

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

**August 10, 2022
Quarterly Meeting**

St. Paul, Minnesota

Brian Chewning of the U.S. Army Corps of Engineers called the meeting to order at 8:00 a.m. on August 10, 2022. UMRR Coordinating Committee representatives in attendance were Sabrina Chandler (USFWS), Mark Gaikowski (USGS), Chad Craycraft (IL DNR), Randy Schultz (IA DNR), Megan Moore (MN DNR), Matt Vitello (MO DoC), and Jim Fischer (WI DNR). A complete list of attendees follows these minutes.

Minutes of the May 25, 2022 Meeting

Randy Schultz moved and Matt Vitello seconded a motion to approve the draft minutes of the May 25, 2022 UMRR Coordinating Committee meeting as written. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2022 Fiscal Update

Plumley reported that UMRR has obligated nearly \$22 million, or just over 66 percent, of its \$33.17 million FY 2022 funds as of August 1, 2022. Plumley said the Conway Lake HREP was completed faster and with less material than expected, resulting in approximately \$439,000 of savings on the project. These funds will be transferred to the award of the McGregor Lake contract. A construction contract for Steamboat Island HREP in Rock Island District is also anticipated to aid in allocating remaining program funds. Plumley said he anticipates UMRR will obligate over 98 percent of its FY 2022 appropriation by the end of the fiscal year.

FY 2023 Fiscal Outlook

Plumley reported that the President's FY 2023 budget as well as the House and Senate FY23 energy and water appropriations bills include \$55 million for UMRR. Plumley said final appropriations are not yet known. There is a high potential Congress will elect to move a continuing resolution for FY 2023 spending early in the fiscal year, extending current funding levels for the federal government.

The draft FY 2023 plan of work for UMRR at a \$55 million funding scenario is as follows:

- Regional Administration and Program Efforts – \$1,550,000
 - Regional management – \$1,280,000
 - Program database – \$100,000
 - Program Support Contract – \$120,000
 - Public Outreach – \$50,000
- Regional Science and Monitoring – \$15,450,000
 - Long term resource monitoring – \$5,500,000
 - Regional science in support of restoration – \$8,350,000
 - Regional (Integration, Adapt. Mgmt) – \$200,000

- Habitat evaluation (split across three districts) – \$1,275,000
- Report to Congress – \$125,000
- Habitat Restoration – \$38,000,000
 - Rock Island District – \$11,148,000
 - St. Louis District – \$13,502,000
 - St. Paul District – \$13,250,000
 - Model certification – \$100,000

Plumley pointed out the most substantial changes that would result from UMRR being funded at \$55 million in comparison with its recent \$33.17 million appropriation, as follows:

- Increasing regional science in support of restoration from approximately \$3.8 million to \$8.3 million
- Increasing habitat restoration funding in each district from between \$6 million to \$7 million to between \$11 million to \$13 million.

WRDA 2022

Plumley said the draft Senate Energy and Public Works Committee’s WRDA 2022 measure includes an annual appropriation authorization increase for the HREP element of UMRR from \$40 million to \$75 million. With LTRM’s annual authorized appropriation level of \$15 million annually, the total UMRR annual authorized funding level would be \$90 million. Plumley reported the bill is in conference now and noted that UMRBA and some non-governmental partners have advocated for an increase to LTRM as well.

Plumley observed that, should this potential increased appropriations become reality, there would be dramatically elevated demands on personnel resources across the partnership.

Everglades

Plumley recalled his presentation during the May 25, 2022 UMRR quarterly meeting comparing UMRR to other national ecosystem restoration programs included in the President’s FY 2023 budget. Of the eight ecosystem restoration projects included in the FY 2023 budget, UMRR received the second highest funding level. The South Florida Ecosystem Restoration (i.e., Everglades) received \$406 million.

Plumley explained that the Everglades Program recently faced a question of when it would be done. That generated the estimate of a total federal cost for Everglades ecosystem restoration of \$11,101,414,000 and the estimated total non-federal cost of \$9,916,663,000. The remaining federal balance to complete restoration work is \$5,467,119,000, indicating that the program is about half complete. In response to a question from Jennie Sauer, Plumley said he could report back on an acreage comparison for Everglades and UMRR.

UMRR Ten-Year Plan

Plumley reported that changes to the UMRR 10-year implementation plan include extending schedules for Reno Bottoms, Green Island, and Beaver Island Stages I and II; replacing Glades Refuge with Reds Landing; and adding Gilead Slough. Plumley said increased annual appropriations to \$55 million would result in accelerated project schedules and expedited need for another project selection process. In response to a question from Matt Mangan, Plumley said the next HREP selection process under a \$55 million funding scenario is anticipated to begin in calendar year 2024.

Acres Restored

Plumley said four projects are anticipated to be completed in 2022 that will collectively add 9,810 acres to UMRR's total restored or improved habitat. This estimate includes the clarification that Beaver Island Stages I and II are anticipated to be complete this year with follow-on forestry work to be completed in FY 2023.

2022 Report to Congress

Plumley reported that the draft 2022 UMRR Report to Congress has been reviewed twice by UMRR Coordinating Committee members and once by some non-governmental partners. The report authors have addressed the comments in consultation with the UMRR Coordinating Committee. MVD is currently reviewing the draft report. MVD has requested additional explanation regarding the legal or policy basis for the requirements at issue in the project partnership agreements. The second in-progress review with USACE Headquarters is scheduled for August 29, 2022. Plumley said the Corps remains on schedule to deliver the 2022 Report to Congress in December 2022. Following recent minor delays in the schedule, the Corps has identified some procedural efficiencies to ensure the deadline is met.

Environmental Justice

Plumley reflected on the UMRR Coordinating Committee's open conversation about environmental justice following the May 25, 2022 quarterly meeting. In concluding the discussion, the Coordinating Committee requested additional conversation about UMRR's role in advancing environmental justice. As a first step in follow up to that discussion, Plumley provided an overview of the history of environmental justice in federal policy and guidance and how UMRR has been addressing it in projects to set the stage for future conversations. Plumley said UMRR's partnership is broad, but there are important voices that have not traditionally been involved within UMRR.

Plumley said federal environmental justice programs started in 1970s, codifying associated principles and guidelines for water resource development programs in the 1980s via four accounts: national economic development, environmental quality, regional economic development, and other social effects. The Corps' feasibility reports include discussion of all four categories. The environmental quality account includes project elements relating to Habitat units and benefits. Environmental justice effects are included in the other social effects account.

In 1994, Executive Order 12898 defined environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." This Executive Order also spoke to how the Corps should incorporate environmental justice into its work. WRDA 2020 included specific language about the need to address all four accounts with an emphasis on environmental justice. Plumley said subsequent Executive Orders established environmental justice work groups and required coordination between OMB and ASA(CW) offices. In March 2022, ASA(CW) issued interim implementation guidance for the WRDA 2022 provisions. This interim guidance provides direction for analyzing environmental justice issues and encourages the Corps to develop engagement strategies with underserved communities.

Plumley said the Corps made environmental justice part its of mission. The Corps strives to be creative in how it reaches out to communities that have traditionally been underserved through the agency's programs and projects to learn from their perspectives and ensure that underserved communities are not adversely impacted. He noted that environmental justice is both a movement that reflects the desire by underserved communities to be recognized and included in decision making as well as the Corps' intention to be more inclusive. The Corps is moving toward a better model of improving participation in decision making by

removing barriers (e.g., translation services for people with limited English proficiency), increasing access to benefits from projects, and reducing environmental burdens to communities. Plumley noted that most HREPs occur in relatively isolated areas.

Plumley outlined how the Corps six-step planning process for all HREPs aligns with the NEPA process and how environmental justice is woven into that process. Whereas the early years of the environmental justice movement called for simply doing no harm, the objectives now are to involve underserved communities more closely in decision making processes. Plumley pointed to the Corps' environmental justice policies that state the agency's intention to integrate environmental justice into all aspects of its work, including through UMRR. He encouraged future dialogue among UMRR partners regarding the tools and approaches that their respective agencies' use to advance environmental justice in their own work and to discuss options for ways in which UMRR can advance environmental justice. Plumley offered to convene additional structured discussions on this topic over the next several months and to consider how we communicate the benefits and value of UMRR going forward.

Lauren Salvato read Olivia Dorothy's comment provided in the meeting chat forum that the Civil Rights Act of 1964 be included in historical timelines of the environmental justice movement. Dorothy pointed to Title 6 of the Civil Rights Act that prohibits discrimination based on the basis of race, color, or national origin in any program or activity that receives federal funds or other federal financial assistance.

Jim Fischer expressed appreciation to Plumley for raising this topic and indicated his support for further dialogue as a program on how to advance environmental justice. Fischer noted environmental justice is critically important nationally and for UMRR. Fischer said it will be especially important that our actions reflect our words today, urging partners to keep environmental justice in mind when implementing UMRR and NESP projects under very compressed timelines.

Fisher reported that Governor Evers issued an executive order establishing the Wisconsin Department of Environmental Justice, which will collaborate with the Office of Sustainability and Clean Energy to promote collaboration across agencies through strategies that advance environmental justice. The Department is hiring a Chief Resilience Officer now. Fischer said the Office of Great Waters (OGW) established a performance objective for all staff to continue dialogue about environmental justice, diversity, equity, and inclusion on a quarterly basis. Rebecca Fedak, Lake Michigan Supervisor for Wisconsin DNR, recently led a case study to develop an engagement framework around the Milwaukee Area of Concern (AOC) organized around commitment to partnership, playing to strengths, investing in the AOC community engagement model, and centering on equity and justice. The draft framework may be applicable to efforts on the river as well. Additionally, Fischer said a project scoping framework tool is available that lays out steps to assess environmental justice in any OGW projects, which could apply to HREPs or other UMRR projects.

Megan Moore also commended Plumley for addressing the environmental justice and welcomed additional structured conversations going forward. Moore highlighted ongoing efforts in Minnesota to establish a Chief Inclusion Officer and Chief Equity Officer. The positions will be incorporated into the Walz-Flannigan Administration to promote diversity, equity, and inclusion as well as environmental justice across agencies. Moore noted that Minnesota DNR works under a culture of respect and incorporates within position descriptions the ability to think inclusively and consider how one's work impacts vulnerable communities. Sabrina Chandler said underrepresentation in the workforce is often overlooked in these discussions but is a very important aspect for consideration. It is important that the people working on UMRR and are involved in its decision making represent underserved communities so that there is a diversity of backgrounds and perspectives and ideas inherently brought into planning processes. The Service is actively working to better serve underserved communities by having those folks represented in their workforce.

Olivia Dorothy echoed Chandler's comments. Dorothy raised the issue that the UMRR Coordinating Committee meets at times and in places that are not accessible to all of the communities and potential partners along the Mississippi River. Dorothy suggested reviewing how decision making processes can be more accessible to underserved communities.

Brian Chewning expressed appreciation for Plumley's approach to the conversation and the comments raised by partners. Chewning noted that additional Corps guidance on environmental justice is forthcoming as it continues to be a priority for the Administration and said there may be useful tools from USEPA and others that help define disadvantaged communities geographically. In response to a question from Kirsten Wallace, Plumley suggested convening a small group to plan for a focused discussion on how UMRR's current approaches, tools, and opportunities incorporate environmental justice and can be improved as well as how UMRR can engage with communities that have not been traditionally served by the program. Mark Gaikowski said there is a NOAA Knauss fellow working with the midcontinent region who did post-graduate work on environmental justice issues in the Central Atlantic Coast who may be available to join the *ad hoc* group. Stephenson said he will send an email to the UMRR Coordinating Committee to designate staff from their respective agencies to participate in an *ad hoc* group on UMRR's roles in environmental justice.

Implementation Issues

Plumley reported that, on July 12, 2022, Andrew Stephenson sent revised draft implementation issue papers to the UMRR Coordinating Committee that reflected the Committee's input on earlier drafts. The Coordinating Committee is scheduled to meet on August 31, 2022 to discuss the revisions and identify the preferred actions to address each issue. In response to a question from Stephenson, Plumley said the revised PPA language in the Report to Congress states that OMRR&R and indemnification are based in law but does not change the message of the issue paper. The revised language will be available for inclusion in the August 31, 2022 discussion.

Inflation

Plumley reported that inflation is impacting HREP costs. Recent HREP contract bids have come in approximately 23 percent to 24 percent above the government estimate. Steamboat Island HREP bids were 18 percent to 40 percent above estimates. Plumley said that inflation is affecting all Corps projects and programs around the country. Jennie Sauer said LTRM has seen increased equipment costs including the water quality lab equipment costs. Jim Fischer said fleet rates in Wisconsin have increased. Plumley said UMRR will further assess impacts across program activities.

HREP and LTRM Integration

Plumley outlined recent initiatives related to HREP and LTRM integration. The Lower Pool 13 HREP in the Rock Island District was the first HREP to intentionally embed LTRM staff in the PDT due to it being in a trend pool. LTRM staff reported their involvement in the PDT provided valuable perspectives to them on how projects are developed. Plumley said the Lower Pool 13 PDT has a tentatively selected plan, and mentioned that he will request the PDT conduct an after-action review to identify what was supposed to happen, what did happen, and what could be done differently. These lessons learned would help to inform LTRM involvement on other PDT activities for projects in LTRM trend pools, such as Pool 4 Big Lake.

Plumley said the 2022 science meeting included a session focused on Lower Pool 13 for which a summary is forthcoming. Individuals involved in that discussion may also meet again over next several months to review how that conversation may help to inform integration of the program elements. Sabrina Chandler said the Service also held internal discussions to reflect on the Lower Pool 13 process and that the intentional inclusion of LTRM staff was critical to the success. Chandler said that, in efforts to replicate the success for the Pool 4 Big Lake project, questions arose such as who is responsible for inviting LTRM staff to the PDT

and who is responsible for utilizing LTRM data to inform the planning process. Chandler expressed enthusiasm for progress on integration and said it will be important to set expectations and establish roles and responsibilities for those activities.

Plumley said integration has also been discussed throughout the LTRM implementation planning effort. Houser echoed Chandler's comments and said adding capacity to bridge LTRM and HREP may require additional staff rather than having existing staff expand their roles. Stephenson said lessons learned through UMRR may also apply to NESP projects in LTRM trend pools and suggested looking back on the Pool 8 Islands HREP for perspective on how LTRM monitoring post-HREP construction can help evaluate certain project features. In response to a question from Wallace, Plumley proposed soliciting a small work group this fall to plan for additional discussion on integration of the two UMRR elements.

Chandler said Sharonne Baylor is creating information packets for onboarding new staff and there is an opportunity to expose employees to both sides of program in a more integrated approach rather than as stovepipes. Jim Fischer said Wisconsin DNR developed a Mississippi River 101 guidance document to bring waterways permitting staff up to speed. Fischer noted that there may be entire staff turnover within 5-10 years that would result in the loss of substantial institutional knowledge, warranting a programmatic approach to prepare for knowledge transfer. Matt Mangan suggested that, and Plumley agreed, LTRM should be involved in the planning charette stage to identify potential information needs and LTRM support needs as well as other opportunities for collaboration. Houser and Chandler attributed success of the Lower Pool 13 project to early inclusion of LTRM staff. Hagerty said there are a number of resources on UMRR and LTMR websites available for new staff, such as the UMRR and LTRM 101 webinars.

Ribbon Cutting

Plumley reported that a new video celebrating the ribbon cutting of the Pool 12 Overwintering HREP is available at this link: <https://www.youtube.com/watch?v=kJmUOQuOvqo>. Chandler applauded the video for utilizing a free-flowing conversation format. Mark Gaikowski suggested that, and Fischer agreed, a video ribbon cutting of the renovated UMESC water quality lab would showcase the UMRR science and monitoring element. In response to a question from Fischer, Plumley said the Pool 12 HREP video was shared to social media but did not have a coordinated partnership effort similar to the recent LTRM status and trends report release. Fischer said the video would help generate conversation among the river users. Stephenson noted that the Communications and Outreach Team is working on a process to better enable sharing of these products across the partnership.

2015-2025 Strategic and Operational Plan Review

Stephenson recalled that, on September 20, 2021, a survey was distributed to the UMRR partnership at-large regarding the 2015-2025 UMRR Strategic and Operational Plan. Stephenson reported that of 15 success criteria included in the survey, 10 returned majority agreement. The survey data are available in a format that will allow for relatively quick, additional analyses of partners' perspective on various aspects the program. In response to a question from Jeff Houser, Stephenson said open-ended responses will be included in a report appendix. In response to a question from Chandler, Stephenson said a finalized report on the survey results is anticipated to be submitted to the UMRR Coordinating Committee in the coming months. A meeting to review and discuss the results is anticipated to be convened in October 2022.

Status and Trends Report Release

Marshall Plumley reported that the Ecological Status and Trends of the Upper Mississippi and Illinois Rivers Report was published in June 2022. Plumley expressed appreciation to USGS for leading development of the report, to all contributors, and to those who helped to develop a communication and outreach strategy for the report release. Plumley noted the value of a concerted and coordinated communication effort around this

report was clear and the report provides opportunities for follow-on products. Jeff Houser expressed appreciation to the broad array of contributors including chapter leads and authors as well as those involved in the data collection, analysis, and summarizing of information for the past 30 years. He expressed specific appreciation to Jason Rohweder for creating all the maps and to Sauer for coordination across many tasks. Houser thanked the A-Team, Andrew Stephenson, and Karen Hagerty for reviewing the report at various points. Houser echoed Plumley's appreciation for the communication teams efforts to share the report and noted the payoff in terms of resultant and ongoing inquiries and media coverage. Sauer expressed appreciation for the formal report reviews by USFWS staff and staff at the USGS Grand Canyon Monitoring and Research Center. Mark Gaikowski commended Houser and Sauer for their efforts to assemble the report and work through the publication process. Jim Fisher commended all those involved in accomplishing this quality report and acknowledge the tremendous reception of the report by those outside the program.

Stephenson said the third LTRM status and trends report release, jointly issued by the Corps and USGS, received considerable media attention including from regional and national news outlets. The press release was shared through multiple mediums, including print and radio media outlets, social media, and partner email distribution lists. The electronic press release was viewed 874 times. Sam Heilig said that, in comparison to other Corps press releases, this release has maintained greater longevity and has had a higher-than-normal distribution. Randy Hines said that, on July 26, 2022, USGS hosted reporters and the editor of the Mississippi River Ag and Water Desk. It was a unique opportunity to underscore the value of the regional partnership and UMRR. Hines noted the Ag and Water Desk can be a medium through which to share future success stories. Sauer expressed appreciation to the Wisconsin DNR field staff for demonstrations of monitoring methods during the visit. Megan Moore said the partnership coordination on the status and trends report rollout shows progress on goal three of the strategic plan. Stephenson said the COT reflected on successes and discussed opportunities for improvement in future similar efforts.

Sabrina Chandler said the Service is working hard nationally to increase the visibility and public's understanding of the National Refuge System. Chandler noted that many tours occur on the Upper Mississippi River National Wildlife and Fish Refuge, but the Refuge is not always acknowledged. As an example, the Pool 12 HREP ribbon cutting video does not acknowledge the Upper Mississippi River NWF Refuge. The Upper Mississippi River NWF Refuge helped lay the groundwork for UMRR and many of the positive changes on the river are closely associated with the presence of the refuge. Chandler said initial planning for the Upper Mississippi River NWF Refuge's 100th anniversary, to occur in 2024, is underway and requested that partners support the raising awareness of the refuges. Jennie Sauer and Karen Hagerty suggested developing talking points articulate the Refuges' role in UMRR. Megan Moore agreed, noting the opportunity to highlight how the Upper Mississippi River has benefitted from the Refuge and how the Refuge has benefitted from the river.

Status and Trends Report Long Rollout

Stephenson presented plans for a long rollout of the LTRM status and trends report to make the tremendous amount of information in the report accessible to key audiences as well as the interested public. The press release represented a handshake to media outlets with a high level digestion of materials. UMRBA will coordinate the development of a series of four two-page flyers related to findings presented in the status and trends report and create a plan for disseminating flyers to the UMRR partnership and media outlets. Topics will include fisheries, water quality and nutrients, floodplain forest loss, and sedimentation. Stephenson said key findings from the press release will be the basis for the flyers including:

- Forest loss: Floodplain forest loss has occurred across most of the system.
- Water quality: Concentrations of nutrients, notably nitrogen and phosphorous, remain high, exceeding U.S. Environmental Protection Agency benchmarks. However, total phosphorous concentrations have declined in many of the studied river areas.

- Fish Communities: The river system continues to support diverse and abundant fishes. However, invasive carps have substantially affected the river ecosystem where they have become common.

Stephenson said there was not a key takeaway for sedimentation included in the press release, but presented a draft version as follows:

- Sedimentation: Sediment accumulation has changed the river structure by creating new floodplain land areas and reducing depths in backwater areas. These changes affect the quality and availability of habitat for fish and wildlife.

The loss of deep backwater areas can reduce suitable habitat for some fish species, especially for overwintering.

New landforms with sandy substrates can be important habitats for shorebirds and waterbirds and offer ideal conditions for the establishment of important tree species such as willows and cottonwoods.

In response to a question from Karen Hagerty, Jennie Sauer said USGS is also developing a four-page glossy focusing on why the report was created and why the information is relevant. These documents may incorporate information related to recent questions from interviews. Hagerty encouraged collaboration in the development of the flyers and four-page glossy. Stephenson said tracking media questions will be helpful for informing future efforts. Kirsten Wallace said Goal 3 of the UMRR 2015-2025 Strategic Plan is to work with organizations that affect our vision for the river ecosystem. As an example, Wallace explained that the sedimentation flyer will likely be relevant to the Corps' consideration of a sediment budget for the UMRS.

Communications

Jill Bathke reported that the UMRR Communications and Outreach Team (COT) met on August 3, 2022 and reflected on what worked well in disseminating the third LTRM status and trends report and offered the following comments and improvements:

- Overall, the press release was widely used by various publications. It provided adequate information that attracted broad media attention. It worked well to have state-specific information, partnership participation, points of contact for media requests, and planning six to eight months in advance.
- Improvements include the focus of the press release, the availability of the press release or report in advance to states and partners, integrating information with river groups, and creating a standard of protocol for future efforts.

Bathke said UMRR COT fall 2022 activities center around learning, connecting, and sharing, including:

- Incorporate wider partnership participation and leadership
- Learn from the LTRM status and trends release to develop best practices
- Complete the UMRR video series
- Create communications inventory

Bathke reported that COT members were recently asked to provide feedback on a) agenda items for meetings, b) presentation topics for UMRR communications or cross-cutting communication topics, c) how to integrate HREP and LTRM science into communications, and d) how the COT can support UMRR partners' communications goals and needs.

Kirsten Wallace noted that the limited access to the draft report made it challenging for states and partners to prepare timely media releases. Houser said there was interest in the press release being distributed the day the report was publicly available. He suggested that future reports be posted discretely in advance of a timeframe for disseminating an associated communications campaign. Gaikowski said USGS did provide a courtesy review to aid in partner coordination, but explained that fundamental science practices could not be modified. Gaikowski and Wallace agreed that the report could be released on the publication warehouse with a planned delayed media coordination. Houser expressed appreciation to Bathke and the COT and noted that the program had not seen media coverage of this level on previous efforts.

Olivia Dorothy congratulated all involved in producing a quality report that shows how different indicators have changed over time. Dorothy noted that recommendations were not as strong in this report and suggested follow-on efforts highlight areas that need restoration efforts. Gaikowski expressed an interest in hearing any feedback on the report. While management recommendations could not be included in a USGS report, the information allows for the management agencies to make recommendations regarding future restoration efforts. In response to a comment from Dorothy, Gaikowski said future reports could include analyses of LTRM trends over differing time periods.

In response to a question from Angela Deen, Bathke said that producing concise videos take considerable effort and that two-minutes videos seems to be the right length. Deen asked the group what aspects of projects would be most impactful to include in videos. Jennie Sauer suggested including monitoring efforts for projects. Gaikowski suggested drafting a storyboard template for HREP videos that would include various stages of HREP development including pre-planning, monitoring, and construction. Bathke said that a video developed for the scoping stage could be re-released with a draft report later.

External Communications and Outreach

Wallace reported UMRBA met with Department of Interior Assistant Secretaries for Water and Science and for Fish and Wildlife and Parks. In making the request that DOI leadership provide the top-down support for partnership, Wallace said she discussed the LTRM status and trends report and the value of the Refuges and ecological services to UMRR, NESP, and UMRBA's other work. Wallace also underscored non-federal sponsor issues with PPAs.

Fischer said Wisconsin DNR has been interviewed regarding the LTRM status and trends report. Communications within the agency has raised interest in Mississippi River issues. On June 7, 2022, the Wisconsin DNR environmental management team visited La Crosse and discussed UMRR HREPs and LTRM as well as dredge material management. The visit included a tour of the Pool 8 Islands HREP. Fischer noted that the participants offered to carry forward concerns to the Governor's office. On July 19, 2022, Fischer and Brenda Kelly gave a boat tour of McGregor Lake HREP to the agency's wildlife leadership team and discussed opportunities associated with increased appropriations as well as implementation challenges of staff shortages and increased workload. Fischer said Jeff Janvrin presented to the Wisconsin DNR forestry team about floodplain forest restoration on the Mississippi River.

UMRR Showcase Presentations

LTRM Spatial Data Component

Nate De Jager, USGS UMESC, presented on the LTRM spatial data component, including land cover/land use imagery, topobathy, and landscape modeling as well as many analyses that utilize those datasets. The component is funded through base monitoring and provides data for Land Use/Land Cover (LU/LC), topobathy, and their derivatives such as models and tools. Staff run analyses, investigations, and produce reports such as HNA to identify future data needs. De Jager introduced key team members and their specialties: himself (models, data, reports, partnership), Ben Finley (geographer, UAS pilot,

remote sensing), Jayme Strange (lab manager, topobathy), and Jason Rohweder (GIS, data development, server maintenance).

De Jager said LU/LC data are updated every decade and are the base of the topobathy and landscape modeling. August 2020 imagery was taken at peak biomass, flown with a FWS airplane. Imagery shows flowering rush is spreading rapidly. The data has new modifiers; “b” indicates flowering rush, “z” wild rice, and “s” floodplain forest mortality > 25 percent. Derived data products include core areas, forest blocks, and reed canary grass areas. De Jager said emerging technologies such as unmanned aerial systems (UAS) allow researchers to show change over time. De Jager reiterated the importance of topobathy because it is the base of so many analyses, including identification of geomorphic units, flood inundation, SAV model, and the wind and wave model. Multi-beam sonar provides high-resolution depth data to delineate substrates, flow velocity data, and shoreline elevation data. The group plans to update and expand the topobathy data. They aim to fill gaps and update topobathy data for key LTRM pools and estimate rates of change. Landscape modeling uses forest simulations, sedimentation in lentic areas, and forest/backwater condition forecasts. De Jager shared an example of forest simulations for Reno Bottoms to forecast forest loss. In Upper Pool 13, there is extensive floodplain forest loss. Around 1,450 acres have been lost, being replaced by shallow marsh annuals and mud flats.

Olivia Dorothy expressed appreciation for the spatial datasets and having integrated them with the new Harrison model that looks at emissions from reservoirs. Dorothy said American Rivers recently received additional funding to continue that work. In response to a comment from Matt Mangan, De Jager said spatial data is used at the outset of project development to delineate areas and take stock of current conditions. Additionally, some data may be needed to run hydraulic models. De Jager said there can be challenges with models being parameterized with one dataset and application to another dataset. In response to a question from Chandler, De Jager said models and platforms can be applied broadly but may need specific information from a location to run on a particular landscape. For example, the forest model applies to the whole system, but Reno Bottoms data was incorporated for finer scale modeling on the project. The sedimentation model is non-spatial but runs across the whole system and is current efforts are focused making the model more spatially explicit to map changes in depth over time. Chandler said this is an example of how LTRM information can be applied to non-trend pools and should be acknowledged when discussing LTRM and HREP integration.

De Jager reported that the forest model received regional certification, which will improve its application to various HREPs to assess project alternatives. In response to a question from Stephenson, De Jager said he had not yet been engaged on NESP-related forestry projects but that the model is regionally certified and widely available and could be used without his involvement. Chandler said many of the foresters involved in the model development were also involved in the systemic or multi-pool fact sheet development and likely considered application of the forest model.

Jim Fischer expressed appreciation for the work of the spatial data team and noted the data is ever present in presentations he sees and should be more widely acknowledged. De Jager said he struggles to articulate the importance of topobathy data because it is underneath everything else we do. In response to a question from Mark Ellis, De Jager said the LTRM data is unique amongst other land cover dataset in the resolution. The national landcover dataset is more coarse because it utilizes satellite imagery. However, De Jager noted some drawbacks of being unique, including having to address novel changing methods and map alignments over time. De Jager added that LTRM methods may be cost prohibitive for others.

Habitat Restoration

Angela Deen said MVP’s planning priorities include Big Lake – Pool 4, Reno Bottoms, and Lower Pool 10. Feasibility planning continues for Big Lake – Pool 4 and Reno Bottoms. The final report for Lower Pool 10 to was approved in June 2022. MVP has four projects in construction, including Harpers Slough,

McGregor Lake, Bass Ponds, and Conway Lake. A ribbon cutting ceremony for Bass Ponds is anticipated in September 2022. The UMRR Coordinating Committee is scheduled to tour Bass Pond on August 10, 2022 and the River Resources Forum on August 24, 2022. Deen also provided an overview of Bass Ponds in advance of the afternoon site visit.

Leo Keller said MVR's planning priorities include Lower Pool 13, Green Island, Pool 12 Forestry, and Quincy Bay. The District's design priorities are Steamboat Island Stages I and II. Design of Steamboat Stage I is complete, and bids are due on August 9, 2022. MVR has five projects in construction. The Pool 12 Overwintering Stage II ribbon cutting took place on July 6, 2022. The ribbon cutting video was posted on July 28th and can be found via the following link: <https://www.youtube.com/watch?v=kJmUOQuOvqo>. Marshall Plumley said that high covid cases locally prevented the Quincy Bay project from holding a public meeting in-person. He also said that enclosure efforts and submersed aquatic vegetation and emergent vegetation response at Huron Island provided new insights on how to restore vegetation, which will be shared during the next quarterly meeting.

Brian Markert said MVS's planning priorities include West Alton Islands and Yorkinut Slough. MVS's design priorities include Piasa & Eagles Nest, Harlow Island, and Oakwood Bottoms. MVS has three projects in construction. Construction at Crains Island Stage 1 is anticipated to be completed in the fourth quarter of FY 22. Stage I of Piasa & Eagles Nest was completed and stage II work is anticipated to begin in fall or winter 2022.

Long Term Resource Monitoring and Science

FY 2022 3rd Quarter Report

Jeff Houser reported that accomplishments of the third quarter of FY 2022 include publication of the following reports and manuscripts:

- *Resisting-Accepting-Directing: Ecosystem Management Guided by an Ecological Resilience Assessment*
- *Evidence of Alternative Trophic Pathways for Fish Consumers in a Large River System in the Face of Invasion*
- *Darter (Family: Percidae) Abundance in Deep-Water Habitats of the Upper Mississippi River*
- *What is a Stand? Assessing The Variability of Composition and Structure in Floodplain Forest Ecosystems Across Spatial Scales in the Upper Mississippi River*
- *A Case Study of Large Floodplain River Restoration: Two Decades of Monitoring the Merwin Preserve and Lessons Learned through Water Level Fluctuations and Uncontrolled Reconnection to a Large River*
- *Ecological Status and Trends of the Upper Mississippi and Illinois Rivers*

Houser reported that the LTRM Water Quality Lab has temporarily moved to the University of Wisconsin – La Crosse while renovations take place at UMESC. The laboratory renovation is expected to be completed in July 2023. Houser also reported that 2021 LTRM data is fully integrated into the online spatial data query tool.

USACE LTRM Report

Karen Hagerty said UMRR's LTRM FY 2022 budget allocation includes \$6.3 million (i.e., \$5.0 million for base monitoring and \$1.3 million for analysis under base) with an additional \$2.5 million available for "science in support of restoration and management." In the last quarter, execution of the FY 2022 budget is at \$8.76 million (out of \$8.8 million). Any unspent funds will be rolled into FY 2023.

Hagerty presented two FY 2023 budget options. If UMRR is funded at \$33.17 million and LTRM receives \$8.8 million, funds would be allocated consistent with the past five years. If UMRR is appropriated \$55 million and LTRM receives \$13.85 million, allocations would be as follows:

- Base monitoring would increase to \$5.5 million (from \$5 million),
- Science in support restoration would increase to \$1.5 million (from \$1.3 million).
- Science in support of restoration and management would increase to \$6.85 million (from \$2.5 million)

In response to a question from Stephenson, Hagerty said FY 2022 budget numbers would not be modified now to address inflation. The LTRM element costs more than what was allocated in FY 2022, however, “science in support of restoration” funds were used to pay for the remaining LTRM balance. Hagerty said the FY 2023 increased LTRM amount reflects inflation as well as long-standing staff salaries.

Hagerty reported that field stations are developing FY 2023 budgets and scopes of work, which will be presented at the November 16, 2022 quarterly meeting. In response to a question from Lauren Salvato, Hagerty said the completion dates for Illinois Waterway monitoring activities can be found in Appendix C of today’s meeting packet. Jennifer Dieck added that the aerial data collection report is scheduled to be published at the end of the fiscal year. The associated report should be distributed by the end of the calendar year.

A-Team Report

Scott Gritters reported that the A-Team met on August 4, 2022. The A-Team reviewed and approved previous meeting minutes and received updates from UMRR leadership. The A-Team discussed adding recent highlights to the A-Team Corner on USGS’s LTRM website as well as processes for ensuring that the A-Team has sufficient time to review future science proposals. Presentations included paddlefish diet after ice out, the design of HREPs to support species of greatest conservation need, and an overview of staff at the Lake City Field Station. As a result of the latter presentation, the A-Team agreed to continue featuring a field station during each meeting. Stephenson expressed appreciation for the field station feature. Gritters emphasized that people make the program possible. In response to a comment from Stephenson, Gritters said he will make a note to discuss turtle bycatch data at a future meeting. Gritters noted that, while bycatch data is recorded by field stations and presents a unique learning opportunity, there is a bias issue regarding species caught.

LTRM Implementation Planning

Jennie Sauer reported that the UMRR Coordinating Committee tasked the *ad hoc* LTRM implementation planning team with determining new research opportunities and priorities in light of the potential for increased funding. Through frequent meetings over the past several months, the implementation planning team has drafted objectives and identified information needs in four broad categories: floodplain ecology, hydrogeomorphic change, aquatic ecology, and restoration ecology. Descriptions of information needs include how the information will be used, measurements and endpoints, geographic extent, and research approaches to meet the need. The LTRM implementation planning team members are currently employing a review within their respective agencies regarding the draft information needs, with the deadline for input by August 25, 2022. On September 13-25, 2022, the implementation planning team will gather in-person to score and prioritize the information needs based on objectives and quality. The process will consider relevance, uncertainty, and ways to reduce the uncertainty, and costs of each information need. Sauer expressed appreciation to all participants in the LTRM implementation planning process.

In response to a question from Wallace, Sauer said crosswalks of the information needs, focal areas document, indicators report, and HNA-II report were completed to ensure known information needs were included. In response to a question from Gritters, Houser and Stephenson confirmed that a crosswalk was also done with the UMRB strategic and operational plan. In response to a comment from Fischer, Houser confirmed that the research frameworks were considered as well because the focal areas were distillation of research frameworks. Houser said the implementation planning process is operating at a scale between the focal areas, which are more specific, and the strategic plan, which is higher level. Houser said Kristen Bouska and Stephenson conducted a preliminary crosswalk of select focal areas but noted a finer scale review of the focal areas may be needed with the more specific information needs.

Lauren Salvato read a question from Nick Schlessler in the online meeting chat forum regarding inflationary impacts to current program costs and how that relates to potential funding increase. Sauer said field station budget requests are anticipated in the coming weeks and will provide better perspective on FY 2023 requests. Plumley said more information from other contract actions this fall will better illustrate potential impacts to program. Houser said there is a need to anticipate out-year costs to better understand capability for new work.

In response to a question from Plumley, Sauer said that after information needs are prioritized, the team will identify approaches to address the needs. Following that, various portfolios of actions will be determined to assess and maximize return on investment of available funds. In response to a comment from Gaikowski, Sauer said the relevance to management outcomes could be a criteria for prioritization.

Navigation and Ecosystem Sustainability Program

Andrew Goodall reported that the Corps is arranging payments of \$200,000 to the five states, UMRBA, USFWS, and USGS to provide financial support for their NESP consultation responsibilities per the program's authorizing legislation. UMRBA's roles and responsibilities include facilitating collaboration and strategic planning, leveraging resources, organizing programmatic communications, and planning and participating in various meetings and events. The state and federal agencies' roles and responsibilities revolve around their participation in strategic planning and communications and various programmatic activities as well as providing their technical expertise related to ecosystem restoration projects. Goodall said other items in development include a charter for the NESP consultative processes and standing up an advisory panel per NESP's authorization.

Goodall provided a status update on the two NESP projects funded through the 2022 Infrastructure Investment and Jobs Act. In September 2022, contract awards are expected for lockwall modifications on Lock 25 for the new 1,200-foot lock chamber. The Corps has conducted significant engagement with construction contractors and the navigation industry. Goodall said risk identification has begun, which involves identifying factors that could slow down the construction progress and mitigating those factors if possible. A request for proposal has been sent for completion of the project design for L&D 22 fish passage. The award is tentatively expected in the September 2022 timeframe. The final project information report was approved by the Chief of Engineers in early June 2022. Goodall reported that pre-project fish monitoring activities are beginning. USACE is working with USGS and USFWS to finish fish tagging efforts in the next few weeks. Goodall reported that the Corps continues its evaluation of NESP's NEPA compliance and reengaged USFWS regarding Endangered Species Act coordination was in June 2022. NESP project updates can be found on USACE's NESP webpage: <https://www.mvr.usace.army.mil/Missions/Navigation/NESP/>

In response to a question from Olivia Dorothy, Goodall said the Corps is still evaluating mitigation needs for L&D 25. Brian Johnson said locations identified in the past need to be updated. Johnson said

utilizing wetland banks may be an option. Johnson added that systemic mitigation will primarily be located under the ordinary high water mark to address erosion, vegetation, and fish impacts. In response to a question from Dorothy, Goodall said he will report on whether L&D 25 requires independent external review.

Other Business

Upcoming quarterly meetings are as follows:

- **November 2022 – Quad Cities**
 - UMRBA quarterly meeting – November 15
 - **UMRR Coordinating Committee quarterly meeting – November 16**

- **February/March 2023 – Virtual**
 - UMRBA quarterly meeting – February 28
 - **UMRR Coordinating Committee quarterly meeting – March 1**

- **May 2023 – St. Paul, MN**
 - UMRBA quarterly meeting – May 23
 - **UMRR Coordinating Committee quarterly meeting – May 24**

With no further business, Jim Fischer moved, and Matt Vitello seconded a motion to adjourn the meeting. The motion carried unanimously, and the meeting adjourned at 2:08 p.m.

**UMRR Coordinating Committee Virtual Attendance List
August 10, 2022**

UMRR Coordinating Committee Members

Brian Chewning	U.S. Army Corps of Engineers, MVD
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges
Mark Gaikowski	U.S. Geological Survey, UMESC
Chad Craycraft	Illinois Department of Natural Resources
Randy Schultz	Iowa Department of Natural Resources
Megan Moore	Minnesota Department of Natural Resources
Matt Vitello	Missouri Department of Conservation
Jim Fischer	Wisconsin Department of Natural Resources

Others In Attendance

Jim Cole	U.S. Army Corps of Engineers, MVD
Leann Riggs	U.S. Army Corps of Engineers, MVD
Angela Deen	U.S. Army Corps of Engineers, MVP
Jill Bathke	U.S. Army Corps of Engineers, MVP
Nathan Wallerstedt	U.S. Army Corps of Engineers, MVP
Kim Thomas	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Leo Keller	U.S. Army Corps of Engineers, MVR
Jodi Creswell	U.S. Army Corps of Engineers, MVR
Davi Michl	U.S. Army Corps of Engineers, MVR
Andrew Goodall	U.S. Army Corps of Engineers, MVR
Rachel Hawes	U.S. Army Corps of Engineers, MVR
Sam Heilig	U.S. Army Corps of Engineers, MVR
Col. Jesse Curry	U.S. Army Corps of Engineers, MVR
Greg Kohler	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Jasen Brown	U.S. Army Corps of Engineers, MVS
Kat McCain	U.S. Army Corps of Engineers, IWR
Chuck Theiling	U.S. Army Corps of Engineers, ERDC
Matt Mangan	U.S. Fish and Wildlife Service, IIFO
Kraig McPeck	U.S. Fish and Wildlife Service, UMR Refuges
Laura Muzal	U.S. Fish and Wildlife Service
Jeff Houser	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Kristen Bouska	U.S. Geological Survey, UMESC
Nate De Jager	U.S. Geological Survey, UMESC
Jen Hanson	U.S. Geological Survey, UMESC
Dave Glover	Illinois Department of Natural Resources
Scott Gritters	Iowa Department of Natural Resources
Kirk Hansen	Iowa Department of Natural Resources
Nick Schlessler	Minnesota Department of Natural Resources
Olivia Dorothy	American Rivers
Kim Lutz	America's Watershed Initiative
Lindsay Brice	Audubon
Travis Black	Maritime Administration
Rick Stoff	Stoff Communications
Brian Stenquist	Meeting Challenges

Andrew Casper	Illinois Natural History Survey
Paul Dierking	HDR Engineering, Inc.
Doug Daigle	Lower Mississippi River Sub-basin Committee
Kirsten Wallace	Upper Mississippi River Basin Association
Andrew Stephenson	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Lauren Salvato	Upper Mississippi River Basin Association
Natalie Lenzen	Upper Mississippi River Basin Association
Erin Spry	Upper Mississippi River Basin Association