, running, fishing, hunting, trapping, ricing, photographing, painting, disc-golfing, snowshoeing, mountain biking, camping, and just being by the water. Some interviewees stated that they enjoy the rural lifestyle and endless outdoor opportunities in this region, saying “there’s so much you can do here. You can fish and hunt and camp. If you like the outdoorsy lifestyle it’s a great place to live.” Stories about the river often showed frequent engagement—like an interviewee who takes pictures of the river nearly everyday—and were often explained through sensory embodied experiences with and along the water: “There’s a melody to the River that if you listen you can hear in the quietness”; the knocking of a canoe in the water showing someone the “majesty and magic” of the river; “you can’t hear this in the Cities. You know the wind, the wind has a specific speed that gives off specific sounds and depends upon the birds.”

Interviewees from the Gorge Region (Little Falls, MN to Bay City, WI) report that the river is a place for recreation and interaction. Interviewees said they trap—“when you trap, you know water is life”— hunt, canoe, fish, tube, bike, swim, forage, bird, camp, paint, photograph, and “just hang out” on the river. One respondent shared that “as kids we’d either run down the river, float down the river, and we’d get in the Mississippi, swim across the Mississippi, over to islands and hang out, just, it’s been an integral part of my life.” Another interviewee brought up the tension in uses of the river once commercial traffic starts in St. Paul, Minnesota, saying that while the river is used for recreation—boating, fishing hunting, “laying alongside”—it is also a place for commercial traffic and industry: “It is no question that it’s an ecology that is important, needs to be maintained…In order to do that we need an economy to afford us that opportunity.”

In the Driftless Region (Bay City, WI to Clinton, IA), interviewees reported that they interact with the water to fish, boat, hunt, tube, swim, hike, bird—“there’s not a river system on the planet Earth that has an equal to the Mississippi River, it’s number one in bird migration”—canoe, and kayak. People fished and trapped on the river recreationally in this region year-round, and fishing and boating events like bass fisherman contests were common where “they might have a hundred boats racing downriver…to get to the right spot.” Many people reported that it was a paradise for outdoorsy people: “The river is perfect. There’s so much to do on the river—fish, you can go tubing, you can do anything” and "I mean this area, this Driftless area has some of the best trout fishing in the nation, so yeah! If you like the out-of-doors…if you like to run, if you like to fish, if you like to kayak or canoe, if you like to speed boat, it goes on and on and on, it’s pretty hard to find those types of things in other parts of the country." Some respondents in the Driftless Region who work the river through commercial fishing—“we totally make our living off the River”—or industry report that they use the river for both work and play; when they aren’t working the river they are out pole fishing and swimming off the boat docks. Interviewees stated that there are diverse river users—“you got speedboats, pontoons, houseboats,” sailing communities on Lake Pepin, and state parks “hopping with campers and canoers”—that share the river with commercial traffic. Respondents reported that unique features—braided streams, side channels, backwaters, islands, and sandbars—make the river special and create safe spaces outside of the main shipping channel for people to recreate and interact with the river:

“Usually we just go to sandbars and jump off.” One person stated, “you know the lower river has a braided stream, the upper river has a [braided stream]—but in between it's more of a shipping canal. It’s different. This is the good part. The braided stream part.” Another person explained that while up north there are lots of lakes for people to recreation on—“they’re all lake people”—the braided Mississippi River takes center stage in the Driftless Region for water recreation. Interviewees reported that having a view of the river was integral to their engagement with the river in the Driftless Region, allowing them to observe the changes in the landscape throughout the seasons—“I love to see the seasons change on the River”—and the multiple users and visitors to the river, saying “I look out onto the river every morning and see what’s going on. The barges coming through, watch the eagles,” and “it’s right here in front of me. It’s activity central! Every time I look out on the River there’s something new coming down.” Stories in this region show a deep knowledge of the river and its many seasons and moods, ranging from seasonal changes to their favorite time of day on the river: “The beauty of this river is just at dusk when things are just going dark. Typically the wind dies; it’s like glass—it’s just like glass. The birds are now skipping and picking up insects. You got bats flying. You’ve got fish boiling at that time. It’s just a magical time of night.”

In the Working River Region (Clinton, IA to Elsberry, MO), respondents reported that they engage with the river through looking at it and river-adjacent activities more than getting out on the water. Interviewees talked more about the river as a scenic backdrop where they could sit and enjoy the sunset and watch the boat traffic come and go: “the river to me is just a beautiful thing”; “I sleep with the curtains open…we can watch the sunset, the sun come up every morning…it never gets old”; “the peacefulness of seeing [the river] is mesmerizing…we’ll just sit down and watch.” Looking at the river was an important way for people to notice the birds come and go and how the river changes: “I’m always amazed by how the river is different from one day to the next part of the day, saying “It’s a sunny day, it’s nice and blue, and if it’s a cloudy day, it might be windy. There might be whitecaps. It might just be a mirror, everything's reflected…” and “It gets from muddy, a really muddy mess. It looks like the muddy mess to a blue, a really dark blue…” While most interviewees talked about the scenic beauty of the river as central to their connection to it, some people stated that they interact with the river either directly on the main channel or experienced the river through river-adjacent recreation. Respondents reported that paths along the river, often on top of levees, provide a space for them to see, enjoy, and engage with the river. One interviewee commented that he “runs along the river a few times a week and it is the one place he runs where he doesn’t wear headphones. He just listens to the river.” Some respondents in the Working River Region used the river for hunting, fishing, and on-water recreation: “it’s just kind of a sportsman’s paradise”; “I’m sure you’ll probably see boats lined up out there, even if it’s a Wednesday.” One interviewee reported that they regularly boat and “spend all their summer weekends on the river, riding up and down the channel, stopping at sandbars, enjoying the water.” Another respondent said they get out on a boat during work breaks, even for less than an hour, because he “loves it.” Some interviewees reported that they sail on the river and go on twilight cruises or multi-day cruises in larger passenger boats. However, recreational canoeing and kayaking on the river in this region was less common. One interviewee reflected that there isn’t as much recreational boating as there used to be, likely due to people thinking the river is dangerous and dirty. Another respondent

shared that there is a notable event called Floatzilla in the Quad Cities where over 1,200 people paddle on the main channel of the Mississippi River and they close the river down to commercial watercraft.

In the Confluence Region (Elsberry, MO to Hickman, KY), respondents reported that they did not interact with the river as much as upstream regions. People shared that their connection to the river was largely through working the river as a deckhand on a barge, building or monitoring levees, running a ferry, or working at an industry that interfaced with the river for transporting goods; the daily interaction with the river through work is how many people built a relationship with its waters. Interviewees stated that they engaged with the river through looking at it and enjoying the scenic views: “There’s no more beautiful scenery than this right here.” Some respondents reported that they use the river for boating, swimming, duck hunting, water skiing, kayaking, and just spending the day “drinking and having a good time.” They shared that the “bottomlands” were important spaces for recreation like fishing, hunting, and just hanging out—“you can just see the green trees and you can see a little bit of water here and there, and I don’t know, I just loved it!” An interviewee in St. Louis said that more people go to the Mississippi River to play than the Missouri River, and that they were originally concerned about boating the river but “found out it’s not the scary river that everybody told me about…you just have to be smart.” Another respondent reported that he kayaks at least once a week but stated that it is not “fun” to paddle when the water is high: "there’s no gravel bar, no sand bars. There’s no way to stop, so you just float down the middle of the River until you get out. It just takes the fun out of it.”

Some interviewees in the Chickasaw Bluff Region (Hickman, KY to Randolph, TN) stated that they don’t get out of the river often while others reported that they interact with the river through boating, water skiing, commercial and recreational fishing, hunting, and trapping. One interviewee’s son leads tours on the river to bowfish for invasive carp. Respondents reported that industry drives people’s connection to the river in this region; several interviewees had careers moving barges up and down the river or working directly with industries on the water.

People in the Delta Region (Randolph, TN to Vicksburg, MS) reported that they fished, hunted, trapped, had bonfires, kayaked, canoed, and enjoyed the scenic views on the Mississippi River. Hunting clubs were prevalent in the bottomlands of this region. Similar to previous regions, and even more so than the Working River, Confluence, and Chickasaw Bluffs Regions (Clinton, IA to Randolph, TN), people expressed a strong connection to the Mississippi River in the Delta Region. One interviewee in particular lived and breathed the Mississippi River Delta and engaged with the river through exploration and photography. Another respondent from Helena explained that they have one of the most photographed places in town and attributed that to Mark Twain’s Life of the Mississippi, which refers to Helena as one of the “prettiest situations on the river,” due to its long views over the valley. Interviewees reported that some of their first memories were on the river sitting around a campfire, fishing, or going on adventurous family trips boating up the Mississippi and Arkansas Rivers. One respondent stated that he took his young daughter kayaking on the river and some people at the boat launch said, “What are you crazy or something? Man, I would never do something like that. That’s too dangerous,” adding that if you know and respect the river it is safe to paddle. Several respondents in the Delta

Region worked the river, including two men who started working as deckhands in their youth and they've been working on the river ever since, traveling to "the top and bottom of every river navigable by tow boat within the Mississippi River watershed."

In the Lower Mississippi Region (Vicksburg, MS to St. Francisville, LA) interviewees reported that they canoe and kayak on the river. The ability to look at the river and enjoy the scenic river valley continued to be important to people. One interviewee said "it's just something magical about the Mississippi River when you get out there. And the expansive horizon and nature. I mean you are all immersed in nature. And you know the Mississippi River is a migratory highway of millions of waterfowl coming from South America up to the Arctic, Canada, and so it's ever changing and there's different animals out there." A few interviewees were outdoor outfitters and tour guides on the Lower Mississippi— "we take them outdoors, we put them on pontoon boats, we put them in the river, we go in the backwaters"—where they said hunting, fishing, biking, birding, boating, and outdoor activities were common, and the local schools even had fishing teams. Respondents felt pride in a strong "redneck culture" present in this region; people shared that they regularly engage in activities in the river, bayou, bottomlands, and backwaters, and especially use the islands and bayous for recreational activities. People shared stories of doing just about anything you could think of doing outdoors, from wrestling alligators, hand-grabbing catfish and frogs, to surfing waves off of barges on the river—"I could surf that." One interviewee painted the picture of the sportsman's paradise in this region, saying: "How Cajuns and rednecks are in our part of the world that really hunt and fish and love the outdoors…so you put Jimmy Allgood, aka little Jim Bob and Ricky Fontenot together, you put our daddy's together, and if it swam, crawl, flew, had fins, fangs, or feathers, we chased it, and he cooked it…so that was the beginning roots of my knowing the outdoors hunting, fishing and growing up loving it." While many respondents expressed that they engage with the river regularly, commercial fishing is less common that it used to be, and one interviewee noted that "the fish are still there, but nobody knows how to fish them."

Respondents reported that river-adjacent recreation was common in the Gulf South Region (St. Francisville, LA to Gulf of Mexico). People stated they enjoyed views of the river and utilized the levee trails for walking, running, and biking. One respondent was working with their community to connect the levee trail to a pier so people could better access the river. An interviewee shared a local tradition of levee bonfires where communities build massive bonfires on the levees near their homes and another talked about a paddle-in campsite on the river run by a local family in Paulina. Interviewees stated that they hunt, fish, trap, and crawfish, mostly in the backchannels, bayou, and spillway grounds. Respondents reported that yacht clubs and marinas were important access points where they had boats to access the river, ocean, and bayous. Some said they know how to navigate the complicated twists and turns of the river and the waters in the bayou like the back of their hand and have seen the changing ecosystem. An interviewee in the oyster industry remarked, "we know what's going on cause we constantly monitor, we check, we got oyster tons, and just all our years of, you know, hundred plus years of knowledge, all combined, gives us—we know exactly pretty much what's going on, you know?" Someone reported that they take their boat out on a regular basis to check up on river infrastructure projects near the mouth of the river. Respondents stated that engagement with the river was more common in rural areas, whereas in urban areas "there's no immediate interaction. Some

people still fish in the river, but there are very few people that get out in their little boats." In the Gulf South Region, stories illuminated how people used to engage with the river more than they do now. People remembered back when "everyone had shrimp boxes to catch river shrimp"; "we played in the river and swam and fished and put out shrimp boxes and we ate off that River"; and would do things like ski in the marshes and float down the river on logs and walk back home. One interviewee remembered fishing with his dad on their boat when he was little, reflecting that "it was a much much better business…We had our bays and bayous. We had our camps out there."

How do water values differ throughout the qualitative regions?

The interviews in the Headwaters Region (Lake Itasca to Little Falls, MN) of the Mississippi River reported a reverence—"that's my church"—and deep love for the river passed on through generations—"my dad's love for Itasca infiltrated my being." Family land, colonial and Indigenous history, geomorphology, and deep community roots permeate through the stories in this region. Many interviewees stated that they had traveled around and lived elsewhere but they always came back to the river, expressing, "there is something that draws you in" and there is something "magic" about the Mississippi River near the headwaters. Respondents reported that the river is in their blood and deeply embedded into a way of life, often seen through the art and photography of the region. Tales of "this was the first lake I ever swam in as a boy" and "I used to get to school by boat on the river" and "I remember when the water was so low we could walk out on the riverbed and excavate, pulling out things like old cars" are common in the Headwaters Region. Interviewees reported the river is a place of personal healing and solace during hard times: "the river saved" people, "changed their life," and provided them with purpose. Generational land and deep lineages continued to be a theme in the Gorge Region (Little Falls, MN to Bay City, WI) as people described family ties to the land and water that "runs deep in their blood." Someone noted the cultural significance of the river expanded beyond just the people living along it but through stories and books that, in turn, made them feel proud to live on its banks. Often described as "home," interviewees shared that they "can't imagine living somewhere other than down by the river"; "we wouldn't be here…if it weren't for this river"; they "can travel all over and never find a prettier area." Someone expressed they were "spellbound by the river," and didn't know the pleasures water could bring before he moved to the river. The river was described as "luring people in through some kind of magical connection."

People in the Driftless Region (Bay City, WI to Clinton, IA) were proud to continue a river legacy, saying "I was wearing diapers when my dad had me out fishing. I got out of diapers but not out of the river," and "I'm actually the fourth generation to have run a boat for part of my life…I done commercial fishing as long as I can remember." Some people were self-proclaimed "river rats," and many had family members who relied on the river for their livelihood. Respondents reported that memories on the river compound over time to shape their relationship with the water: "When you're on the river, it becomes timeless…you go back in time, and you remember all those wonderful times you've had on the river. There's no politics, there's no conflict, there's just the peace of the river. Our motto is, 'your worst day on the river is better than your best day on land.'" Interviewees expressed a strong sense of nostalgia for being a "free range kid" adventuring on the Mississippi River in the Driftless Region, where people "grew up at a boat

landing," and swam in the river by themselves as early as seven years old. Stories began with family histories centering the river like "my mother was born in that shanty boat on the riverside," "My dad…had a little canoe with a four-horse catching frogs and snakes, snapping turtles when I was a kid, and I think that's where I fell in love with the River," "my family bought this land in 1938…that's why I'm here," and "I first went on the river in 1936 with my dad, back then the lock and dam hadn't been built, the pool hadn't risen, the shorelines were still rip-rapped." Interviewees reported that ties to land and the river were passed down through the generations: river life is "an art you have to learn…that needs to be taught through the generations" and "he wanted our kids to at least experience that [commercial fishing], or to know what it's about, you know, cause it's a way of life that generations adopted."

The legacy of fishing, hunting, and trapping passed down through generations was significantly less prominent in the Working River Region (Clinton, IA to Elsberry, MO), but respondents stated that the river remained culturally significant in different ways, through celebrations like Mark Twain festivals and in the stories of old river life passed down and sustained by people with deep roots in the valley. In the Working River Region, people shared sentiments like: "I don't know, there's something special about the river, you can't explain"; "[The river] it's just, it's just been part of who I am…it's just part of the way I grew up"; "This is my paradise"; "water is life and life saving and I never knew this for a long time. I never knew why I felt that way…"; "I came here and saw the Mississippi River and fell in love." The interviews showed a continued reverence for the river as a healing and magical place that drew them in, one of them expressing that "the water is also so attractive…and it has attracted people for thousands of years." When questioned why they came back home after traveling and living in other areas of the country, someone said, "my answer to that is if you're born in Mississippi mud, it doesn't wash away." Respondents reported that family roots in the Working River Region run deep. One interviewee referred to local families as "royalty," known for building up a lot of the small towns along the river. One interviewee said he'd been in his house upwards of 70 years and "had a strong relationship with the river, swimming, fishing, duck hunting."

In the Confluence Region (Elsberry, MO to Hickman, KY) respondents struggled to put to words the strong emotional and personal significance of the river in their lives. A woman in Cairo said, "I think the river just calls you. I don't know what it is, I can't really explain it, but every major experience happening in my life happens upon the river." While interviewees didn't express love and reverence for the river in the same ways or words as they did in the Headwaters, Gorge, or Driftless Regions, they did imply that the water and the surrounding bluffs had a certain beauty and healing power, saying things like, "Sometimes I think it's that you're gonna have a rough day, you can have a bad day or something, and all you really have to do is just look up at the bluffs…" When asked why they made this place home, people often listed the river as a reason: "I fell in love with the town because of the river and the hills here." One interviewee reported that he liked "the people and the laid-backness of the environment right off the Mississippi River," and that the river can be both beautiful and destructive at the same time—"an energy that we all have inside us but we can't see it, the energy you feel when you go out to the river." Someone whose parents used to drive them down to the river said, "I still do it to this day, and sometimes I stop and if I had something bothering me, I stopped and I pray and I talk, and that's my home." Childhood memories in the Confluence Region often centered the river as people shared stories

of life in the bottomlands and memories of before the levees were built; memories of walking down the street through feet of water, or watching their dad help build the levee in town. In respondent's tales of family histories and old ties to the river there was a sense that times have changed and would continue to change as people faced more intense flooding and were further separated from the river by levees or forced relocation. One person was intentionally documenting this history through recording her father's relationship with the river, capturing a way of life that was slipping away.

Childhood memories in the Chickasaw Bluffs Region centered stories of commercial fishing as early as eight years and spending time with family outdoors in this "sportsman's paradise." One respondent reported that his family has been in the country for seven generations, all within the Mississippi River watershed, saying "I've got a good connection with the river system." The only time someone mentioned love for the river was when they reminisced about doing these activities with their brothers, saying "that's kind of where I fell in love with the river itself."

Interviewees in the Delta Region (Randolph, TN to Vicksburg, MS) shared memories of working on the river. One interviewee said his surrogate father was a steamboat captain on the lower river, saying "he raised me on the river, and told me all these stories about the river, taught me how to handle a boat, and canoe, and how to fish and hunt, and told me the lore of the river as a little boy, and I grew up on the river." Stories illuminated people's first memories on the river sitting around a campfire or fishing and were often tied to adventurous family trips boating up the Mississippi and Arkansas Rivers. Respondents told stories of how things used to be, like the decline of commercial fishing and the changes in land use and agriculture throughout the decades their families had been there.

There was a noticeable increase in personal connections with the river in the Lower Mississippi Region (Vicksburg, MS to St. Francisville, LA) compared to the Working River, Confluence, Chickasaw Bluff, and Delta regions (LOCATION). Interviewees reported they were drawn to the "beauty and magic" of the river. They expressed it is a place of healing that holds spiritual significance: "It's like an Etch-a-sketch, when you go out there, whether you have anxiety or you have stress or whatever, you come off that water, it just shakes it away. And you can just feel so good." The river reminded people that "the only constant in life is change," and one interviewee recognized that while the river changes it also remains a constant in his life, so embedded in his memory and personal experiences. Childhood memories on the river centered family life and place-based knowledge of the valley as land had been passed down from generation to generation. Many of them grew up on the water—"she always had a ski boat, spending time out on the sand bars, pitching a tent, cooking out, camping"; "Tanya's grandmother and her cousin, both from Natchez, used to go down to the River and play when they were young,"; "Ed grew up loving to fish, waterski, and camp on the water around Vicksburg where he grew up. His father Earl was a cattle rancher in Vicksburg but had a strong relationship to the river"; "Layne grew up around the tow boats"; "He always loved the water, and spent a lot of time water skiing and boating growing up." Respondents reported that the river held memory and deep personal significance, one of them sharing that they met their husband by sending a message in a bottle and sending it downriver, only to become married to the person who found it and responded. A

farmer, on a passionate rant about how important it is to sustainably tend to the land, said “I’ve been here, we’ve been here for 150 years, so I’m part of the soil.”

Respondents reported that the river is a way of life in the Gulf South Region (St. Francisville, LA to Gulf of Mexico), but it is a hard place to live that requires a certain adaptability and resilience of the people who choose to live there. The river was described as a double-edged sword, people said things like “the river’s our friend, the river’s our foe” and “the river is so spectacular, and I’ve always used that terminology when we saw [that] water’s so beautiful. Some people wanna just get next to water, but when there’s a problem, [it] can jump up and bite you is what I call it.” Several people expressed that their souls are drawn to the river and river communities—“New Orleans is my soul,” “this is where my soul was born”—and shared stories of a spiritual connection with the delta tied to its rich and contentious history—“the energy and the people and the slave trade and the food, and the traditions, you just can’t deny it, if you know it you can’t deny it.” Some people said their river communities were the best places to live and they “wouldn't want to live anywhere else,” noting the beauty of the marsh and how blessed they are to live by water. Many interviewees shared that they “love it here,” one saying that the river brings him joy: “You know, I mean, it’s just, I grew up on the river, and I never seen a thing yet that I didn’t like. You know, I mean I—I’m more like a kid, a kid in Disney World, you know, how they feel. Well that’s the way I feel here.”

What correlations emerge between human-nature interactions and discourse throughout the regions?

1. Engagement with the river fuels perceptions and greatly impacts how the river is valued

Seeing and engaging with the river impacted how people perceived and valued the river. Across the nine qualitative regions, engaging with the river in some form—including looking at the river—was an important way for respondents to develop perceptions and water values. Where engagement with the river was strong, perceptions were largely positive and people valued the river in more diverse ways; where engagement was decreasing, perceptions and values of the river were expressed through a nostalgia of how the river used to be or with a focus on childhood memories on the river; where engagement was low or nonexistent, perceptions of the river were generally negative and the river was valued more as a scenic backdrop than an active player in people’s lives, unless it was a direct harm to their livelihood during a flood (see Table 1).

Interviewees who engaged in on-water activities had more knowledge and positive perceptions of the river than those who were wary of going out on the water. For on-water engagement, access to the river was important, but interviewees reported that it was also helpful if people had somewhere to go on the river: a sandbar, island, backwater channel, bayou, etc. The presence of different river features and interconnected waters allowed for increased engagement amongst diverse stakeholders like hunters, fishers, swimmers, boaters, and paddlers, alongside commercial traffic in the main shipping channel. In some middle and lower regions (Working River, Confluence, Chickasaw Bluff, Delta—see Figure 3), when backwater channels, bayous, islands, and sandbars were not abundant, fewer people engaged directly with the water and, as

a result, the river became a backdrop to life in the levee system where many residents were too afraid to get out on the dangerous current in the main channel of the river. In those regions, people expressed a greater disconnect from the river than in regions where people could safely engage with the water. While engaging directly with the river was an important way people built a relationship with the water, being able to see the river also shaped perceptions and values. In places where on-water engagement and river access was complicated by river infrastructure and/or constant flooding, river-adjacent opportunities to see and engage with the river on land—levee paths and overlooks—were vital for people to build a relationship with the river. People expressed that simply seeing the river valley or running along a levee trail provided scenic and spiritual values and a sense of place tied to the Mississippi River. However, in places where people couldn't see or interact with the river—largely more urban areas separated from the river by the levee system in the lower river—people expressed that they don't think much about the river until the water is close to topping the levee, and feel like the river doesn't impact them on a day to day basis. This highlights how engaging with the river—either directly through on-water activities or indirectly through river-adjacent activities—can influence perceptions and values.

Maintaining places for people to engage with and see the river is vital to build a relationship with the river, benefit from its attributes, and notice its changes. This is a perhaps straightforward yet provocative implication for river management and land use planning. Tensions around the management of the river and local uses of the river were present in the interview content. There was a desire for the Army Corps of Engineers to not just focus on commercial navigation but on sustaining people, recreation, and river economies. Some people expressed they wanted the Army Corps of Engineers to consider fishing and recreation in their decisions to hold back water at different times, or to dredge and dump sand in specific areas that meet commercial needs and preserve certain sandbars to support and enhance recreational uses. While opportunities to recreate on the levees and in the bottomlands were important for people to connect with the river, the strongest relationships with the river emerged from those people who actually got out on the water and experienced the river directly—either through work or recreation, often a combination of both—even in areas where perceptions of the river were otherwise largely negative.

2. Engagement with the river over time creates deep cultural water values that are passed down through generations

Engagement with the river fueled perceptions and shaped water values but the river as a place of economic, cultural, personal, emotional, and spiritual value permeated all regions and was intertwined with childhood memories, cultural significance of the river, and family traditions. In the upper river regions (Headwaters, Gorge, Driftless, from Lake Itasca to Clinton, IA, see Figure 3) people expressed a deep love and reverence for the river. Even in middle regions (Working River, Confluence, Chickasaw Bluffs, from Clinton, IA to Randolph, TN) of the river where engagement was lower than upper (Headwaters, Gorge, Driftless) and lower (Delta, Lower Mississippi, Gulf South) regions and perceptions were largely negative, people still expressed that the river is a place of healing that they are drawn to, and often felt a sense of pride living along the Mississippi River. However, they spoke less about a personal love for the river and more about the cultural significance of the river in history and novels, like Mark Twain,

family stories passed down, and the river as a place of beauty and peace. In the lower river regions (Delta, Lower Mississippi, Gulf South), interviewees shared that the river is a way of life and deeply embedded into rural southern culture, echoing the deep love of the water similar to the upper regions (Headwaters, Gorge, Driftless). Values were often tied to family land and traditions passed down over time. People shared stories of growing up as “free range kids” on the Mississippi River, telling tales of commercial and recreational fishing, hunting, boating, swimming, and playing by the river with their family from a very young age. Even if people didn’t themselves recreate or engage regularly with the river on a day to day basis, their experiences with the river over time and core childhood memories played a large role in their relationship with the river today. The interview data shows how river life is something that has deep generational roots throughout the entire corridor. In some regions, the river as a way of life still holds strong, while in other regions it lives on through stories of parents or grandparents growing up on the river with a sense that times are changing, especially in regions where stories of “before the levee” and “after the levee” tell a tale of declining river engagement (see Table 1). Examples of the generational implications of changes to the river can be seen through three main phases in the interview content: in some regions the river played an active role in people’s lives as they continued to pass down traditions and practices from generation to generation; in other regions, the memory of growing up on the river was so strong and tied to family and culture that even if people didn’t engage with the river as much anymore due to levees or flooding it was still important to their lives and identities; in some regions, people shared that they don’t think much about the river unless it becomes a direct threat (see Table 1). This shows the constitutive nature of how river management decisions, changing climate, and policies compound over time across different geophysical regions to impact river engagement, perceptions, and values and generational relationships with the river.

3. Some long-standing relationships with the river are at stake while new ways of engaging with the river are emerging

Rapid changes to the river in the last several decades have severed many long-standing place-based relationships passed down through generations. Respondents reported that backwater channels are filling in with sediment in some upper and middle regions of the river (Driftless, Working River, see Figure 3) and communities near the mouth of the river (Gulf South Region) are experiencing rapid land loss. While communities across the entire river have always dealt with high water events, interviewees shared that floods were happening more regularly and less predictably. Throughout the river corridor, people talked about the changes in the weather and water levels, sharing stories of high and low waters and long periods of rain and drought that negatively impacted agriculture, recreation, public health, and the livability of communities along the river, especially down south. Respondents attributed increased hardships for commercial and recreational fishing—one of the many ways people interact with and build a relationship with the water over time—to environmental degradation. They discussed sedimentation of the backwaters, the river silting in, concerns of chemicals in the water, changing salinity levels, and land loss that negatively impact fishing and recreation. While threats to the river have hindered activities like fishing, hunting, and trapping in some areas, there are still people who held strong to those traditions and continued to live the “river rat” way of life, although respondents expressed that there were fewer and fewer of them. Larger societal

trends like the corporate buyout of small farms negatively impacted rural populations, land use, and water quality in every region, as did invasive species like zebra mussels and carp (largely impacting recreation in middle and lower regions of the river). Interviewees reported that levees built to protect developed flood-prone areas from high waters are a direct barrier to engaging with the river where people used to have easier access to and greater engagement with the water. These threats change how people interact with the river and could have implications for river-wide perceptions and values that compound over time.

However, it is not guaranteed that because people are increasingly separated from the river or engagement is hindered by changes in weather or environmental degradation that they will not care about it. While some relationships are dwindling, like commercial fishing, new ways of being with the river are emerging, like cruise ships and guided canoe trips in the lower river. In the first three regions—Headwaters, Gorge, Driftless, from Lake Itasca to Clinton, IA—interviewees shared how their communities have turned back toward the water and invested in restoring river shoreline and increasing access to the Mississippi River. This has boosted people's ability to engage with the river, whether through looking at it or getting out on it. While turning back to the river is a trend throughout the entire corridor, upper regions of the river had more success with river tourism than middle and lower regions that are facing more extreme and sustained floods, although the relatively new cruise ships traversing the river were supporting tourism in southerly regions, too. In the middle and lower regions of the river, outfitters like Quapaw Canoe Company and organizations like the Lower Mississippi River Foundation are promoting recreation and stewardship of the river by getting more people out on the water. While the interview data illuminated stories of old times back when people interacted with the river more, the respondents also told a tale of increased tourism and recreation efforts throughout the entire corridor to reconnect people with the Mississippi River.

Conclusion

This research shows how people's perceptions, engagement, and values vary throughout diverse regions of the Mississippi River, from the headwaters to the Gulf of Mexico. We found that engaging with the Mississippi River helped respondents build a relationship with the water and sustain important generational place-based relationships that are under threat from changing climate, river infrastructure, and degrading water quality. To summarize qualitative data, we applied regional definitions to interview data that align with social and biophysical characteristics. Qualitative data in the form of unstructured interviews provides a useful window into the perceptions of river residents. While considering these unique regions of the river may be challenging to existing structures of river management—including coordination across multiple units of government, local, regional, and state institutions, and a complex network of incentive structures and competing sectors—these regions can facilitate future cross-river analyses and may reflect key regional geographies better than state or administrative boundaries. Future work could compare biophysical metrics of water quality, flood risk, protection level, river infrastructure, visitation patterns, and recreational behaviors to better understand the relationship between perceived environmental quality, threats, values, and uses across the river's unique biophysical and social gradients.

Bibliography

Balvanera, P., Calderón-Contreras, R., Castro, A. J., Felipe-Lucia, M. R., Geijzendorffer, I. R., Jacobs, S., Martín-López, B., Arbieu, U., Speranza, C. I., Locatelli, B., Harguindeguy, N. P., Mercado, I. R., Spierenburg, M. J., Vallet, A., Lynes, L., & Gillson, L. (2017). Interconnected place-based social–ecological research can inform global sustainability. *Current Opinion in Environmental Sustainability, 29,* 1–7. https://doi.org/10.1016/j.cosust.2017.09.005

GPS Nautical Charts. (n.d.). *i-Boating: Free marine navigation charts & fishing maps* [Interactive web map]. Retrieved July 20, 2025, from https://fishing-app.gpsnauticalcharts.com/i-boating-fishing-web-app/fishing-marine-charts-navigation.html?title=Lower+Mississippi+River+section+11_508_814+boating+app#12.66/31.6102/-91.4183

Hartig, T., Mitchell, R., de Vries, S., & Frumkin, H. (2014). Nature and health. *Annual Review of Public Health, 35,* 207–228. https://doi.org/10.1146/annurev-publhealth-032013-182443

Hausmann, R. (2016). Economic development and the accumulation of know-how. *Welsh Economic Review, 24,* 13–16. https://doi.org/10.18573/j.2016.10049

Littlejohn, S. W. (1977). Symbolic interactionism as an approach to the study of human communication. Quarterly Journal of Speech, 63 (1), 84–91.

Louv, R. (2010). *Last child in the woods*. Atlantic Books.

Lower Mississippi River Foundation. (n.d.). *Lower Mississippi River Foundation*. Retrieved May 22, 2025, from https://www.lowermsfoundation.org

Marin, A., & Bang, M. (2018). "Look it, this is how you know:" Family forest walks as a context for knowledge-building about the natural world. *Cognition and Instruction, 36*(2), 89–118. https://doi.org/10.1080/07370008.2018.1429443

Manson, S., Schroeder, J., Van Riper, D., Kugler, T., & Ruggles, S. (2024). *IPUMS National Historical Geographic Information System: Version 17.0 [2020 American Community Survey: 5-Year Data (2016–2020, Block Groups & Larger Areas)]* [Data set]. IPUMS. https://doi.org/10.18128/D050.V17.0

Miles, M., & Huberman, A. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). SAGE.

Minnesota Department of Natural Resources. (2025, June 23). *Mississippi River State Water Trail*. Retrieved July 8, 2025, from https://www.dnr.state.mn.us/watertrails/mississippiriver/index.html

Mississippi Headwaters Board. (n.d.). *Publications*. Retrieved May 22, 2025, from https://www.mississippiheadwaters.org/publications.asp

National Research Council. (2008). *Mississippi River water quality and the Clean Water Act: Progress, challenges, and opportunities*. National Academies Press. https://doi.org/10.17226/12051

Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2009). The nature relatedness scale: Linking individuals' connection with nature to environmental concern and behavior. *Environment and Behavior, 41*(5), 715–740. https://doi.org/10.1177/0013916508318748

Relay of Voices. (2019). *Relay of Voices: A collection of voices depicting how the Mississippi River shapes a nation and how we shape the Mississippi* [Website homepage]. Retrieved July 20, 2025, from https://www.relayofvoices.com/

Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). SAGE.

Taylor, D. E. (2014). *Toxic communities: Environmental racism, industrial pollution, and residential mobility*. New York University Press.

U.S. Army Corps of Engineers, Memphis District. (2015). *Flood control and navigation maps Lower Mississippi River, Cairo, Illinois to the Gulf of Mexico, Mile 953 to Mile 22 B.H.P.* Retrieved July 8, 2025, from https://www.mvm.usace.army.mil/Missions/Navigation/River-Navigation-Charts/

U.S. Army Corps of Engineers, Rock Island District. (2011). *Upper Mississippi River navigation charts: Minneapolis, MN to Cairo, IL, miles 866 to 0, Minnesota and St. Croix Rivers*. Retrieved July 8, 2025, from https://www.govinfo.gov/app/details/GOVPUB-D103-PURL-gpo56420

U.S. Army Corps of Engineers, St. Paul District. (2025). Fact Sheets. Retrieved May 21, 2025, from U.S. Army Corps of Engineers, St. Paul District website: https://www.mvp.usace.army.mil/Media/Fact-Sheets/

U.S. Fish & Wildlife Service. (n.d.). *Upper Mississippi River pool maps* [Web page]. Retrieved July 8, 2025, from https://www.fws.gov/library/collections/upper-mississippi-river-pool-maps

Wegner, G., & Pascual, U. (2011). Cost-benefit analysis in the context of ecosystem services for human well-being: A multidisciplinary critique. *Global Environmental Change, 21*(2), 492–504. https://doi.org/10.1016/j.gloenvcha.2010.12.008

Wild Miles. (n.d.). *Home – Wild Miles on the Middle & Lower Mississippi River*. Retrieved July 20, 2025, from https://wildmiles.org/

Wisconsin Department of Natural Resources. (n.d.). Upper Mississippi River. Retrieved May 22, 2025, from https://dnr.wisconsin.gov/topic/UMR

Young, J. C., Rose, D. C., Mumby, H. S., Benitez-Capistros, F., Derrick, C. J., Finch, T., Garcia, C., Home, C., Marwaha, E., Morgans, C., Parkinson, S., Shah, J., Wilson, K. A., & Mukherjee, N. (2018). A methodological guide to using and reporting on interviews in conservation science research. *Methods in Ecology and Evolution, 9*(1), 10–19. https://doi.org/10.1111/2041-210X.12828

Upper Mississippi River Quarterly Meetings

Attachment G

Mississippi River Watershed

REPORT | THE MISSISSIPPI RIVER BASIN LEGISLATIVE COHORT

The Mississippi River Watershed

State Policy Options for Risk Reduction and Resilience

NCSL
NATIONAL CONFERENCE OF STATE LEGISLATURES

JANUARY | 2026

The Mississippi River Watershed: State Policy Options for Risk Reduction and Resilience

THE MISSISSIPPI RIVER BASIN LEGISLATIVE COHORT

The National Conference of State Legislatures is the bipartisan organization dedicated to serving the lawmakers and staffs of the nation's 50 states, its commonwealths and territories.

NCSL provides research, technical assistance and opportunities for policymakers to exchange ideas on the most pressing state issues, and is an effective and respected advocate for the interests of the states in the American federal system. Its objectives are:

- Improve the quality and effectiveness of state legislatures.
- Promote policy innovation and communication among state legislatures.
- Ensure state legislatures a strong, cohesive voice in the federal system.

The conference operates from offices in Denver, Colorado and Washington, D.C.

Background and Introduction

The Mississippi River Basin, spanning 31 states and encompassing over 250 rivers, has a rich history shaped by both natural and human influences.

For thousands of years, Native Americans relied on the "Great River" for sustenance and transportation, as its freely shifting course created fertile soils and diverse habitats across a landscape ranging from arid plains to swampy cypress forests. With the arrival of European explorers and settlers, the river became an essential route for trade and movement. As populations along its banks increased, efforts to control the river's flow grew stronger.

Major transformations took place during the 1930s and 1940s, when the construction of large locks and dams facilitated greater commercial navigation and spurred significant economic growth. Industrialization also brought the development of levees and navigation channels, replacing much of the river's natural landscape with concrete and steel. While these changes supported urban and agricultural expansion, they also altered the river's natural dynamics, often resulting in more severe floods, loss of habitats, reduced wetlands, destruction of forests and the spread of invasive species throughout this diverse watershed.

Today, the Mississippi provides drinking water, transportation corridors, power generation, fertile agricultural land and a multitude of outdoor recreation opportunities. The river also supports tens of billions of dollars in economic activity and provides habitat for over 780 species of fish and wildlife.

MISSISSIPPI RIVER BASIN LEGISLATIVE COHORT

NCSL's Mississippi River Basin Legislative Cohort and Agriculture Task Force toured the Upper St. Anthony Falls Lock and Dam in Minneapolis with the U.S. Army Corp of Engineers.

The Mississippi River Basin Legislative Cohort

Given the importance of the Mississippi River and the surrounding basin, the National Conference of State Legislatures (NCSL) convened a bipartisan group of legislators from the 10 mainstem states—Minnesota, Wisconsin, Iowa, Illinois, Missouri, Kentucky, Tennessee, Arkansas, Mississippi and Louisiana—to form the Mississippi River Basin Legislative Cohort. Over the course of a year (June 2024 to June 2025), convening in person and virtually, the group shared ideas and best practices and learned from subject-matter experts to gain greater insight into the challenges of the Mississippi River Basin and discuss potential solutions.

This report provides an overview of select watershed issues identified by members of the cohort and highlights innovative policy approaches and state legislation that may serve to help states across the Basin protect their watersheds and communities from extreme weather and other hazards. A common theme among the states participating in the Cohort was the desire to tackle issues related to flooding, drought and water quality while also enhancing their state's economic and community resilience. There was also increased awareness that actions taken to address issues such as nutrient runoff or changes to water flow, could have both upstream and downstream impacts. As such, a holistic, collaborative approach is essential to minimize unintended consequences. This perspective reinforces the idea that states are operating within a shared basin context, where individual decisions connect to broader regional outcomes.

The Largest Drainage Basin in the United States

The Mississippi River Basin covers all or parts of 31 states and two Canadian provinces.

NCSL, 2026

Policy Drivers in the Mississippi River Basin

Faced with an increasing number of disasters, a changing federal funding landscape, aging infrastructure and shifting demographics, adaptation will be a throughline for state legislatures as they play an increasingly important role in addressing issues affecting the Mississippi River Basin, including flooding, drought, economic development and water quality. When considering policy options, lawmakers' decisions are largely guided by three primary drivers: economic, environmental and recreational.

■ **Economic**: The basin's ecological productivity is the foundation of its economy, hosting some of the most fertile agricultural lands on the planet. According to the Waterways Council, over 90% of U.S. agricultural exports are transported by the Mississippi River, and waterborne cargo is valued at over $150 billion, according to the U.S. Army Corp of Engineers. It's estimated that barge transportation contributes half a million jobs to the U.S. economy. The river and surrounding landscapes also support power generation, agricultural and industrial production, commercial fishing and outdoor recreation. To protect the vast economic value of the river, extensive investments have been made in engineered infrastructure to help reduce the impacts of flooding. While beneficial in some cases, in others, these conventional, human-engineered systems have led to more severe flooding and have accelerated habitat loss.

■ **Environmental**: The basin is home to diverse ecosystems, providing vital habitat for numerous species of fish, birds and other wildlife. It also includes the largest continuous system of wetlands in North America. These habitats and ecosystems face a variety of threats including hotter temperatures and extreme rainfall events in addition to increased nutrient loads. This is most evident off the coast of Louisiana where nutrient runoff has resulted in large algae blooms which have depleted the supply of oxygen, killing fish, oysters and other marine life. Known as "the dead zone," Gulf hypoxia has been devastating to the fishing economy along the Gulf coast. The health and vitality of the river are inextricably linked to the economic viability of the region and thus essential to protect and restore.

■ **Recreational**: The Mississippi river is known for its diverse recreational opportunities including boating, fishing, hiking and birdwatching which attract millions of visitors annually and generate tens of billions of dollars in economic activity. Recreation-related tourism along the river corridor supports thousands of jobs and contributes significantly to local and regional revenue. Arkansas SB 464 (2023) established the Natural State Initiative Pilot Program to promote outdoor recreation and economic development through designated opportunity zones near rivers, parks and historic sites. Additionally, states are increasingly investing in river restoration projects to create new recreational opportunities and improve ecosystem health. In Minnesota, for example, a voter-approved sales tax increase, known as the "Legacy Amendment" has helped fund a wide range of conservation and recreation initiatives, including parks and trails along the Mississippi River.

These drivers also reflect the extent to which states are linked by common basin conditions, a connection that becomes even clearer in the context of increasingly variable weather.

Extreme Weather: An Emerging Policy Driver

Another challenge state lawmakers face is the increasing frequency and severity of disasters. In the past decade, the number of billion-dollar disasters has grown along with numerous disasters that may not meet the threshold of a presidentially declared disaster but nevertheless cause significant damage to the impacted communities. Catastrophic flooding increasingly impacts the Mississippi River Basin, threatening human lives, infrastructure and ecosystems. Rapid water flow accelerates soil erosion, increases sedimentation, destroys wildlife habitats and degrades water quality. These flooding events also complicate efforts to control nutrient runoff and protect water resources.

States generally develop risk reduction strategies to shield their communities from destructive flooding. However, these efforts become more complicated when the same region faces both severe floods and extended periods of drought or reduced river flow in a single year. These low-water conditions can be particularly severe in the Mississippi River Basin, affecting wildlife habitats, economic trade and recreation. The river frequently reaches low water levels, and according to the National Oceanic and Atmospheric Administration, has recently shown a pattern of rapidly shifting between drought and flood conditions. These shifting conditions highlight the need for basin-wide strategies that strengthen watershed resilience across diverse landscapes.

Watershed Protections: Unpacking Environmental Policy Drivers

Having a clean and resilient watershed is essential to the recreational and economic vitality of the region. Whether addressing water flows or nutrient runoff, protecting water quality and ensuring the sustainability of the surrounding ecosystems are top-of-mind. States are expanding their toolkits by leaning into wetland restoration, land conservation and partnerships with landowners.

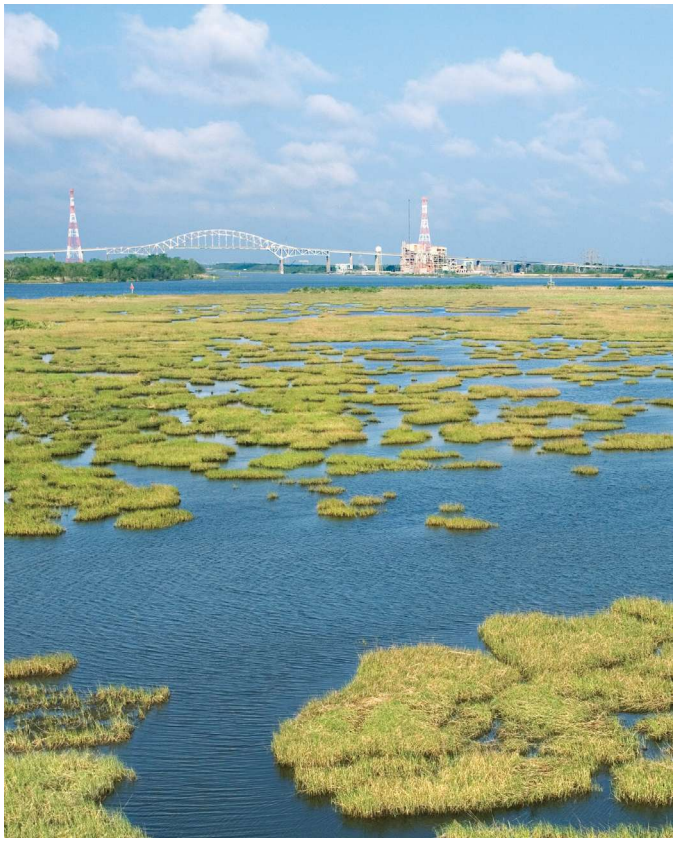
In an effort to address repetitive flooding and low-river levels, federal and state lawmakers are considering traditional grey or hard infrastructure along with nature-based solutions, such as floodplain reconnection, wetland restoration and riparian buffers. By enhancing and restoring these natural features, more stormwater can be stored or directed away from people and infrastructure and allowed to infiltrate into the ground,

Lessons from Loch Leven

In January 2016, record-setting rainfall throughout the Midwest led to severe flooding on the Mississippi River, overwhelming numerous levees in Illinois and Missouri and impacting downstream communities. State policymakers faced urgent challenges as levee failures, such as the breach in Wilkinson County, Mississippi, exposed the vulnerabilities of privately managed flood infrastructure. The situation at Loch Leven—a 6,000-acre island affected by these recurring floods—highlighted the critical need for coordinated state and federal policy responses. Through strategic partnerships and robust support from federal Farm Bill programs, Loch Leven serves as a model for floodplain reconnection initiatives in the Lower Mississippi River region.

recharging groundwater and depleting aquifers. Wetlands help to slow and disperse floodwaters, which reduces flood peaks and minimizes erosion. Additionally, wetlands act as natural filters by removing pollutants from the water. As communities face the costly cycle of rebuilding levees, restoring wetlands is becoming a practical and often cost-effective strategy for flood mitigation.

In 2024, Illinois enacted Senate Bill 247 to support conservation services such as wetland restoration, flood mitigation and natural infrastructure. The state also enacted Senate Bill 2510 (2025) to appropriate funds from the Ducks Unlimited Fund to finance wetland protection, enhancement and restoration projects, and to fund other associated efforts.



GETTY IMAGES

Swamplands along the Mississippi River in New Orleans.

States are also recognizing that private landowners play an essential role in restoring wetlands to mitigate flood impacts and restore waterfowl and other species. The Louisiana legislature enacted House Bill 564 (2025) which established an incentive program within the conservation fund to assist landowners with enhancing wildlife habitats and wetlands on private property. Iowa established the Conservation Reserve Enhancement Program (Iowa Code § 466.5) that provides incentives to landowners who voluntarily establish wetlands to reduce nitrogen loads and the movement of other agricultural chemicals from croplands to streams and rivers. In addition to improving water quality, these wetlands will provide wildlife habitat and increase recreational opportunities.

The intrinsic relationship between agriculture and water has also come into sharper focus in recent years, leading states and agricultural producers to collaborate on soil health practices and water recycling initiatives. Organizations like the Iowa Soybean Association and Ducks Unlimited, among others, support communities and farmers by providing technical assistance and grants to restore wetlands, oxbows and habitats that help rehabilitate ecosystems and enhance water quality.

Given that over 20 million Americans rely on the Basin as their main source of drinking water, maintaining high water quality standards is crucial. Although the Clean Water Act (1972) has led to significant improvements, the Mississippi River and its tributaries still face threats from excessive amounts of nitrogen, phosphorus and other nutrients from agricultural runoff. These nutrients, commonly used in farming, aid plant growth and carbohydrate storage. However, when they accumulate unnaturally, they fuel algae blooms whose decomposition depletes oxygen in the water, resulting in "dead zones."

As nutrient loads in water continue to rise each year, states are increasingly working with farmers to adopt conservation measures that curb nutrient runoff. For instance, the Wisconsin Department of Agriculture, Trade and Consumer Protection offers Producer-Led Watershed Protection Grants (Wis. Stat. §93.59). These grants help fund cost-sharing initiatives, on-farm demonstrations and outreach efforts to assist farmers in adopting conservation strategies and innovative methods to

MISSISSIPPI RIVER BASIN LEGISLATIVE COHORT

The cohort tours the Highland Bridge Project in St. Paul, Minn., where native vegetation, bioengineering, advanced green infrastructure and native limestone support watershed restoration, stormwater management and economic revitalization.

The Highland Bridge Project: A Case Study in Watershed Restoration and Economic Development

While record-breaking floods may garner the most attention, a significant number of smaller floods and other weather events every year cause damage to agricultural land, communities and the economy. To combat this, both states and the federal government are investing in and implementing disaster management strategies that achieve multiple benefits and involve both structural measures (such as dams and floodwalls) and nonstructural approaches (including land-use planning, wetland restoration and nature-based solutions). These multi-benefit projects are designed to achieve multiple positive outcomes—such as environmental protection, economic growth, improved public spaces, and enhanced community well-being—through integrated planning and solutions.

A good example of this is the Highland Bridge project, which the cohort visited during its first meeting in Minneapolis -St. Paul. The Highland Bridge project employs a multi-benefit approach to flood mitigation by integrating engineered and natural stormwater systems throughout its 122-acre development. Stormwater is collected and filtered through biofiltration and central water features, capturing significant pollutants and ensuring clean, regulated water flows into Hidden Falls Regional Park and the Mississippi River. This strategy restores the previously buried Hidden Falls Creek, stabilizes water flows, and reduces untreated runoff. In addition to flood resilience, the project enhances public spaces, supports affordable housing, and promotes sustainability through extensive native landscaping and LEED-certified buildings. Comprehensive planning not only protects the environment but also strengthens community connectivity, economic development and livability.

improve water quality in local watersheds. Similarly, Arkansas, Michigan and Mississippi have acted to lower the costs for landowners who adopt practices aimed at reducing agricultural runoff. The Arkansas Agriculture River Quality Loan Program (authorized by Arkansas Code §15-5-901) provides low-interest loans to agricultural landowners for conservation practices such as the construction of tailwater recovery systems and the purchase of no-till drills to help reduce pollution impacts to water quality. The Michigan Department of Agriculture and Rural Development oversees the Agricultural Environmental Assurance Program created by Mich. Comp Laws § 324.8710, which supports landowners in developing and implementing unique conservation plans to prevent or minimize agricultural pollution risks. Finally, Mississippi Code §69-27-1 created the Soil and Water Conservation Commission. The Commission uses federal funding provided by the Federal Clean Water Act to carry out agricultural non-point source pollution education and land treatment cost-share projects across the State.

Policy Issues and Approaches

Legislators are identifying policy levers within their authority to tackle these challenges with an eye towards sustainable investments that deliver long-term societal, ecological and economic benefits.

State lawmakers agree that the long-term viability of the river and the broader basin is essential to preserve the region's way of life. The economics of the basin are rooted in the river and its tributaries as movers of goods, sources of drinking water and destinations for recreation. As state, federal and private partners look to invest in the basin's infrastructure to withstand the ever-changing impacts of weather, nutrient runoff and industrial chemicals, they continue to encounter three main challenges:

- **Coordination and Capacity**: Strengthening intergovernmental coordination requires open lines of communication and collaboration among local, state, tribal and federal officials. This cross-jurisdictional collaboration is beneficial for effective water management, infrastructure planning and environmental stewardship. It also better prepares communities when funding becomes available as states and communities can have a clear framework for how they'll get "boots on the ground" to design and implement projects.
- **Data and Information:** Across the country, states are recognizing that unmanaged flood risks, water quality concerns and elongated droughts threaten public safety, local economies and long-term fiscal stability. Yet too often, states and local communities don't have the information, modeling, or data to effectively assess and plan for these growing risks. High-quality, reliable data is fundamental for conducting precise needs assessments, informing strategic investments and evaluating results.
- **Funding**: Infrastructure investments are among the costliest investments for state and federal governments, and the needs almost always outweigh the available resources. Over the years, states have sought to shore up their own funding mechanisms by creating infrastructure banks or passing resilient infrastructure bonds, among other strategies. As the federal government shifts more of the cost burden to states, lawmakers will need to reevaluate their current planning, mitigation and response systems to meet the demands of future extreme weather events through innovative funding and financing mechanisms.

Coordination and Capacity

State policymakers increasingly recognize the need to formalize and strengthen relationships with neighboring states to address shared challenges such as flooding, nutrient runoff and economic development. Legislative approaches may include the creation of interstate compacts, formal agreements or multi-state task forces that bring together lawmakers, agencies and technical experts to align priorities and share data. These collaborative structures facilitate capacity building and streamline planning across jurisdictions to ensure that upstream and downstream interests are jointly considered.

States are also exploring ways to coordinate across political and sectoral boundaries within their own

SCOTT OLSON/GETTY IMAGES

A traffic light in Cedar Rapids, Iowa, shows red above a flooded street in 2008.

borders to maximize regional benefits. At least 12 states have created a designated office or individual to enhance whole-of-government coordination. These chief resilience offices or officers lead long-term planning and coordinate agency efforts. Separately, states are using tools like data sharing, joint infrastructure investments and shared grant programs to foster cooperation and improve disaster mitigation and hazard planning.

Leveraging interagency working groups and regional advisory councils to inform basin-related decisions and increase coordination with neighboring states are other ways states work across borders to ensure protection of the Basin's assets. For example, the Upper Mississippi River Basin Association (UMRBA) facilitates interstate water resource planning among its five member states: Illinois, Iowa, Minnesota, Missouri and Wisconsin. It serves to increase resources and policy alignment on issues including floodplain resilience, water quality and ecosystems. Similarly, the Lower Mississippi River Conservation Committee acts as an interstate platform for states including Arkansas, Kentucky, Louisiana, Mississippi, Missouri and Tennessee. The mem-

Cedar Rapids: A Case Study in Watershed-Based Planning

Following the significant floods of 2008, Cedar Rapids and adjacent communities within the Cedar River basin came together utilizing a watershed-based planning approach to facilitate the exchange of data, information and advanced modeling techniques across county and municipal jurisdictions. Intergovernmental agreements allowed local governments to consolidate financial resources to maximize access to federal and state funding for expansive, multifaceted projects. A key partner in these efforts has been the Iowa Flood Center, established by state legislation in 2009. As part of the University of Iowa, the Flood Center provides research and innovative tools to Iowa's decision-makers, enhancing the state's flood preparedness and resiliency.

ber states work collaboratively to develop habitat restoration plans, implement restoration projects and promote coordinated management of the lower river.

Alongside local and regional collaboration, states also engage with numerous federal agencies operating in the Basin. The U.S. Army Corps of Engineers plays a vital role, and the cohort highlighted the importance of the Corps' coordination with the states. The Corps manages the river's navigable channels, locks, ports, and harbors; oversees navigation infrastructure projects; implements flood risk management through levees and dams; and supports habitat restoration and long-term monitoring. Because flood control and resource management are shared responsibilities, strong collaboration among the Corps, state agencies and legislatures is crucial. This coordination helps align policy objectives, secure funding, and ensure projects effectively address the needs of both states and local communities.

By strengthening these intergovernmental relationships, legislatures can amplify the effectiveness of individual state policies and pursue more holistic strategies for water quality, flood resilience and economic vitality throughout the basin.

STATE POLICY EXAMPLES:

- **Iowa:** In 2010, the state enacted HF 2459, establishing a watershed planning advisory council tasked with providing recommendations to state agencies regarding best practices for protecting water resources, ensuring sufficient water supply, mitigating and preventing flooding, and promoting sustainable, fiscally responsible and environmentally responsible resource management.

- **Minnesota:** The One Watershed, One Plan originated from Minnesota Statute §103B.801, establishing a comprehensive watershed management plan to create a systematic, watershed-wide, science-based approach to watershed management.

- **Louisiana:** established the Chief Resilience Officer within the governor's office (House Bill 526, 2023) to develop strategic direction for resilience initiatives, coordinate state agency functions related to risk reduction, align departmental budgets with resilience goals, pursue federal and private funding for resilience projects and integrate resilience into major state plans like the Coastal Master Plan and Hazard Mitigation Plan.

State legislatures are increasingly working to clarify responsibilities and build structured partnerships that support more effective cross-border water governance. In tandem with efforts to improve coordination across jurisdictions, states are also exploring how investments in watershed health and infrastructure can generate lasting economic benefits for local communities.

Data and Information

Accurate, accessible, and localized data is critical to understanding, planning for and responding to water-related challenges across the Mississippi River Basin including flood risk, water quality trends, land use changes and infrastructure vulnerabilities. Yet many states continue to face gaps in modeling, data collection and risk mapping, limiting their ability to assess vulnerabilities or prioritize cost-effective mitigation strategies. These gaps can result in misaligned investments, policy blind spots or missed opportunities to build long-term resilience.

Data integrity is an emerging threat impacting decision-makers and the general public. At face value, the abundance of maps and data obtained through a simple web search may seem helpful, but understanding the origins of the data, especially if it's being used as the basis for decision-making, are essential. For example, in late 2025, a nationally recognized real-estate listing site was forced to remove climate risk scores from property listings after concerns about data reliability and legal challenges.

In addition to data integrity, lawmakers must also consider data transparency—how data is shared and with whom. As a way to protect the public, several states, including Florida through HB 1015 (2025), require disclosure of floods and other hazards that may impact a property's safety and value.

KC MCGINNIS/FOR THE WASHINGTON POST VIA GETTY IMAGES

Flood waters surround area businesses near the main breach in the Mississippi River in Davenport, Iowa in May, 2018.

Lastly, data is often fragmented across jurisdictions or agencies and not always accessible to the state legislators and community leaders who shape policy responses. Improved coordination between state natural resource departments, environmental agencies, universities, and local governments can help close these information gaps and enable more strategic investments.

Montana offers one example of a legislative initiative focused on data-driven decision-making. The Modernization and Risk Analysis (MARA) Committee, supported by nonpartisan legislative staff, launched a data project to compile and analyze economic, demographic, and fiscal data from across the state. By integrating datasets from multiple agencies, the MARA project provides a more comprehensive view of long-term trends and the interconnectedness of government operations. The result is a suite of studies, reports, and interactive tools that help policymakers understand emerging risks and plan more effectively for the future.

The Louisiana Coastal Master Plan also demonstrates improved state coordination and data sharing. Following the devastating hurricanes in 2005, the Louisiana Legislature created the Louisiana Coastal Protection and Restoration Authority (CPRA) to serve as a single state authority aligning and coordinating coastal restoration and protection priorities. The CPRA's Coastal Master Plan leverages the best available data and engineering to guide the state's coastal actions and risk reduction goals.

As Mississippi River Basin states consider new resilience strategies, coordinated efforts to improve data infrastructure and share methodologies, such as forecasting tools, mapping standards, or plan-

ning templates, can bring shared benefits from the lessons learned across the region. Regional collaboration on data can amplify state investments and lead to stronger outcomes for communities across the basin.

STATE POLICY EXAMPLES:

■ **Iowa**: IA Code § 466C.1 (HB 822, 2009) established the Iowa Flood Center to develop hydrologic models for flood-frequency estimation and establish community-based programs to improve flood monitoring.

■ **Texas:** Tex. Water Code § 16.061 (SB8, 2019) directed the adoption of a comprehensive state flood plan, incorporating regional flood plans and making recommendations to guide state, regional and local flood control policy. With mapping completed and 14 regional flood planning groups assessing risks and identifying flood mitigation projects, the first-ever Texas State Flood Plan was released in 2024.

■ **North Carolina**: NC Session Law 2021-180 (SB 105) directed the development of a statewide Flood Resiliency Blueprint for major watersheds impacted by flooding, providing guidance for projects and funding strategies to mitigate flooding.

Funding and Financing

Securing capital for long-term investments in infrastructure and risk mitigation can be challenging as immediate needs can easily dominate budget planning processes and these much-needed investments. To counter this, states data should include yield returns beyond finances, including lives saved, conserved habitats and preserved recreation.

States frequently encounter significant obstacles due to the fragmented nature of federal funding sources. Whether undertaking infrastructure initiatives or responding to severe weather events, funding is often distributed among multiple federal agencies, each with distinct application procedures and varied outcomes. As previously noted, appointing a dedicated individual or establishing an office to facilitate interagency coordination can streamline funding processes and reduce project misalignment. Additionally, states that develop comprehensive project plans addressing diverse objectives may enhance their ability to secure and effectively utilize available funds.

States are implementing innovative funding strategies to support water infrastructure, either by matching federal programs or developing independent state-funded initiatives. Legislators aim to enhance infrastructure reliability and ensure communities are prepared for future disasters. The following are examples of approaches currently being implemented across the Mississippi River Basin:

STATE POLICY EXAMPLES:

■ **Texas:** Water Code §15 (SB 7, 2019) created the Flood Infrastructure Fund, which provides financial assistance for flood control, flood mitigation and drainage projects. The fund was initiated with $793 million from the state's Economic Stabilization Fund, aka "the rainy day fund".

■ **Wisconsin:** Wis. Stat. § 323.63 (SB 222, 2024) established the Pre-Disaster Flood Resilience Grant to provide funds to identify flood vulnerabilities, improve flood resiliency and restore hydrology to reduce flood risk and damages in flood-prone communities.

Additionally, as states in the Mississippi River basin continue establishing and investing in programs to protect water quality, many look to leverage federal funding streams as a way to develop and sustain projects focusing on pollution control, drinking water and a variety of other water infrastructure programs. Longstanding federal programs such as the Clean Water State Revolving Loan Fund and the Drinking Water State Revolving Loan Fund are essential to state infrastructure investments and support states' ability to plan and oversee projects at the local level. The creation of the federal Water Infrastructure Finance and Innovation Act in 2014, has helped to accelerate state investments in larger infrastructure projects.

GETTY IMAGES

Two girls play on the bank of the Mississippi River below the Coon Rapids dam in Minnesota.

- **Clean Water State Revolving Fund (CWSRF):** The federal-state partnership fund supports a wide range of water quality infrastructure projects, including municipal wastewater facilities, nonpoint source pollution control, decentralized wastewater treatment systems, stormwater runoff mitigation, green infrastructure, estuary protection and water reuse.
- **Drinking Water State Revolving Loan Fund (DWSRF):** Capitalization grants, requiring a 20 percent match, are awarded to states based upon the results of the most recent Drinking Water Infrastructure Needs Survey and Assessment.
- **Water Infrastructure Finance and Innovation Act (WIFIA):** The WIFIA program offers long-term loans that can be combined with State Revolving Fund assistance, municipal bonds and federal and state grants to help communities deliver more critical water infrastructure projects including wastewater treatment and stormwater projects.

Conclusion

While the challenges in the Mississippi River Basin are plentiful, the Mississippi River Basin Legislative Cohort found common ground on many issues, learned about best practices in the region and recognized the power of their collective voice to advocate for common-sense solutions. As we look ahead, state legislatures are increasingly adopting policy mechanisms that support both traditional infrastructure and nature-based approaches to water management. Dedicated grant programs, bonding authority and revolving loan funds are being used to advance projects such as wetland restoration, floodplain reconnection and riparian buffer enhancement. These mechanisms help align ecological goals such as habitat protection and water quality improvements with long-term economic and risk reduction benefits. By designing flexible funding streams and statutory frameworks, legislatures can make natural infrastructure a core component of their state's water management strategy.

At the same time, states are revisiting governance structures to better coordinate implementation across agencies, regions and sectors. Tools such as watershed councils, interagency planning committees and multi-jurisdictional agreements are helping to integrate ecological priorities into water management decision-making. Legislatures are also creating new pathways for public-private partnerships and using federal investment for projects that emphasize environmental resilience. With the right structures in place, states can deliver policies that are more adaptive, more inclusive and more attuned to the role of nature in sustaining river systems.

Extreme weather will continue to increase the demands on states and make the challenges of coordination, data management and funding more difficult. Without advanced planning and investments in risk mitigation, states may find themselves in a pattern of reactive funding and relief programs, but as highlighted throughout this report, states are making strides to proactively address the issues they face and doing so with the health and longevity of the Basin in mind.

Protecting and effectively managing the Mississippi River Basin requires bold, coordinated action from state governments and stakeholders. In committing to innovative policies, prioritizing watershed health and fostering cross-sector partnerships, states can help ensure the enduring vitality of this invaluable resource.

By emphasizing regional priorities and long-term outcomes, lawmakers can support efforts that benefit local communities, economies and ecosystems. Ongoing progress, collaboration and investment at the state level will play a significant role in sustaining the value of the river for future generations.

Acknowledgements

NCSL would like to thank the Environmental Defense Fund for its support of the Mississippi River Basin Legislative Cohort. The cohort illuminated the differing challenges and policy approaches in the Mississippi River Basin while showcasing the shared goals of a healthy and vibrant river. This report is intended to offer state policymakers a roadmap for addressing the watershed issues in the Basin and enhancing the resilience of their communities.

Several organizations and individuals shared information with the cohort and NCSL is appreciative of their time and expertise. These organizations and individuals include America's Watershed Initiative, American Flood Coalition, Charles Sutcliffe (National Wildlife Federation, former Chief Resilience Officer, State of Louisiana), City of Cedar Rapids, City of Minneapolis, CSRS Inc., Iowa Flood Center, Institute for Resilient Infrastructure Systems, University of Georgia, Lower Mississippi River Conservation Committee, National Association of Flood and Stormwater Management Agencies, St. Anthony Falls Laboratory, Upper Mississippi River Basin Association, U.S. Army Corps of Engineers - Mississippi River Commission and Wisconsin Department of Natural Resources.

Appendix

The following chart outlines a few of the organizations who worked with the cohort and which work on issues affecting the Mississippi River Basin. This is not a comprehensive list of all the organizations working in the Basin.

Organization	Mission
Upper Mississippi River Basin Association	UMRBA serves as a forum for five states—Illinois, Iowa, Minnesota, Missouri and Wisconsin— to discuss river-related concerns, encourages joint planning and management of natural resources, helps state and federal agencies share information, and represents the collective interests of the basin states to Congress and federal agencies.
America's Watershed Initiative	AWI has partnered with The Nature Conservancy to bring together government, community, academic, industry and NGO leaders to develop shared priorities across the entire Mississippi River watershed.
National Audubon Society	The National Audubon Society partners with stakeholders, advocates and decision-makers on efforts to improve and preserve critical habitat and community resilience in the Mississippi River Basin.
The American Flood Coalition	This bipartisan coalition works at all levels of government to scale innovative solutions to protect communities from higher seas, stronger storms and more frequent flooding.
The Mississippi River Cities and Towns Initiative	The initiative is a coalition of mayors from cities and towns along the Mississippi River. Its mission is to protect and promote the river as a vital economic, environmental and cultural resource. The initiative works on issues such as flood resilience, water quality, sustainable development and infrastructure investment.
The Nature Conservancy	TNC focuses on strategies that deliver multiple benefits: increasing connectivity, supporting wildlife habitats and improving water quality. Through collaboration, its Mississippi River Basin program leads broad initiatives to reconnect floodplains. Using science-based tools, TNC identifies effective strategies for flood mitigation, water quality and habitat restoration.
The National Association of Flood and Stormwater Agencies	The association supports flood and stormwater agencies by advocating for effective public policy, securing essential funding and promoting innovations that help members better serve their communities.
The National Association of Floodplain Managers	This scientific and educational nonprofit organization educates policymakers on sound floodplain management policies and practices, improves the knowledge of floodplain managers, conducts applied research and develops tools that address all aspects of flooding and floodplain management.

Each Component of the Framework Outlines Options Where Legislators May Act

The American Flood Coalition's State Flood Resilience Framework outlines five areas where state legislators can take action.

LEADERSHIP AND ACCOUNTABILITY	• Codify lead flood office(r) with budget, permanent staff, and authority to break down agency silos (note: either create a new office or designate an existing office). • Fund watershed-based staff to plan across jurisdictions and reduce technical burden on local communities. • Designate watershed-based regional entities to build flood resilience.
DATA MANAGEMENT AND RISK ASSESSMENT	Establish or designate a statewide data and modeling coordination hub to: • Complete a statewide flood risk assessment (e.g., state-owned properties, dams and levees, critical infrastructure). • Collect flood data/inputs, identify gaps in the data and close them. • Act as home for statewide flood data and conduct modeling that identifies risk scenarios and options to reduce risk.
STRATEGIC PLANNING	Require a statewide flood resilience strategy that includes risk reduction goals, a prioritized list of flood projects, and metrics to measure progress. • Establish a technical assistance program to support resilience planning at the watershed level. • Incorporate flood risk reduction into local/regional transportation and comprehensive plans.
FUNDING AND FINANCING	• Develop a statewide investment scorecard to allocate funds towards the highest priority projects and responsibly steward taxpayer money. • Establish consistent funding to invest in flood protection infrastructure and solutions. • Establish a state funding source for local match requirements to ensure the maximum amount of federal dollars come to the state. • Create a common application or state-administered flood resilience grant programs.
STATEWIDE STANDARDS	• Adopt the latest building codes, including all flood-related provisions. • Ensure flood risk disclosure to protect prospective homebuyers and renters. • Enable local governments to establish stormwater utilities or similar functions to fund flood protection infrastructure.

The State Flood Resilience Framework was developed by the American Flood Coalition, a national, bipartisan coalition working with local, state, and federal leaders to advance practical solutions that reduce flood risk and strengthen community resilience.

NCSL Contact:

environment-info@ncsl.org

NATIONAL CONFERENCE OF STATE LEGISLATURES

7700 East First Place, Denver, Colorado 80230, 303-364-7700 | 444 North Capitol Street, N.W., Suite 515, Washington, D.C. 20001, 202-624-5400

ncsl.org

Upper Mississippi River
Quarterly Meetings

Attachment H

Federal Agency Fiscal and Program Reports

FY 2026 Appropriations Enacted
Summary of Relevant Upper Mississippi River System Programs and Projects
(Millions $)

	2024 Actual	2025 Enacted	2026 P-Budget	2026 House	2026 Senate	2026 Enacted
Corps of Engineers						
Construction						
Upper Mississippi River Restoration Program (UMRR)	55.000	13.516	52.000	52.000	52.000	52.000
Navigation and Ecosystem Sustainability Program (NESP)	120.000	0.000	0.000	2.000	18.000	18.000
Brandon Road Lock and Damn, Aquatic Nuisance Control	0.000	0.000	28.000	28.000	28.000	28.000
Melvin Price Lock and Dam	62.000	0.000	0.000	0.000	0.000	0.000
Cahokia Heights Flood Project	1.100	0.000	0.000	7.297	7.297	7.297
TJ O'Brien L&D Major Rehabilitation	0.000	122900.000	0.000	0.000	0.000	0.000
Investigations						
UMRS Flow Frequency Study	1.000	1.000	0.000	0.000	0.000	0.000
Lower St. Anthony Falls	0.000	1.128	0.000	0.000	0.000	0.000
Upper St. Anthony Falls	0.000	0.924	0.000	0.000	0.000	0.000
East St. Louis	0.000	0.000	0.000	0.500	0.500	0.500
Interbasin Control of Great Lakes - Mississippi River Invasive Species	0.200	0.000	0.000	0.000	0.000	0.000
Operations and Maintenance						
Small Port Dredging						
Davenport Harbor	1.018	0.000	0.000	0.000	0.000	0.000
Andalusia Harbor	0.750	0.000	0.000	0.000	0.000	0.000
Moline Harbor	1.500	0.000	0.000	0.000	0.000	0.000
Quincy Bay	2.000	0.000	0.000	0.000	0.000	0.000

	2024 Actual	2025 Enacted	2026 P-Budget	2026 House	2026 Senate	2026 Enacted
Corps of Engineers (Cont.)						
Quincy Harbor	1.500	0.000	0.000	0.000	0.000	0.000
Rock Island Harbor	1.000	0.000	0.000	0.000	0.000	0.000
New Madrid County Harbor	0.560	0.561	0.587	0.587	0.587	0.587
New Madrid Harbor	0.475	0.476	0.497	0.497	0.497	0.497
Winona Harbor	0.000	0.160	0.000	0.000	0.000	0.000
Southeast Missouri Port	0.509	0.554	0.582	0.582	0.582	0.582
Chicago Sanitary and Ship Canal Dispersal Barrier	13.746	17.979	12.979	12.979	12.979	12.979
Mississippi River Between Missouri River and Minneapolis						
St. Paul District	99.865	102.668	100.576	100.576	100.576	100.576
Rock Island District	76.732	106.573	72.169	90.169	72.169	90.169
St. Louis District	29.347	72.959	33.068	45.068	33.068	45.068
Mississippi River Between Missouri River and Ohio River	29.962	40.931	33.132	33.132	33.132	33.132
Illinois Waterway						
Rock Island District (MVR)	51.334	61.503	54.557	54.557	54.557	54.557
St. Louis District (MVS)	2.445	2.540	2.749	2.749	2.749	2.749
Kastaksia River Navigation	7.578	6.584	6.845	6.845	6.845	6.845
Minnesota River	0.325	2.152	0.355	0.355	0.355	0.355
Clarence Cannon Dam and Mark Twain Lake	8.204	10.187	8.302	8.302	8.302	8.302
U.S. Environmental Protection Agency						
State Pollution Control Grants (Sec. 106)	225.685	225.379	0.000	225.685	225.685	226.435
State Nonpoint Source Grants (Sec. 319)	174.500	174.263	0.000	174.500	174.500	175.250
Clean Water State Revolving Fund (CWSRF)	1,638.861	1,638.861	155.000	1,208.314	1,638.861	1638.861
Drinking Water State Revolving Fund (DWSRF)	1,126.101	1,126.101	150.000	894.737	1,126.101	1126.101
Inland Oil Spill Program	23.712	20.711	16.395	17.560	16.506	20.561

	2024 Actual	2025 Enacted	2026 P-Budget	2026 House	2026 Senate	2026 Enacted
Department of Agriculture - NRCS						
Watershed Rehabilitation	1.000	1.000	0.000	7.000	1.000	3.000
Conservation Operations	914.899	895.754	112.259	850.000	895.754	850.000
Watershed and Flood Prevention Operations	35.000	14.650	0.000	35.000	52.360	50.000
Agriculture Conservation Easement Program	416.043	414.593	414.593	Auth. Limit	Auth. Limit	Auth. Limit
Environmental Quality Incentives Program	1,879.000	1,873.473	1,873.473	Auth. Limit	Auth. Limit	Auth. Limit
Regional Conservation Partnership Program	282.900	282.900	282.900	Auth. Limit	Auth. Limit	Auth. Limit
Conservation Stewardship Program	922.000	943.000	1,414.500	Auth. Limit	Auth. Limit	Auth. Limit
Emergency Watershed Protection	0.000	920.000	0.000	0.000	0.000	0.000
ARS: Environmental Stewardship	303.000	303.000	220.000	Auth. Limit	Auth. Limit	Auth. Limit (-9.764)
U.S. Fish and Wildlife Series						
Habitat Conservation	72.000	72.000	68.836	68.836	69.820	69.760
Ecological Services - Conservation and Restoration	37.571	37.821	28.586	36.255	37.571	36.822
National Wildlife Refuge System	527.035	527.857	412.135	505.746	525.555	522.035
National Wildlife Refuge Fund	13.228	13.228	0.000	13.228	13.500	13.228
Land Acquisition	0.000	0.000	0.000	0.000	0.000	0.000
Fish and Aquatic Conservation	226.793	223.016	152.015	190.607	220.310	225.775
Science Applications	33.781	33.781	0.000	27.431	32.793	30.781
U.S. Geological Survey						
Ecosystems Mission Area	299.377	292.877	0.000	289.780	307.947	294.705
Climate Adaptation Science Cneters		63.115	0.000	66.115	62.115	64.115
Geology, Energy, and Minerals	101.093	155.337	136.526	104.657	110.594	104.664
Natural Hazards	198.636	196.126	136.526	190.565	209.439	200.131
Water Resources	288.772	288.772	223.818	285.212	291.802	288.772
Core Science Systems	273.221	227.987	165.041	283.221	279.721	276.127

Upper Mississippi River Quarterly Meetings

Attachment I

Additional Items

QUARTERLY MEETINGS
FUTURE MEETING SCHEDULE

MAY 2026	
Minneapolis-St. Paul Metro	
May 19	UMRBA Quarterly Meeting
May 20	UMRR Coordinating Committee Quarterly Meeting

AUGUST 2026	
St. Louis, MO	
August 4	UMRBA Quarterly Meeting
August 5	UMRR Coordinating Committee Quarterly Meeting

Acronyms Frequently Used on the Upper Mississippi River System

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

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

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

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

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

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

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