

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

**May 24, 2023
Quarterly Meeting
Virtual**

Brian Chewning of the U.S. Army Corps of Engineers called the meeting to order at 8:01 a.m. on May 24, 2023. UMRR Coordinating Committee representatives in attendance in-person were Mark Gaikowski (USGS), Chad Craycraft (IL DNR), Vanessa Perry (MN DNR), Matt Vitello (MO DoC), Jim Fischer (WI DNR), and Rich Vaughn (NRCS). Sabrina Chandler (USFWS) and Randy Schultz (IA DNR) attended virtually. A complete list of attendees follows these minutes.

Minutes of the March 1, 2023 Meeting

Chad Craycraft moved and Matt Vitello seconded a motion to approve the draft minutes of the March 1, 2023 UMRR Coordinating Committee meeting as written. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2023 Fiscal Update

Marshall Plumley reported that UMRR has obligated over \$35 million, or 64.4 percent, of its \$55 million FY 2023 funds as of May 1, 2023. This marks the largest obligation in program history, exceeding the previously authorized level of \$33 million with five months left in the fiscal year. Plumley said he has no concerns about the program's ability to obligate its available funds this year, noting that execution rate is an important metric for the program. Consistent execution reflects the partnership's effectiveness and commitment to the program.

FY 2024 Budget Outlook

Plumley reported that the President's FY 2024 budget was released on March 9, 2023, and includes \$55 million for UMRR. The President's FY 2024 budget includes funding exceeding \$50 million for only two other ecosystem restoration programs through the Corps of Engineers: \$415 million for South Florida Ecosystem Restoration (Everglades) and \$67 million for Columbia River Fish Mitigation.

The draft FY 2024 plan of work for UMRR at \$55 million is as follows:

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

- Regional science staff support – \$200,000
- Habitat evaluation (split across three districts) – \$1,275,000
- Habitat Restoration – \$38,000,000
 - Rock Island District – \$11,150,000
 - St. Louis District – \$13,700,000
 - St. Paul District – \$13,050,000
 - Model certification – \$100,000

Plumley said the FY 2024 workplan is largely consistent with the FY 2023 workplan with the addition of the next HREP selection process. In response to a question from Mark Gaikowski, Plumley said he is unsure of the execution rates of the Corps’ other ecosystem restoration programs but is not aware of another program that executes as well as UMRR. UMRR has executed between 95 percent and 98 percent over the last decade. Chewing said the Louisiana Coastal Area Ecosystem Restoration project executes well but is focused only on the beneficial use of dredged material. According to Chewing, support from Congressional support for UMRR is partly due to effective and efficient execution of the program by the partnership.

WRDA 2022

Plumley reported that the enactment of WRDA 2022 on December 15, 2022 increased the annual authorized appropriation for UMRR to \$90 million, with \$75 million for HREP and \$15 million for LTRM. Plumley said FY 2025 will be the first year that the District could include planning scenarios of up to \$90 million for UMRR in its annual budget proposal.

UMRR Ten-Year Plan

Plumley said the UMRR 10-year plan illustrates the implementation schedules for 22 projects, including 10 projects in feasibility and 12 projects in design or construction. It was updated to reflect small changes to project timelines for McGregor Lake, Lower Pool 4, and Big Lake in St. Paul District, Pool 12 Forestry in Rock Island District, and Clarence Cannon, Crains Islands, Harlow Island, and Gilead Slough in St. Louis Districts. Plumley said the colors on the 10-year plan were changed to reflect the UMRR logo colors.

Assistant Secretary of the Army (Civil Works) Site Visit at the Beaver Island HREP

Plumley reported that, on April 10, 2023, the UMRR partnership hosted the ASA(CW) Mr. Michael L. Connor on a tour of the UMRR Beaver Island HREP. Plumley facilitated a discussion emphasizing UMRR’s unique role in improving the Upper Mississippi River System ecosystem and the UMRR program’s knowledge of it. Key messages included:

- The UMRR program is the nation’s first large river ecosystem restoration and scientific monitoring program in the nation.
- The UMRR program consistently leads the nation in execution of dollars and makes significant contributions to USACE delivery of acres restored. During the past 37 years this program has restored 119,720 acres and completed 62 projects on the Upper Mississippi River System.
- UMRR, informed by the best available science, has pioneered many new and innovative engineering and planning techniques for ecosystem restoration in large river systems.

Plumley thanked Iowa DNR, which demonstrated electrofishing for Mr. Connor. Initial feedback from the visit was very positive. The partnership's support and value of the program was evident. Plumley expressed appreciation for everyone's involvement.

Environmental Justice

Plumley provided an overview of the UMRR Coordinating Committees discussions on environmental justice over the last year. The UMRR Coordinating Committee convened an initial discussion in May 2022, made a commitment to integrating environmental justice into habitat project planning, design, construction, operations, and management in August 2022, and established an *ad hoc* environmental justice committee in November 2022. Plumley reported that on January 25, 2023, the *ad hoc* committee met to share perspectives on approaches, best practices, methods, and tools related to environmental justice in participants' respective agency's work. Participants included agency personnel specializing in diversity, equity, and inclusion with limited priority experience with UMRR. The *ad hoc* committee also discussed how UMRR currently approaches environmental justice through HREPs.

Marshall Plumley introduced the new "UMRR HREP and Environmental Justice Dashboard" that shows completed and in-progress projects in relation to census tracts identified as disadvantaged communities. In response to a question from Lauren Salvato, Plumley said the outreach mechanisms are in place at the project level, but the tool may help highlight areas where work has not been done or where outreach methods may need to be modified. Vanessa Perry applauded the tool and expressed support for incorporating it into the HREP selection process. Plumley said the tool builds on the program's long term investment in data management and the database and will be available to river teams during the next UMRR HREP selection process. The tool is available at: <https://usace-mvr.maps.arcgis.com/apps/instant/portfolio/index.html?appid=5b089a1373b744b697c73014c3ad3c3b>.

Strategic Plan Review

Plumley reported that, on February 21, 2023, a revised draft 2015-2025 UMRR Strategic Plan Review Report was submitted via email to the UMRR Coordinating Committee with a request to provide any comments or suggested edits by March 20, 2023. On March 27, 2023, the UMRR Coordinating Committee met to review comments on the report and unanimously approved the draft report. The final report is anticipated to be distributed in the coming weeks. The report describes important partner insights.

The UMRR Coordinating Committee intends to use the report's findings to inform its priorities for UMRR in the near and long term, particularly as the Committee develops the program's next strategic plan. Plumley reflected on progress to advance priority actions since the survey was distributed. Efforts to advance Goals 1, 2, and 4 include aquatic vegetation planting at Huron Island, evaluating project performance, and the creation of HREP storymaps. Plumley said that additional efforts are underway to address other priorities, such as developing a platform for pre-and post-construction monitoring data to be incorporated into the HREP database by December 2023, specific hypothesis testing and monitoring through the Lower Pool 13 HREP associated research project, and standardizing consistent monitoring among HREPs.

Implementation Issues Assessment

Plumley reported that, on November 11, 2022, final implementation issue papers were sent to the UMRR Coordinating Committee. A survey to advance or resolve a suite of options associated with each paper was sent via email on September 21, 2022. The UMRR Coordinating Committee will meet on May 24, 2023 following the conclusion of the quarterly meeting to review consensus actions identified through the survey, prioritize implementation issues, identify agencies to lead on actions, and lay out recommended steps to implement the actions.

2022 Report to Congress

Plumley said that ASA(CW) Michael Connor is reviewing the 2022 UMRR Report to Congress prior to transmitting it to Congress. The Corps is drafting a press release and four-page flyer that was sent to the UMRR Communications and Outreach Team (COT) for review. Case studies on construction, science, and monitoring activities were developed for the report and can serve as a basis for future outreach efforts.

LTRM Program Manager Position

Plumley said the Corps intends to post the LTRM Program Manager position at the end of May 2023. The position is open to current federal employees and the public and can be located in any of the three UMRS Corps Districts. Plumley hopes to fill the position before the end of July. Plumley asked the partnership to share the position widely.

Outyear Funding Scenarios

Plumley said that, in response to a request from UMRR Coordinating Committee members during its March 1, 2023 meeting, a meeting will be convened this summer to discuss outyear funding scenarios for UMRR. Scenarios may include stable funding at \$55 million, up to the authorized amount of \$90 million, less than current funding levels, or variable funding in outyears. In response to a question from Kirsten Wallace, Plumley said topics to frame the discussion include the existing portfolio of HREPs and LTRM, the pace of additional HREPs initiating feasibility, partner capacity, additional WRDA changes, and inflation. Plumley said scenarios are anticipated to be drafted in June and a meeting is expected to be scheduled between July and November. Jim Fischer expressed appreciation for the conversation and consideration of partner capacity. Fischer said Wisconsin DNR has three to five staff working on UMRR, NESP, and Channels and Operations that were stretched under a \$33 million program. Fischer stated that Wisconsin DNR does not want to be a bottleneck for UMRR execution at an increased \$55 million appropriation.

UMRR HREP Workshop

Plumley said the last UMRR HREP workshop was held in 2019. A UMRR workshop for both HREP and LTRM personnel is anticipated for winter 2023 or spring 2024. A planning committee kickoff meeting is anticipated to be held in July. Potential workshop topics include monitoring and adaptive management, HREP/LTRM integration, HREP design handbook updates, and HREP lessons learned among others. Andrew Stephenson suggested UMRR Coordinating Committee members serve as POCs for an availability request in February to April of 2024. Kirk Hansen suggested coordinating the workshop with NESP. Plumley said workshops are great opportunities for new staff across all agencies to collaborate and learn about the program. He noted there are many staff across all agencies working on both NESP and UMRR and would leave it up to agencies to determine who should attend the UMRR workshop.

HREP Selection Process

Plumley recalled that the UMRR Coordinating Committee has set a recurring schedule for an HREP selection process to be implemented every five years. The last HREP selection process was completed in 2020. Plumley said the Program Planning Team, consisting of the UMRR Coordinating Committee, District HREP managers, and District River Team chairs, will convene in June 2023 to discuss a timeline for the next project selection process to have endorsed projects by the third quarter of FY 2025. Plumley said the request to river teams will align with the NESP Coordinating Committee's project selection planning process request also to be in June 2023. Stephenson expressed appreciation for the alignment of the two programs' requests to river teams in light of partner capacity considerations.

UMRR Strategic Planning

Plumley said UMRR's next strategic planning process is scheduled to occur in FY 2024. He noted the process for developing the last strategic plan took over two years. Plumley said that scoping the 2026-2036 strategic plan effort is anticipated to begin in fall 2023.

Desired Future Conditions

Plumley said the development of the Habitat Needs Assessment II (HNA-II) in 2017 was an initial step toward defining desired future conditions for the river. A summary of HNA-II and past planning efforts was included in the 2022 UMRR Report to Congress. Specific next steps to further define desired future conditions were outlined in the HNA-II document. Plumley said the development of desired future conditions could be a standalone effort or incorporated into the next strategic planning effort.

Program Priorities Table

Plumley presented a new table to overview programmatic efforts such as the next HREP selection process or UMRR strategic planning that will occur over multiple years. This table helps to visualize UMRR activities and aid partners in capacity planning. Jeff Houser said the next UMRR LTRM Science Meeting is anticipated to occur in January 2024.

Communications

Status and Trends Flyers

Andrew Stephenson reported that flyers are complete that describe the condition and trends of the UMRS fisheries, floodplain forests, sedimentation, water quality, and aquatic vegetation developed from the 2022 LTRM status and trends report. Two coordinated releases of the flyers are being planned. The first will celebrate 2023 as the 30th year of LTRM monitoring through partnership and feature flyers on fisheries, aquatic vegetation, and water quality. The second release will acknowledge the high water in 2023 and how flooding impacts floodplain forests and sediment. The UMRR Communications and Outreach Team (COT) will discuss the two coordinated releases at its June 7 meeting.

Stephenson reported that Big River Magazine shared the links to the flyers in a recent digital newsletter. Mark Gaikowski suggested considering developing K-12 criteria based on the Ecological Status and Trends Report. Stephenson recalled the Our Mississippi publication was developed for grades K-5. Karen Hagerty said NESP previously developed a teacher's guide that was popular. Jim Fischer agreed and supported a similar effort based on the LTRM status and trends report. Fischer added that environmental justice should consider science outreach efforts as well. Additional science outreach efforts now may influence future generations who work on the river. Diversity of applicants during a hiring process is important for recruiting diverse staff, noting that it will benefit the region to expand the diversity of our partnership.

Communication and Outreach Team Update

Marshall Plumley reported that, this spring, the UMRR Communications and Outreach Team will focus on developing a team framework to assist with successful communication, coordination, and collaboration. The framework addresses activities that are self-initiated by the team, directed by the regional program manager, or directed by the UMRR Coordinating Committee. The team is also reviewing the draft press release and flyer for the 2022 UMRR Report to Congress, supporting the rollout of the status and trends flyers communications toolkit, and supporting the 100th anniversary of the UMR National Wildlife and Fish Refuge in 2024. Plumley said the communication and outreach team will also hold future discussions on environmental justice communication.

Plumley said Jill Bathke has accepted a position as NESP Senior Plan Formulator and that Anne Wurtenberger (Anne.C.Wurtenberger@usace.army.mil), in Rock Island District, will serve as of co-coordinator for the COT with Rachel Perrine. In response to a question from Stephenson, Plumley said he would report back on progress on the video series the COT is currently developing.

External Communications and Outreach

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

- Sabrina Chandler said the national level Izaak Walton League is engaging in activities to help celebrate the 100th anniversary of the Upper Mississippi River National Wildlife and Fish Refuge to occur in 2024. Will Dilg and the Izaak Walton League were instrumental in the founding of the Refuge. Chandler said she briefed Rep. Van Orden on the refuge and UMRR program and will attend Audubon’s legislative tour next week to brief state legislators and congressional offices. Chandler also said that, during the transfer of HREP projects in St. Paul, she had the opportunity to brief the USFWS Action Midwest Regional Director Chuck Traxler as well Assistant Secretary of the Interior for Fish and Wildlife and Parks Shannon Estenoz on the program. Chandler said both were impressed with the partnership.
- Kirsten Wallace said UMRBA staff met with industry and NGO partners to advocate for UMRR. Rep. LaHood submitted a letter supporting FY 2024 appropriations for UMRR. UMRBA continues to engage Congressional offices regarding resolving the project partnership agreements (PPA) and have been asked to identify the merits of projects that have not been implemented due to PPA issues.
- Lauren Salvato said UMRBA’s Water Quality Executive Committee and Task Force discussed a joint UMRR and NESP meeting in 2009 on the Clean Water Act and opportunities to collaborate across monitoring activities on the river.
- Brian Markert said MVS held an island naming contest with grade schoolers for features of the Piasa and Eagles NESP HREP. Staff from the local Corps project office as well as Chad Craycraft, Illinois DNR, visited two schools with over 2500 students to provide information on UMRR and the project.
- Jim Fischer said Wisconsin DNR staff hosted a visit for Wisconsin DNR Secretary Adam N. Payne. The visit included discussions of UMRR and LTRM during a road tour of the Spring Lake HREP, a visit to Buena Vista Park in Alma to discuss dredge material management, and a groundbreaking for the Section 1122 Pierce County Islands project. Governor Tony Evers also attended the groundbreaking.
- Mark Gaikowski said MICRA was planning a visit for Congressional Staffers to lock and dam 19 on May 16, 2023, but that high water may delay the visit until August. Gaikowski said he was able to conduct courtesy visits to several congressional offices in March 2023, including Representatives Omar, Craig, Johnson, Pocan, Van Orden and others.
- Plumley said he was invited by faculty at the University of Pennsylvania to participate in a symposium on the Idaho Power and Snake River. Plumley was asked to explain UMRR’s background and history of collaboration. He anticipates meeting with them virtually the week of May 29, 2023.
- Brian Chewing said the Mississippi River Commission and Mississippi Valley Division will conduct their low water inspection tour on August 14-28, 2023. The tour will start in the Upper Mississippi and work south. Col. Curry said a public meeting in Burlington, IA is scheduled for August 16.

UMRR Showcase Presentations

HREP Storymaps

Kevin Hanson reported on the development of storymaps for UMRR HREPs. Hanson said storymaps incorporate interactive maps, videos, photos, and text in a modern web interface. A basic template was developed for consistency among HREPs, but it remains flexible to allow for additional pieces and information to be incorporated. Hanson demonstrated the Indian Slough HREP storymap. Storymaps are being developed for each HREP and can be found on the project page accessible through the “find an HREP” tool on the UMRR website linked here:

<https://www.mvr.usace.army.mil/Missions/Environmental-Stewardship/Upper-Mississippi-River-Restoration/Habitat-Restoration/Find-an-HREP-Project/>.

Hanson said that, of the 56 completed and 30 active HREPs, storymaps have been published for 25 completed and 18 active HREPs. All three districts have a plan to complete storymaps for all HREPs by the end of FY 2024. Angela Deen said MVP began creating storymaps for older, completed HREPs, but pivoted to current HREPs as they are also helpful for explaining projects during public meetings. In response to a question from Brian Chewning, Hanson said storymaps can be drafted in a few days, but are reviewed extensively by biologists, planners, and public affairs before publishing. Content generation and accessing materials is typically the most time consuming aspect. Dave Potter recalled that previous storymaps incorporated a slider map to show pre- and post- project construction. Hanson said slider maps can be created, but are not currently part of the template.

Challenges and opportunities for HREP construction

John Henderson provided an overview of adaptive and innovative construction methods employed on HREPs in the St. Paul District. Henderson said MVP’s current workload for UMRR from 2023-2030 totals \$177.2 million with an additional \$91.2 million in work under other authorities such as NESP, CAP 204, and Section 1122. The district workload may increase with potential additional investments in UMRR and NESP. Henderson said construction schedules are dependent upon weather and appropriate water levels. High water can exacerbate erosion issues and low water can limit access to project locations. Henderson overviewed environmental challenges to project construction such as wildlife grazing, beetles and mites, and invasive species. He outlined opportunities for cost savings by using available resources on site such as downed trees, the need for careful consideration of alternative species for projects to avoid pests, and potential use of natural regeneration processes in areas. Henderson said increasing project costs necessitate new methods as well, such as beneficial use of dredge material. On average, 900,000 CY of granular material is removed from the main channel of the Mississippi River annually. In the last three years, 1,100,000 CY of dredge material has been beneficially used in habitat restoration projects. The beneficial use of clean river sand creates opportunities to expand the scope of restoration projects. Beneficial use reduces costs because material is ideal for constructing island bases, can be offset by Channels and Harbors funding, and may allow more funds for other targeted project features, such as bank protection, flow control structures, and timber stand improvement.

Henderson provided a scenario for if Conway Lake HREP had incorporated beneficial use, with \$878,562 of project costs being offset by Channel and Harbors contributions. Kirk Hansen expressed support for beneficial use, but noted some environmental benefits would not be realized by using dredge material from the main channel instead of backwaters. Sabrina Chandler said there are opportunities where granular material is needed that dredging may not support and said McGregor Lake HREP was a positive process. Jim Fischer echoed Hansen and Chandler’s comments and said it is necessary to balance the needs of the river. Fischer said that dredging 3 million cubic yards from the main channel means that 3 million cubic yards of material settling in backwaters may not be addressed. He added that the GREAT studies prioritized moving main channel sand to upland areas. Fischer noted that beneficial use is fiscally responsible but stated Wisconsin DNR’s position that backwater dredging be prioritized

first. Chandler said that, when channel maintenance material can be used beneficially there is not a need for a placement site that may not be readily available. David Minge said sediment is largely from upstream drainage eroding banks and bluffs and the most effective thing that can be done is to retain water on land. Minge asked if there has been any effort to determine whether the cost of retaining water by restoring wetlands in upland areas would be less expensive than the cost of building islands and utilizing materials when it gets into the river. Lauren Salvato said the Lower Minnesota River Watershed Board requested the Minnesota legislature provide \$2.5 million for a \$5 million dollar project to stabilize a 1,000 yard bank on the Minnesota River in Eden Prairie. She noted the difficulty of working in the upper watershed and justifying the costs to stabilize the banks in the lower river. Salvato said the One Watershed One Planning effort should help them collectively look at the most chronic areas e.g., Le Seur county to address sedimentation coming from the Minnesota River.

Henderson said cost effective decision making is essential for projects. Human hours, hourly rates for different equipment types, and accounting for risk are the main drivers of project costs, not materials. Exclusion zones can help minimize project uncertainty related to eagles, mussels and other wildlife. Adaptive and innovative methods can also minimize project costs. Henderson said mud waves, due to soft soils, can protect structures, limit the need for rock, and improve vegetation diversity in an area quickly. Henderson overviewed dig and drop methods used at Beaver Island as well as thin layer placement and suggested that less refined features could reduce project costs while still achieving benefits. Henderson said ongoing needs include effectively transferring institutional knowledge prior to retirements, updating the UMRR Handbook to capture lessons learned, knowledge sharing and transparency in coordination and planning, as well as compromise. Henderson said UMRR can serve as a source of knowledge for many and still learn from others. Vanessa Perry asked about the potential to use island features as an experimental treatment option. Henderson said there are ongoing efforts to understand impacts to floodplain vegetation from different material depth and consistency in constructed island soils. In response to a question from Perry, Henderson said teams are looking at new ways to utilize dead trees considering their abundance at some projects such as Reno Bottoms. In response to a question from Minge, Henderson said early establishment of vegetation is key to reducing sediment movement.

Recognizing Karen Hagerty

Col. Jesse Curry presented Karen Hagerty with a Civilian Service Commendation Medal for outstanding performance and dedicated service to the Rock Island District for over 25 years. Hagerty led UMRR's LTRM element for 12 years and made critical contributions to its success. Hagerty said it was an honor and pleasure to work with the partnership. She received a standing ovation from the UMRR Coordinating Committee and attendees.

Habitat Restoration

Angela Deen reported that MVP's planning priorities include Big Lake – Pool 4, Reno Bottoms, and Robinson Lake. A public meeting for Robinson Lake was held on May 17, 2023 in Wabasha and a site visit is scheduled for May 25, 2023. The Big Lake – Pool 4 tentatively selected plan is complete and a milestone meeting is anticipated soon. Reno Bottoms has entered the design phase. As early as this week, MVP anticipates awarding one contract for stages 1, 2, and 3 for the Lower Pool 10 HREP. McGregor Lake HREP construction is 95 percent complete. Bass Ponds and Conway Lake have been officially turned over to the project sponsors and the Harper's Slough HREP O&M Manual is complete. Harper's Slough will be turned over late this year. Deen said the Trempealeau Lake HREP is being evaluated to improve performance where harmful algal blooms have been problematic. The goal is to have recommendations on how to address by the end of FY 2023 and to discuss options in early FY 2024. Lauren Salvato asked if the USACE HAB Demonstration program could help address issues at Trempealeau Lake HREP. Deen said that Shawn Gibling and Aaron McFarlane are looking into it and that ongoing hydraulics and hydrology modeling will provide valuable information. In response to a

question from Andrew Stephenson, Deen said forestry work at Reno Bottoms is extensive and may cost between \$5 million and \$10 million. Kirk Hansen asked if area nurseries have the capacity to provide enough trees. Deen said the Corps is working with industry and small businesses to assess capacity and that the Corps anticipates it will require multiple contractors and for the work to be spread out over time.

Julie Millhollin reported that MVR's planning priorities include Lower Pool 12 Forestry, Lower Pool 13 Phases I and II, Green Island, and Quincy Bay HREPs. The Green Island tentatively selected plan milestone was completed on April 3, 2023 and a Lower Pool 13 Phase II water level management workshop was held on May 19, 2023. Steamboat Island Stage II remains in design with 100 percent review anticipated in July 2023. Millhollin said MVR has four projects in construction: Beaver Island, Steamboat Island Stage I, Keithsburg Division Stages I and II, and Huron Island Stage III. Construction at Huron Island is complete and ERDC is surveying vegetation in June 2023 and will conduct additional plantings this summer and assessment in September 2023. Due to the extensive forestry work across projects, Julie Millhollin said they are using a multiple award task order contract (MATOC) to have a set of three to six contractors do small test orders of under \$800 thousand. This contract mechanism allows a multi-year contract for up to five years and over \$9 million. Millhollin noted there is a lot of forestry work to do along the UMRS and the MATOC may be applicable to both UMRR and NESP. The district has three project evaluation site visits planned for Spring Lake, Huron Island, and Pool 11 HREPs. Millhollin said that a college-level environmental science class from Bettendorf High School toured the Keithsburg Division HREP on May 5, 2023. Students had a hands-on experience observing the spillway, eagle nest, old infrastructure, new infrastructure, and active construction. Stephenson asked Millhollin to describe the process for coordinating with partners to determine which HREP to start next. Millhollin said she convenes partners to review the prioritized list of projects endorsed by the river teams and Coordinating Committee to determine if the prioritization is still relevant and implementable given current needs and capacity. Plumley said that typically, once projects are endorsed by the Coordinating Committee and approved by MVD, they are available to the District Program managers to implement in consideration of administrative factors. Plumley said that the extra coordination recently was to ensure any partner capacity concerns were considered appropriately. Chad Craycraft commended the Quincy Bay PDT for a smooth process with the first NGO sponsored HREP.

Brian Markert reported that MVS's planning priorities include West Alton Islands and Yorkinut Slough. Markert said Gilead Slough and Reds Landing are anticipated to begin feasibility in the first quarter of FY 2024. MVS's design priorities include Harlow Island, Oakwood Bottoms, Swan Lake, and Crains Island HREPs. Harlow Island is completing the 65 percent review and scoping of the Swan Lake HREP flood damage rehabilitation is underway. Markert said MVS has three projects in construction: Crains Island Stage I, Piasa and Eagles Nest Stage II, and Clarence Cannon Refuge. Markert said the contractor is on site at Piasa and Eagles Nest to survey and place pipe. Markert reported that an island naming contest was held with local grade schools for an island forming upstream of the Piasa and Eagles Nest island features. Names were submitted to USGS. USACE real estate and operations helped select the name Powrie Island to honor a family that settled in the area in the 1800s and was paid to maintain a safety light on an island. Markert said reforestation work at Clarence Cannon Refuge is anticipated to occur in fall 2023. Markert described the newly developed Meredosia Island fact sheet and requested the Coordinating Committee endorse the fact sheet. The project is located on the Illinois River and the project sponsor is USFWS. Matt Vitello moved and Chad Craycraft seconded a motion to endorse the Meredosia Island fact sheet. The motion passed unanimously. Sabrina Chandler expressed appreciation for endorsement of the fact sheet and said the project will be critical for that area.

All three districts updated their maps of projects in planning, design, and construction for consistency across districts.

Long Term Resource Monitoring and Science

FY 2023 2nd Quarter Report

Jeff Houser reported that accomplishments of the second quarter of FY 2023 include publication of the following manuscripts:

- *22 Years of Aquatic Plant Spatiotemporal Dynamics in the Upper Mississippi River*
- *Aquatic Vegetation Types Identified During Early and Late Phases of Vegetation Recovery in the Upper Mississippi River*
- *Diverse Portfolios: Investing in Tributaries for Restoration of Large River Fishes in the Anthropocene*

Houser said a hard copy publication of *Molecular Ecology* includes a cover design created by Andy Bartels highlighting the manuscript *Gene flow influences the genomic architecture of local adaptation in six riverine fish species*.

Houser reported that an LTRM all-hands meeting was held April 11-13, 2023 in Muscatine. The LTRM Fisheries component held a field meeting on May 8-11 at the Kibbe Field Station in Pool 19. The field component meetings help to ensure standardized field methods across field stations. The vegetation component will hold a similar meeting in June 2023.

Houser reported that all 2022 LTRM data are available online and that graphical browsers have been updated. Data can be accessed at the following link: <https://umesc.usgs.gov/ltrm-home.html>.

Houser reported the Mississippi River Research Consortium annual meeting was held on April 19-21 in La Crosse, Wisconsin. He said LTRM staff and data were featured in many presentations.

Houser reported the Water Quality Lab anticipates moving back to UMESC by September 30. In response to a question from Marshall Plumley, Gaikowski said commercial properties and others were considered for temporarily relocating the Water Quality Lab, but the University of Wisconsin-La Crosse was the first option due to an existing cooperative space agreement. Gaikowski said the University building is scheduled for demolition and the Water Quality Lab is looking forward to moving back to UMESC. In response to a question from Andrew Stephenson, Mark Gaikowski said they have many photos throughout the lab renovation and could create a communication tool to highlight the Water Quality Lab renovation.

USACE LTRM Report

Karen Hagerty said UMRR's LTRM FY 2023 budget allocation is \$7 million (\$5.5 million for base monitoring and \$1.5 million for analysis under base) with an additional \$6.85 million available for "science in support of restoration and management."

Hagerty reviewed high priority funding items for science in support of restoration totaling \$2,502,149 that were previously endorsed by the UMRR Coordinating Committee including:

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| — LTRM balance: \$331,508 | — Macroinvertebrate contaminants: \$77,483 |
| — Ecohydrology: \$469,973 | — Future landscape modeling: \$600,136 |
| — LC processing (last year): \$335,238 | — Equipment (FS, UMESC): \$659,268 |
| — Vital Rates consolidated report: \$52,788 | — Proposal adjustments: (\$45,894) |
| — Establishing an herbarium: \$21,649 | |

Hagerty presented four priority proposals from the 2022 Science Meeting totaling \$1,626,797 for the Coordinating Committee’s consideration:

- Scoping and vetting new technology and methods for use in future hydrographic and topographic surveys
- Avian associations with management in the UMRS: filling knowledge gaps for habitat management
- Filling in the gaps with FLAME: Spatial patterns in water quality and cyanobacteria across connectivity gradients and flow regimes in the Lower Impounded Reach of the UMR
- Substrate stability as an indicator of abiotic habitat for the UMR benthic community

Jim Fischer moved and Matt Vitello seconded a motion to fund the four proposals. The motion passed unanimously.

Hagerty said that items to utilize the remaining FY 2023 science in support funds totaling \$2,844,108 will be presented to the Coordinating Committee at its August 9, 2023 quarterly meeting. Potential items include funding the Pool 13 HREP associated research project (HARP), updating topobathy, and initiating work on selected LTRM information needs. In response to a question from Vitello, Hagerty said initial cost estimates for updating topobathy systemically were between \$30 million and \$35 million with bathymetry being the largest cost. Vitello asked if topobathy would be an ongoing process over multiple years to update. Houser said that a plan was developed to update topobathy opportunistically over time, but that with the potential for NESP to contribute funds as well, the hope was to update most of the system in a short period of time. Because NESP funds are no longer available, a new plan is being developed. Plumley said he does not expect LTRM to cover all of the costs because the dataset is also incredibly useful for HREP planning and feasibility. Fischer asked if the “scoping and vetting new technology and methods for use in future hydrographic and topographic surveys” science proposal would inform next steps and be important to fund and complete first. Houser explained the project is largely focused on sediment transects in Pools 4, 8, and 13 and would use different methods than systemic methods for backwaters.

A-Team Report

Matt O’Hara introduced himself as the new Chair of the A-Team. O’Hara has 32 years of large river experience, has been involved with the LTRM and A-team in some capacity for over 20 years, and has served as the Illinois A-team representative for the last three years. He said he worked for the Illinois River Biological Station for 19 years before joining the Illinois DNR in 2010. O’Hara reported that the A-Team met on April 19, 2023. The agenda covered the following items:

- Chloride levels on the Upper Mississippi River presented by Kathi Jo Jankowski
- Lower Pool 13 HREP associated research project: understanding wind dynamics and contributing factors of water clarity, aquatic vegetation, and native freshwater mussels presented by Kristen Bouska
- UMRR program updates and LTRM science highlights presented by Marshall Plumley, Karen Hagerty, and Jeff Houser.
- Two-page flyers communicating the major findings from the 2022 UMRR LTRM status and trends report presented by Andrew Stephenson
- Preliminary outputs from the LTRM Implementation Planning Team presented by Jeff Houser
- Updating field stations descriptions
- Rotation of the chairpersonship

- Acknowledgement of Karen Hagerty’s service to the A-Team
- Introduction of new staff, including field station leaders and USGS staff
- Overview of Bellevue Field Station staff

O’Hara expressed appreciation for Hagerty and Scott Gritters involvement in the A-Team. During Gritters’ chairmanship, he emphasized the importance of people in the program and introduced a field station in focus agenda item during each A-Team meeting. O’Hara said the status and trends flyers will be critical informational pieces to share with the public. O’Hara summarized findings from the chloride presentation noting an increasing trend in the data and a need to look more at where and what is the source of chloride. The A-Team voted to continue chloride monitoring under the water quality component.

O’Hara said the Lower Pool 13 HREP associated research project (HARP) will pilot a radar wave monitoring system to better understanding wave conditions in Lower Pool 13 and evaluate relationships between wind dynamics, waves, turbidity, and relative contributions of upstream sources and local resuspension on turbidity in the project area. The Lower Pool 13 HARP proposal and budget will be discussed again at the next A-Team meeting.

O’Hara reported that macroinvertebrate sampling was reinstated at LTRM field stations and shared pictures of ongoing sampling. He said it is good to collect data that has been sorely missed in recent years and noted mayflies have been found in La Grange and Pool 26 samples.

O’Hara said the next A-Team meeting is scheduled to be held virtually on July 24, 2023.

LTRM Implementation Planning

Jeff Houser reported that over the past several months, the *ad hoc* LTRM implementation planning team drafted objective statements and identified and prioritized information needs using a structured decision-making process. The team considered the relevance of information needs to both ecosystem understanding and assessment as well as management and restoration along with the depth of current knowledge, cost, opportunity to learn, urgency, and unique capacity of LTRM to address the information need. The *ad hoc* LTRM implementation planning team identified 11 information needs from an initial list of 29 and presented its tentative selection of information needs recommended for further development. The tentative list of information needs includes:

- System-scale assessments of changes in floodplain vegetation
- Spatial and temporal distribution of higher trophic levels on the UMRS floodplain (reptiles and amphibians)
- Where and how the geomorphology of the river and floodplain changing and can be expected to change over planning horizons of decades to centuries
- Ecological condition of the transitional portion of the UMRS between Navigation Pools 13 and 26.
- Abundance, distribution, and status of zooplankton and phytoplankton
- Aquatic plant distribution
- Status and trends of mussel species within the Upper Mississippi River and Illinois Rivers
- Community composition, abundance, and distribution of native and non-native macroinvertebrates in the UMRS
- Assessing long term changes and spatial patterns in macroinvertebrates through standardized long-term monitoring
- Learning from restoration and management actions
 - Floodplain vegetation change at restoration project scales
 - Effects of restoration on habitat conditions

Houser said the team will work to refine cost estimates and create an in-depth FY 2024 to FY 2026 work plan for these information needs for consideration and endorsement at the August 9, 2023 Coordinating Committee meeting. Houser said there may be available FY 2023 funds to begin one or two information needs and that the *ad hoc* team would also provide a recommendation to that effect for consideration at the August meeting. Lauren Salvato said UMRBA interstate water quality monitoring has a spatial sampling design completed for portions of the area between Pools 13 and 26 and asked how that effort could be complementary to the proposed information need. Houser invited Salvato to future discussions on that information need to ensure that information is incorporated.

Other Business

Upcoming quarterly meetings are as follows:

August 2023 – La Crosse

- UMRBA quarterly meeting – August 8
- UMRR Coordinating Committee quarterly meeting – August 9

October 2023 – St. Louis

- UMRBA quarterly meeting – October 24
- UMRR Coordinating Committee quarterly meeting – October 25

February 2024 – Virtual

- UMRBA quarterly meeting – February 27
- UMRR Coordinating Committee quarterly meeting – February 28

With no further business, Chad Craycraft moved and Vanessa Perry seconded a motion to adjourn the meeting. The motion carried unanimously. The meeting adjourned at 2:28 p.m.

**UMRR Coordinating Committee Attendance List
May 24, 2022**

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

UMRR Coordinating Committee Members

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

Others In Attendance

Jim Cole	U.S. Army Corps of Engineers, MVD
Thatch Shepard	U.S. Army Corps of Engineers, MVD
Samantha Thompson	U.S. Army Corps of Engineers, MVD
Jeff Varisco	U.S. Army Corps of Engineers, MVD
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Nathan Wallerstedt	U.S. Army Corps of Engineers, MVP
Angela Deen	U.S. Army Corps of Engineers, MVP
John Henderson	U.S. Army Corps of Engineers, MVP
Dan Reburn	U.S. Army Corps of Engineers, MVP
Col. Jesse Curry	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
Ken Barr	U.S. Army Corps of Engineers, MVR
Julie Millhollin	U.S. Army Corps of Engineers, MVR
Jesse Dunton	U.S. Army Corps of Engineers, MVR
Davi Michl	U.S. Army Corps of Engineers, MVR
Dan Meden	U.S. Army Corps of Engineers, MVR
Brian Markert	U.S. Army Corps of Engineers, MVS
Kraig McPeck	U.S. Fish and Wildlife Service, IIFO
Sara Schmuecker	U.S. Fish and Wildlife Service, IIFO
Lauren Larson	U.S. Fish and Wildlife Service, IIFO
Greg Conover	U.S. Fish and Wildlife Service
Laura Muzal	U.S. Fish and Wildlife Service
Jeff Houser	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
JC Nelson	U.S. Geological Survey
Rick Pohlman	Illinois Department of Natural Resources
Matt O'Hara	Illinois Department of Natural Resources
Kirk Hansen	Iowa Department of Natural Resources
Bob Bacon	Missouri Department of Natural Resources
Brent Newman	Audubon
David Minge	Izaak Walton League
Rick Stoff	Stoff Communications
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