Minutes of the
Upper Mississippi River Restoration Program
Coordinating Committee

August 11, 2021
Quarterly Meeting

Virtual Meeting

Brian Chewning of the U.S. Army Corps of Engineers called the meeting to order at 8:00 a.m. on August 11, 2021. UMRR Coordinating Committee representatives on the virtual meeting were Sabrina Chandler (USFWS), Mark Gaikowski (USGS), Chad Craycraft (IL DNR), Randy Schultz (IA DNR), Megan Moore (MN DNR), Matt Vitello (MO DoC), Jim Fischer (WI DNR), Verlon Barnes (NRCS), and Ken Westlake (USEPA). A complete list of attendees follows these minutes.

Minutes of the May 26, 2021 Meeting

Randy Schultz moved and Jim Fischer seconded a motion to approve the draft minutes of the May 26, 2021 UMRR Coordinating Committee meeting as written. The motion carried unanimously.

Regional Management and Partnership Collaboration

Marshall Plumley expressed appreciation for the partnership's ongoing efforts to execute the program under continued challenging circumstances and uncertainty. Plumley acknowledged that, given the level of work lately, there have been a lot of additional meetings and he has been asked to consider how to condense discussions and meetings. Megan Moore agreed and noted that, as the program turns back to in person meetings with travel time, condensed and effective meetings will be essential. Jim Fischer agreed that there is an opportunity to strategically condense several meetings and noted the intersections of many ongoing efforts including the Report to Congress, Status and Trends strategic rollout, and LTRM implementation planning. Marshall Plumley agreed.

FY 2021 Fiscal Update

Plumley said UMRR has obligated over $25 million, or 75 percent, of its $33.17 million FY 21 funds to-date. The obligation rate is on target for the year. In response to a question from Brian Chewning, Plumley said the remaining funds to obligate are open contracts and that he does not anticipate any challenges to dispersing remaining funds by the end of the year, but that contingency plans are in place.

FY 2022 Budget Outlook

Plumley said the President's FY 22 budget recommended $33.17 million for UMRR. The House and Senate Appropriations Committees have both acted on appropriations bills for FY 22 and concurred with the President's recommended amount for UMRR. The Corps' FY 22 budget submission to OMB occurred prior to the passage of WRDA 2020, so the Corps did not submit a package with the increased annual authorized appropriation. Plumley said UMRR has capability up to the new authorized amount of $55 million. The final FY 22 appropriation is not yet known.

UMRR Ten-Year Plan

Plumley reported that the UMRR 10-year implementation plan was updated to reflect anticipated program activities from FY 21 to FY 31. Placeholders have been inserted for the future HREPs that the UMRR Coordinating Committee endorsed last year. Plumley noted that all outyears are subject to change based on funding and conditions on the river. In FY 22, Rock Island District is planning to begin the next of the newly identified HREP fact sheets, with Quincy Bay being the first of those

projects to start planning. The next project has not yet been identified. Plumley said an additional change to the spreadsheet reflects that the Harlow Island HREP has a shortened planning phase so construction may start earlier. Andrew Stephenson said this chart continues to be helpful to understand where work is anticipated in the future and to communicate the work by the partnership to develop the pipeline of projects for 10 years.

Acres Restored

Plumley said the current schedule of HREP implementation would restore 76,110 acres between FY 21-FY 31. No projects were completed from FY 17 through FY 20 due to high water. Fischer said the figure is an important communication tool for multiple audiences. Fischer said he used it in a presentation to the Wisconsin Conservation Congress to show where the program's history and future trajectory. In response to a question from Chewning, Plumley said the potential acres to be restored by FY 31 reflects completion of scheduled projects under current funding levels of $33.17 million. Decreased funding levels would extend the end date for completing projects and increased appropriations could accelerate these restoration activities. In response to a question from Ken Westlake, Plumley said UMRR's total restored acres has remained at 106,000 acres since FY 17. Plumley expressed the importance of completing projects this year and next year.

Potential Construction Completions

Plumley reported that three projects, totaling 5,590 acres, are anticipated to be completed by December 2021, increasing UMRR's total acres restored to approximately 111,000 acres through 59 completed projects. These projects include Conway Lake, Pool 12 Overwintering, and Ted Shanks. Another four projects are anticipated to be completed in 2022 that would collectively add 9,810 acres to UMRR's total restored or improved habitat. Karen Hagerty suggested developing a figure depicting acres restored and funding levels together. Mark Gaikowski agreed and said it would help demonstrate the value of continued high levels of investment. Gaikowski suggested aligning significant LTRM science products as well to highlight the continued value of having an improved understanding of the system. Fischer said capturing the growth in knowledge over the decades would be a great story to tell. Hagerty concurred and said UMRR's science has produced incredible insights in recent years. Kirsten Wallace said a message regarding how knowledge has increased exponentially could be incorporated into the strategic rollout of the UMRR LTRM Status and Trends Report and would be useful for a variety of audiences including the public and funding decision-makers.

2015-2025 Strategic and Operational Plan Review

Plumley reported that, on August 6, 2021, the UMRR Coordinating Committee met to review the draft survey being developed for distribution to the UMRR partnership at-large regarding the 2015-2025 Strategic and Operational Plan. The purpose of the survey is to seek input regarding progress achieved since 2015, priorities for the next five years, and the issue areas to include in the 2022 Report to Congress. The meeting included an overview of the strategic plan review crosswalk (pages B5-B10 in meeting packet), which aligns the Objectives, Strategies, Needs, and Actions as outlined in the Strategic and Operational Plan with results of the Coordinating Committee's survey responses and priority actions identified at the May 2020 Strategic Plan review meeting. Janelle Gaun said the survey also identified actions and needs from the Operational Plan with the least consensus around how well they had been addressed. Plumley said that some adjustments were made to the survey following the August 6, 2021 meeting including adding choices to demographic questions, a question on geographic specificity of respondents' familiarity with the river, ways respondents may have engaged with the program, clarifications to question wording, and open-ended questions. Stephenson noted that some priority actions may address multiple goals in the strategic plan. He expressed appreciation for Gaun's efforts to develop the crosswalk document and noted that it will be valuable to reflect on for years to come. Stephenson said revisions to the online survey are underway, and it should be available for distribution

soon. Plumley said the 2019 HREP Planning and Design Workshop invitee list will serve as an initial distribution list as it represents the last all-hands meeting of both program elements. The UMRR Coordinating Committee will be asked to confirm staff on that list within their respective agency to receive the survey. The survey is anticipated to be distributed in September 2021.

2022 Report to Congress

Plumley reported that a kickoff meeting for the UMRR 2022 Report to Congress was held on July 19, 2021. Plumley identified the lead authors and collaborators for each section of the report and overviewed the roles and responsibilities for lead authors, contributors, and Corps staff who will help develop the report. The assigned lead authors and contributors are as follows:

Report Outline Section	**Lead Author(s)**	**Collaboration**
Forward	Marshall Plumley, Jill Bathke	UMRBA
Executive Summary	Marshall Plumley, Jill Bathke	UMRBA
History and Background	Marshall Plumley, Jill Bathke	UMRBA, UMRR partners
A. Origins and Authorization		
B. Evolution of the Program's Maturity		
C. Robust and Stable Funding	Marshall Plumley, Jill Bathke	District HREP Managers, Karen Hagerty, Jennie Sauer, Jeff Houser
Chapter 1. Strategic Partnership and Vision	Marshall Plumley, Jill Bathke	UMRBA
A. Strong, Integrated Partnership	UMRBA	Marshall Plumley, Jill Bathke, UMRR partners
B. Strategic Implementation	Marshall Plumley, Jill Bathke, UMRBA	
C. Bridge Building Initiatives	Marshall Plumley, Jill Bathke, Jeff Houser	Karen Hagerty, Kat McCain, Sara Schmuecker & Nate DeJager
D. Engaging and Collaborating with Others	UMRBA	Marshall Plumley, Jeff Houser, Jennie Sauer
E. Future Strategic Direction	Marshall Plumley, Jill Bathke	UMRBA, Jeff Houser
Chapter 2. Enhancing Habitat	Marshall Plumley	MVP, MVR, MVS, USGS, USFWS, States
A. Addressing Key Ecological Needs		
B. Applying Adaptive Management Principles to Address Risk and Uncertainty		
Chapter 3. Advancing Knowledge	Jeff Houser	Karen Hagerty, Jennie Sauer, Field Stations
A. Assessing and Detecting Changes in UMR Ecosystem		
B. Providing Critical Insights and Understanding to Improve Restoration		
Chapter 4. Implementation Issues	Marshall Plumley, Jill Bathke	UMRBA, UMRR Partners, District HREP Managers
Chapter 5. Conclusions and Recommendations	Marshall Plumley, Jill Bathke, Brian Chewning	UMRBA

Plumley said the Corps has contracted with UMRBA to complete UMRR's last two Reports to Congress. For this report, Corps staff will maintain version control of the document, but that UMRBA has a critical role to play in ensuring we are talking with one-voice in this report and that it will reflect the mission and

priorities of the partnership. Jill Bathke will be the gatekeeper of the document and is responsible for version control. Mary Rodkey will be the technical editor of the report and Emily Chavolla will be responsible for visual design. Chapter templates were created and provided to authors to establish consistent text, figure, and table formatting across chapters. Authors were asked to provide additional details regarding chapter content by August 16, 2021, and the first update meeting with authors and collaborators is anticipated for mid- to late-August. Rough drafts of report sections are scheduled to be completed by the end of September 2021. Chapters will be assembled into a draft report and shared with partners for review from December 2021 to January 2022. Partner comments will be consolidated into one document and shared to ensure transparency in report development. The first in-progress review (IPR) with MVD and USACE HQ is anticipated for January 2022. This will provide an opportunity to engage with Headquarters reviewers early in the process and allow adequate time to make any necessary modifications.

Chewning said that science is integral to UMRR's mission and asked if any information developed under UMRR is being used by other agencies or other Corps offices to advance their own missions. Plumley said groups from outside the region have looked to UMRR and how we do science and monitoring and have taken that back and applied that to other work. UMRR has relationships with other river restoration efforts in other countries to exchange information and that several states have adopted LTRM study design and protocols. Plumley said some of these types of external uses of LTRM data and information have been highlighted in past reports to Congress, and that they can be reiterated and expanded upon in this report. Karen Hagerty noted that New Mexico, Pennsylvania, and Illinois have adopted LTRM methods. Jeff Houser said the broader scientific community is also interested in what UMRR is doing and that can be captured in the report as well. As an example, KathiJo Jankowski was invited to provide a large river perspective to an American Geophysical Union Chapman Conference focused on understanding lake ice dynamics and winter aquatic systems. Kirsten Wallace said the 2016 Report to Congress highlighted The Nature Conservancy's Great Rivers program showcasing LTRM in China and Brazil. She added that, more recently, Jankowski presented to UMRBA's Water Quality Task Force and Executive Committee regarding water quality information and links to Clean Water Act and chloride trends. That will help to integrate CWA-focused monitoring and assessments on the river with LTRM and leverage overall knowledge of water quality conditions. Wallace said the information in the LTRM Status and Trends report will have broad implications and powerful utilization. The value that LTRM provides to UMRR and for broader river management should be explained in the report. Moore said LTRM data has been used and continues to be used for Clean Water Assessments. Hagerty said UMRR is incredibly unique in the research and science arena in large part because of the duration of LTRM's monitoring record. It allows for scientific observations not available in other monitoring initiatives, including long term trends. Plumley said case studies can be highlighted in the report.

UMRR Joint Charter Review

Plumley said that Stephenson sent an August 5, 2021 email to the UMRR Coordinating Committee members regarding suggested technical corrections to the version of the UMRR Joint Charter that was endorsed by the Coordinating Committee at its May 26, 2021 quarterly meeting. These changes are related to legal clarity (e.g., adding references to public laws that have adjusted UMRR's authorization) or some minor editorial changes. Changes include:

- Adding references to public laws that affected UMRR's authorization in the introduction.
- Reordering text.
- Correcting UMRR's authorization date.
- Adding USDA to NRCS in the membership section.
- Revising the Template letter to clarify that i) potential project sponsors are the landowners and ii) serving as a project sponsor requires a cost share match.
- Updating the Charter signatories for NRCS and USEPA.

Fischer asked if USEPA Regions 7 and 5 are both being asked to sign the Charter. Ken Westlake said Region 7 has not yet responded to his request on the matter. Westlake confirmed that Region 5 is prepared to sign the Charter. In response to a request from Brian Chewning, Megan Moore moved and Chad Craycraft seconded a motion to approve the technical changes to the Charter that will be routed for electronic signatures. The motion carried unanimously.

In response to a question from Chewning, Plumley said a PDF document would be routed for electronic signatures. Stephenson suggested using an email chain to advance the Charter to signatories as they sign. Sabrina Chandler and Chewning agreed that similar processes have worked for them before. Rachel Perrine said she would provide an example of digitally routing that was used for the RRCT recently. Plumley said the process would be started in the next couple weeks.

Communications

UMRR Communications and Outreach Team

Rachel Perrine reported that the UMRR communications and outreach team (COT) finalized the draft program flyer. The flyer is geared toward a general audience with limited knowledge of UMRR. It highlights the value of the UMRS and benefits of UMRR in the context of water, wildlife, and way of life. Kirsten Wallace commended the team on the final product and said it will be very useful for distribution to other partners. Jodi Creswell agreed. Perrine said USACE will distribute an electronic version of the flyer and organize a printing of flyers for program partners. In response to a question from Megan Moore, Marshall Plumley said a print order can be organized to meet local event needs. Coordinating Committee members were asked to coordinate within their agencies to determine the number of printed flyers they would like and send an email with the request amount and point of contact to Jill Bathke and Rachel Perrine.

The imagery, text, and themes from the new flyer will be used to develop pull-down banners for outreach activities. Pull-down banners are anticipated to be completed in late 2021. The colors and themes will also be used in the UMRR 2022 Report to Congress. Perrine said the communications team's state members requested the use of state agency logos on the pull-down banners rather than the state seals, due to state policies. Perrine asked the Coordinating Committee to provide guidance on whether to use state seals or state agency logos on outreach materials. Stephenson noted that the states communication experts on the team expressed that some of the state agencies have undergone significant branding efforts of their own and would like that to be considered. Sabrina Chandler said there should be consistency across the flyer, pull-down banner, and other materials. Moore noted the consistent use of the federal agency logos in UMRR documents and expressed support for using state agency logos consistently. Moore confirmed that Minnesota had recently updated its agency logos. Stephenson and Plumley explained that the use of state seals reflected the fact that the states are the authorized partners for UMRR. Wallace added that the UMRR Coordinating Committee had historically agreed to use the state seals because they were thought to be more powerful. She also noted that Illinois' involvement of both the INHS and IDNR was a consideration for using state seals. Jim Fischer expressed a preference for using agency logos as they are more recognizable than state seals. In response to a question from Hagerty, Plumley said HREPs are executed by state agencies. Moore said she will coordinate with state communications staff on requirements and send a recommendation. Wallace said UMRBA staff could draft a formal request and ask state representatives to confirm by August 25, 2021, whether state seals or state department logos should be used in the flyer and future communication materials. Fischer and Moore expressed support for that as a next step. [Note: Following conclusion of the meeting, all UMRR Coordinating Committee state members indicated a preference for using state agency logos over state seals on UMRR outreach materials.]

Perrine said the communications and outreach team also discussed developing a video series to recognize and celebrate UMRR's 35th anniversary. Videos will be three minutes long with clear and

concise messaging similar to a news package with interviewer, narrator, and use of voice over video segments and images of the Upper Mississippi River. The themes of the first four videos are:

1. What is UMRR: History and Partnership
2. Success of UMRR
3. Science on the River
4. Future of UMRR

Interviews for the first video on the history of UMRR will be conducted in August and September. Perrine requested that suggestions for potential interviewees be sent to Jill Bathke. The videos will be shared publicly via social media. In response to a question from Fischer, Perrine said the video production team is focusing on producing one video at a time, but that interviews will be collected throughout. In response to a question from Stephenson, Perrine said she was not certain of the process for reviewing the video script. In response to a question from Chewning, Perrine said she would appreciate suggestions for people to interview for the first video as soon as possible. Fischer said LTRM crews may have valuable video for B-roll and asked how it could be shared with the video production team. Perrine said the video series team was currently developing guidelines (e.g., resolution) for photos or videos that could be used and would share that when it was ready. In response to a question from Moore, Perrine said interviewees do not need to be familiar with UMRR. The team is looking for genuine opinions on the river and the work being done on it. For example, an avid ice angler would speak more avidly about changes in fishing experience than UMRR broadly. Those types of messages are still very related to UMRR's value to the river and the public. Mark Gaikowski suggested contacting the hotel in Stoddard, WI next to Pool 8 Island HREP for their perspective on the economic benefits of restoration projects and connections to local businesses. Chris Erickson suggested reaching out to Terry Tuma, a well-known spokesman in the fishing industry, who fishes extensively on the river.

Perrine said the team is also developing simple talking points and key messages for program partners' use during outreach activities. The team is reviewing the draft statements and determining the appropriate level of detail to include and program facts to highlight.

Plumley explained that an *ad hoc* team to develop strategies for publicly rolling out the third UMRR LTRM Status and Trends Report requested input from the UMRR Coordinating Committee via an online survey. Fischer said this a great opportunity to identify key partners or organizations for the partnership to target with key messages in the report and provided examples of potential audiences, including local conservation groups, Congressional members, among others to both spur action in the watershed and communicate the value of the program. Fischer said there should be additional conversations to clarify the roles of the UMRR Coordinating Committee, communications team, and UMRBA in this effort. Plumley agreed and said there have been several conversations over the past couple months on who the right group is to shepherd the rollout, including how the communications team can support that effort. Plumley acknowledged the leadership roles of USGS and the Corps, as science leads, in collaboration with the UMRR Coordinating Committee and UMRBA. Gaikowski said all partners bring the ability to identify connections to the report information and their respective agency missions and priorities and that he is looking forward to seeing the results of the survey and identification of audiences to help communicate about the Status and Trends Report.

Perrine said future potential activities for the communications team include finalizing the communication and outreach materials inventory, developing HREP/LTRM signage that would have more current information or imagery or tagline, reviewing the UMRR Communication and Outreach Plan, and refining the Lower Illinois River Pilot Project.

External Communications and Outreach

Communication and outreach activities in the third quarter of FY 21 include the following:

- Kirsten Wallace said that, on behalf of UMRBA, she testified to the House Select Committee on the Climate Crisis on June 11, 2021. The hearing focused on building resilient communities and also included the mayors of Madison, Los Angeles, and Atlanta. UMRBA testimony focused on how regional science, coordination, and planning can result in regional resilience. The testimony shared what we know about ecological resilience through the Upper Mississippi River Restoration (UMRR) program and underscored the interconnectedness of communities and river users/uses that require a collective effort at the regional or watershed scale. In addition, the testimony called for investment in UMRR, the Navigation and Ecosystem Sustainability Program (NESP), nutrient reduction strategies, and long term resilience planning. Wallace expressed her appreciation to Megan Moore and Jeff Houser for their review of the testimony. Wallace said it was a good opportunity to bring the data and science to the committee's attention and highlight that UMRR has been working on resilience for some time. Wallace expressed appreciation to Houser and others for their research efforts that allow UMRR to add to national discussions on ecological resilience.

- Mark Gaikowski reported that, on June 3, 2021, USGS participated in an open house with USACE regarding underwater acoustic deterrents at Lock 19. They discussed the value of monitoring for tracking effects of invasive species impacting ecosystems. USGS is also coordinating within the Department of the Interior to highlight the climate vulnerability assessment to support USFWS lands in the Midwest. This effort has connections to various efforts in the UMRS including discussions about modeling potential future hydrology of the UMRS.

- Scott Gritters said that, on August 16, there will be an Iowa mussel blitz on Upper Cedar River that will include Mississippi River staff.

UMRR Showcase Presentations

Why and how should we model future UMRS hydrology?

Molly Van Appledorn and Lucie Sawyer are planning a series of meetings to engage the partnership in discussions about modeling potential future hydrology of the UMRS. The desired outcome from these meetings is for a detailed description of an ideal quantitative future hydrology dataset. Three virtual meetings are planned for this fall to identify UMRR priorities for understanding climate change hydrology, potential datasets and approaches to addressing UMRR priorities as well as ideal outcomes of modeling effort, and to develop a proposal for a quantitative modeling effort. The first two meetings will each consist of two half-day sessions and be held on September 21 and 23 and on November 1 and 2. The third meeting date has not been determined. Participants will include members of the UMRR partnership such as A-Team members, HREP experts, LTRM scientists, UMRR technical experts, and possibly experts from the Corps' Climate Preparedness and Resiliency Community of Practice. Workshop participants will be asked to engage with their colleagues prior to the meeting on the following questions:

- How would a future hydrology dataset help your agency carry out UMRR mission?
- Are there certain hydrologic criteria you use in your decision making or research?
- At what spatial and temporal scales do you use (or would like to use) hydrologic data?

This work builds on Van Appledorn and Sawyer's efforts to determine best practices for serving historic and contemporary daily water surface elevations from USACE gaging locations for use by the UMRR partnership in support of LTRM monitoring and HREP planning.

Mike Klingner said the last a major H&H study for the flood frequency study included a public involvement group that ran concurrently with the scientific analysis and asked if this effort would include a similar public input component. Kirsten Wallace said flood dynamics and sediment issues tied to this work are important to the public. She added that UMRBA will be engaged in the process and work to connect it to its resiliency work and the work of others focused on tributary influences, what a future condition might look like, and what changes might look like relative to conveyance. Klingner encouraged incorporating upland storage impacts into the model discussion. In response to a question from Megan Moore, Van Appledorn said meeting invites were sent to state A-Team representatives and encouraged folks to share additional thoughts, resources, or tools with those individuals to bring to the discussion. Jim Fischer said the work has clear ties to ongoing flood, sediment, and drought work and will be very valuable. Davi Michl commended Van Appledorn and Sawyer on this effort.

HREP Story Maps

Kayleigh Thomas summarized progress on modernizing public facing HREP materials through the development of story maps. Old static and traditional maps were time consuming to produce and update and could quickly become out of date. The story maps can utilize data from existing authoritative datasets, are easily updated, and can be shared publicly or embedded into USACE webpages. GIS team members at the three USACE districts are working with project managers and engineers to distill data from authoritative project documents such as fact sheets, feasibility reports, as-built drawings, operation and maintenance manuals, and performance evaluation reports to include in the story maps. A uniform template was developed for use across all districts to keep the look and content consistent. HREP story maps include a landing page, general information about the HREP as well as the project objectives and restoration features.

The GIS team has completed 36 of 102 story maps and is currently working on several maps. The new online interface also makes it easier to locate an HREP. The link to the interface is: https://www.mvr.usace.army.mil/Missions/Environmental-Stewardship/Upper-Mississippi-River-Restoration/Habitat-Restoration/Find-an-HREP-Project/

In response to a question from Andrew Stephenson, Thomas said many layers are available in ArcGIS and that geoprocessing could be used to identify all project boundaries that overlay a specific project feature (e.g., islands). Davi Michl and Karen Hagerty commended Thomas on her work. Stephenson agreed and it helps address many actions outlined in the strategic plan. Jim Fischer said the story maps are a great communication tool and asked if they were connected to the various datasets available through partners or LTRM (e.g., fixed water quality sites within an HREP boundary or SRS data in trend pools). Thomas said the purpose of the story maps was to update text only static maps but that it could be integrated in the future. Hagerty said there have been steps to better integrate those data but they are still at the beginning of that effort. Houser noted that several of these sites have LTRM sites nearby that could provide interesting opportunities to link to LTRM data. Thomas agreed and said the platform allows leverage of a lot of available data and efficient delivery to the public and said additional products could be developed in the future. Plumley said each project webpage has completed PER reports included, but that easy access to the various information sources across the partnership remains challenging. He said he is interested in understanding the full range of information across PERs, project monitoring, and adaptive management. Rock Island District has started a process to aggregate that information and will share progress with the other districts. Plumley said he would like to have more broad discussions in the next year on the subject after that information is available. Fischer expressed appreciation for that initial inventory work and noted it may also help inform LTRM implementation planning discussions.

Habitat Restoration

Angela Deen said MVP's planning priorities include Reno Bottoms and Lower Pool 10. The forest succession model is being used to re-evaluate alternatives and TSP selection is anticipated in fall 2021. A draft feasibility report for Lower Pool 10 is anticipated to be released for public review in August 2021 and a final report is anticipated to be submitted to MVD in fall 2021. The district hopes to initiate design for Lower Pool 10 this winter. MVP has four projects in construction – i.e., Harpers Slough, McGregor Lake, Bass Ponds, and Conway Lake. The contractor at Harpers Slough HREP began work to repair three islands damaged from high water. Interior lake granular placement, rock work, and berm mixing are occurring at McGregor Lake and the project is fifty percent complete. Concrete stoplog structures are finished at Bass Ponds and Refuge staff were able to do their first drawdown which showed positive vegetation response. Construction may be completed one year ahead of schedule with only miscellaneous metal work and access roads remaining and a ribbon cutting ceremony is being discussed for early October. Conway Lake is nearly complete but high water is needed to access final seeding locations. The district is planning a kickoff meeting for Lower Pool 4 Big Lake feasibility work in fall 2021 and plans to complete three performance evaluation reports by the end of FY 21. Brian Chewning said it was good to see Harpers Slough moving in the right direction. In response to a question from Jim Fischer, Deen said there was a site visit to Trempealeau on June 22, 2021, to tour features and consider options for adaptive management or retrofitting features such as portable pumps. Discussions regarding how best to address the site needs are ongoing. Marshall Plumley said it was great to have in-person discussion at the site and that potential avenues to address concerns were very positive. In response to a question from Andrew Stephenson, Deen said PERs are underway for Ambrough Slough, Long Meadow Lake, and Pool Slough and updates could be shared at the next quarterly meeting.

Julie Millhollin said MVR's planning priorities include Lower Pool 13, Green Island, Pool 12 Forestry, and Quincy Bay. The Lower Pool 13 PDT has determined that two separate projects are needed to effectively address problems with different spatial scales. The Green Island PDT and sponsor met onsite on July 27, 2021. The Pool 12 Forestry PDT held a virtual open house on July 16, 2021, and public comments are due August 14, 2021. A virtual kick off meeting for Quincy Bay is scheduled for August 19, 2021. MVR's design priority is Steamboat Island Stage I and the 100 percent review is scheduled for the week of September 6, 2021. MVR has six projects in construction. Pool 12 Overwintering Stage II is complete; the PDT is wrapping up as-builts and O&M manuals and will be sending out close-out letters in early fall. The contractor at Keithsburg Division Stage 1 has mobilized to the site after eagles left their nest and the PDT finalized the modification to add an articulated concrete mattress for Stage II. Keithsburg Division Stage II proposals are due August 24, 2021. Huron Island Stage III aquatic vegetation planting was completed July 20-21, 2021 and ERDC will evaluate the plants in September 2021. The contractor at Beaver Island is working on shaping placement sites. A panel display monitor was replaced at Rice Lake on July 28, 2021. MVR is addressing sponsor comments on three fact sheets prior to submitting to MVD. In response to a question from Chewning, Millhollin said the district is hoping to submit fact sheets to MVD before the end of the fiscal year.

Brian Markert said MVS's planning priorities include West Alton Islands and Yorkinut Slough. Feasibility planning continues for West Alton Islands with two potential sponsors MDC and USFWS. Yorkinut Slough has complex hydrologic issues for the PDT to consider and hydraulic modeling is in progress. MVS's design priorities include Piasa & Eagles Nest, Crains Island, and Oakwood Bottoms. Plans and specs for Piasa & Eagles Nest Phase II and Crains Island Phase II are both anticipated to be completed in fall 2021. Oakwood Bottoms received assistance from Memphis and Savanna Districts regarding well pump testing and the project is anticipated to be ready for advertising in the first half of FY 22. Earth work and pile removal is ongoing at Crains Island. Construction on a rock structure at Piasa & Eagles Nest is anticipated to begin in August 2021. The pump station and berm setback are underway at Clarence Cannon. Reforestation work was completed at Ted Shanks and the invoice is being prepared to close the project out. The Sterling Island fact sheet was sent to MVD for approval

and the district is awaiting comments from MVD on the Open River fact sheet. The last recommended fact sheet is being coordinated with Illinois DNR/TNC as sponsors and will be sent to MVD for approval later this year.

Long Term Resource Monitoring and Science

FY 2021 3rd Quarter Report

Jeff Houser reported that accomplishments of the third quarter of FY 21 include publication of a manuscript regarding floodplain forest structure and the recent decline of *Carya illinoinensis* (northern pecan) in the journal Forest Ecology and Management. Researchers used dendrochronology to characterize the floodplain forest composition, structure and dynamics and examined annual- to decadal-scale growth responses of northern pecan trees to disturbance events. Observed decline in northern pecan may be due to altered flooding regimes, drought frequency, masting phenology, fire suppression, and warming temperatures. Persistence of pecan trees in much of the UMR floodplain will require direct forest restoration actions.

Houser said 18 UMRR "science in support of restoration" funded projects are in-progress. LTRM staff will assist in developing chapters for the UMRR 2022 Report to Congress and planning for the 2022 UMRR Science Meeting is anticipated to begin in the next few weeks. Houser added that the resilience assessment is ongoing. He noted that Andy Meier's presentation at the UMRBA Board's quarterly meeting on August 10, 2021, included three components from the resilience assessment in discussion of work on systemic floodplain forests.

Status and Trends 3rd Edition

Houser said that the UMRR LTRM Status and Trends Report 3rd Edition is being reviewed by USGS' Science Publishing Network (SPN) to produce a final version of the report by mid-November 2021. A small group is planning for a strategic rollout for the UMRR Status and Trends Report.

USACE LTRM Report

Karen Hagerty said UMRR's LTRM FY 22 budget allocation will follow FY 21 allocations if the program receives $33.17 million in funding. That is, $6.3 million ($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." Hagerty said consistent funding at this level in recent years has contributed to the advancement of many science priorities and expressed appreciation for Houser's leadership on the science portion of LTRM. She said more extensive budget breakouts will be available at the next quarterly meeting.

A-Team Report

Scott Gritters said the A-Team met via webinar on July 20, 2021. Topics discussed included UMRR updates, recent LTRM science publications, Molly Van Appledorn's future hydrology meeting series, macroinvertebrate sampling and research needs, vegetation community analysis by Kristen Bouska, continued impacts of COVID-19 on agency policies and potential impacts to the 2021 field/work season, and an introduction to staff at the Great River Field Station. Gritters said that data suggests there could be decline of mayflies on the river and increases in PFAS, forever chemicals, have unknown impacts to invert populations on the river. Shawn Giblin raised these issues and suggested reinstating macroinvertebrate sampling under LTRM. Jim Lamer is developing a proposal for review and discussion at the next A-Team meeting. Gritters encouraged suggestions for topics for the next A-Team meeting. Stephenson expressed appreciation for the field station visit and focus on people as a new part of the A-Team meeting. Gritters said it is important to recognize the important contributions of partners

at all levels of the program and data collection is fundamental to the program's success. Fischer agreed and said those staff spend thousands of hours on the river and have great perspective on how it changes. The A-Team's next meeting is anticipated to be scheduled for early November 2021.

LTRM Implementation Planning

Houser said LTRM implementation planning is intended to address unmet information needs for UMRS if additional funding is dedicated to the program following increased authorization under WRDA 2020. The purpose of LTRM implementation planning is to identify and prioritize specific information needs not currently being met for the UMRS and specific actions to take to address those needs if additional funds are appropriated for UMRR LTRM. Houser reported that the *ad hoc* LTRM Implementation Planning Team met on July 15, 2021 to select a facilitator(s) from four identified potential facilitators and to review a draft LTRM implementation planning guidance document included on pages D-20 to D-21 of the meeting agenda packet. The draft guidance document outlines the purpose, desired outcomes, and initial process guidelines for discussion with the facilitators. The planning process will be structured to create time and space to think deeply about challenging questions, encourage a fair and transparent process, and allow participants to explore what information their agencies need for the management and restoration of the system. Outcomes are specific information needs and actions to address those needs. The group emphasized that data alone are not actionable items but should be paired with the analysis and communication of the results.

The group identified Max Post van der Burg and Dave Smith from USGS as the best fit for the needs identified in the implementation guidance document and the materials provided by the potential facilitators. Bios for both facilitators are included on pages D-17 to D-19 of the meeting agenda packet, and both have backgrounds in landscape ecology and large-scale planning. The next steps in the process will be to incorporate any feedback from the UMRR Coordinating Committee into a revised draft guidance document and discuss with the facilitators an appropriate sequence of meetings, timeline, and list of participants for implementation planning. In response to a question from Brian Chewning, Houser said information needs are a subset of scientific uncertainty. Megan Moore asked for clarification on whether the LTRM management team or the *ad hoc* implementation team selected the facilitators. Houser explained that the LTRM management team did meet to discuss facilitators and the intent was to bring some suggestions to the small group for discussion but that a decision was not made. Karen Hagerty echoed Houser's reflections but said it could have been handled differently. Plumley said the idea was to let folks know our thoughts on the field of candidates and that additional discussion with the full implementation team resulted in concurrence on the selected facilitators. Jim Fischer agreed that a different approach would have been better and said the discussion with the full team was very valuable and that he supports the direction going forward. Moore expressed appreciation for the additional context and encouraged input from all ahead of future decisions. Houser agreed. Fischer said the diversity in partner perspectives is an important part of the program's success and that having all voices at the table as the planning process proceeds will be necessary. Fischer asked Houser to speak to the overlap between the UMRR 2021-2025 Strategic Plan review survey and LTRM implementation planning. Houser said LTRM implementation planning will focus at a greater level of detail and specificity than the Strategic Plan review survey, but that any overlap will be explored. Stephenson noted that it will be important to be aware of the relationship to the two efforts but that the survey will prioritize actions already identified by the Committee while implementation planning will identify information needs that have not necessarily been considered before. Fischer emphasized the need to use the survey to inform the implementation planning to the extent possible. Houser agreed.

Navigation and Ecosystem Sustainability Program

Brian Johnson provided an update regarding the Navigation and Ecosystem Sustainability Program (NESP). Additional updates are anticipated at future UMRR Coordinating Committee meetings until such a time that a formal NESP coordinating body is established. The focus for NESP during FY 21 has

been to advance projects to construction readiness. Navigation and ecosystem projects that will be construction ready for FY 22 include:

Navigation (Total $12.5M)

- Lock 25 Lockwall Modifications
- Lock 14 Mooring Cell
- Moore's Towhead Systemic Mitigation

Ecosystem (Total $10M)

- Pool 2 Wingdam Notching
- Twin Islands Island Protection
- Alton Pool Side Channel and Island Protection
- Starved Rock Habitat Restoration and Enhancement

Lock 25 lockwall modifications will be the first project to construction if funds are received in FY 22. Lock 14 mooring cell is a small-scale navigation project, and the environmental assessment will be sent out for public review in the coming weeks. Moore's Towhead systemic mitigation was started in 2009. The island on the Illinois River located next to the navigation channel and was identified as an area that would be impacted by additional navigation traffic. Pool 2 wingdam notching will be ready for construction in FY 22. The project was approved prior to the interruption of major NESP planning funding in 2011. Twin Islands project approval will likely be completed in the next week. It was approved in 2009. Starved Rock is currently in planning and design and will convert a portion of the pool from a flowing system to a large slack water area to encourage the growth of aquatic plants and provide habitat for associated fauna. Karen Hagerty suggested renaming the Starved Rock project to something without the HREP moniker.

Additionally, the feasibility report for fish passage at Lock and Dam 22 underwent public review, and approval of that report is anticipated by the end of the calendar year 2021. The project is anticipated to be construction ready by the end of FY 23.

The District-based river teams were asked to identify additional ecosystem projects for implementation under NESP by July 30, 2021. Twenty-nine projects across three districts have been identified as priority projects including six side channel restoration projects, six multi-pool projects, five island construction, five backwater projects, three floodplain restoration, two island and shoreline protection, one habitat improvement and one dike alteration project. Ten to twelve projects will be selected for fact sheet development and be sent to MVD for approval. River teams identified some larger, multi-pool efforts that would fit well under NESP such as systemic shoreline protection or forest restoration. Projects over five million dollars will need approval by MVD prior to starting. There is a need to further evaluate the larger multi-pool or systemic efforts across river teams, but needs for forest and shoreline restoration exist in all districts. In response to a question from Tim Yager, Johnson clarified that the RRF has not yet endorsed the projects advanced by the FWWG. The RRF is scheduled to meet on August 24, 2021 to review and consider endorsement of the list. In response to a question from Chad Craycraft, Johnson said Starved Rock is near the 35 percent review milestone, but that H&H modeling is causing them to look at alignment at top of that structure. In response to another question from Craycraft, Johnson said implementation guidance under NESP states that fish passage projects must be approved at the Chief of Engineers level and that he has reached out to Headquarters to understand the requirements for that going forward should NESP receive a construction new start.

In response to a question from Kirsten Wallace, Johnson said that NESP does not have a formal coordinating body. There are monthly calls with federal and state representatives, but Andrew Goodall intends to talk with partners about standing up a formal coordinating body in the future. Wallace noted that the leading agencies wrote a letter last year to support the Lock and Dam 22 fish passage project. Wallace asked those who participate in the coordinating meetings if the partnership wants to issue a formal statement on the prioritized list of projects when they are identified. In response to a question from Matt Vitello, Wallace suggested adding it as a discussion topic at the next coordinating meeting. Johnson said the Corps hopes to have a draft set of priority projects by the next meeting and could discuss the appropriate path forward with implementing partners. Moore agreed with the proposed actions and requested that Corps staff distribute necessary reference materials ahead of the meeting to aid agency review and internal discussions. Lauren Salvato suggested the Starved Rock PDT coordinate with the Illinois River Basin NGWOS to avoid duplicative monitoring efforts as they will be collecting data in the pool and intensively monitoring harmful algal blooms and nutrient levels. Johnson said he would follow-up with the PDT and project manager.

Other Business

Upcoming quarterly meetings are as follows:

- **November 2021 – TBD**
  - UMRBA quarterly meeting – November 16
  - **UMRR Coordinating Committee quarterly meeting – November 17**
- **February 2022 – TBD**
  - UMRBA quarterly meeting – February 22
  - **UMRR Coordinating Committee quarterly meeting – February 23**
- **May 2022 – TBD**
  - UMRBA quarterly meeting – May 24
  - **UMRR Coordinating Committee quarterly meeting – May 25**

With no further business, Chad Craycraft moved and Jim Fischer seconded a motion to adjourn the meeting. The motion carried unanimously, and the meeting adjourned at 1:37 p.m.

UMRR Coordinating Committee Virtual Attendance List
August 11, 2021

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
Ken Westlake	U.S. Environmental Protection Agency, Region 5

Others In Attendance

Jim Cole	U.S. Army Corps of Engineers, MVD
Thatch Shepard	U.S. Army Corps of Engineers, MVD
Ben Robinson	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
Chris Erickson	U.S. Army Corps of Engineers, MVP
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Julie Millhollin	U.S. Army Corps of Engineers, MVR
Davi Michl	U.S. Army Corps of Engineers, MVR
Rachel Hawes	U.S. Army Corps of Engineers, MVR
Rachel Perrine	U.S. Army Corps of Engineers, MVR
Kayleigh Thomas	U.S. Army Corps of Engineers, MVR
Jodi Creswell	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Kat McCain	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, MVS
Greg Kohler	U.S. Army Corps of Engineers, MVS
Lane Richter	U.S. Army Corps of Engineers, MVS
Bryan Taylor	U.S. Army Corps of Engineers, SWT
Jason Daniels	U.S. Environmental Protection Agency
Kraig McPeek	U.S. Fish and Wildlife Service, IIFO
Sara Schmuecker	U.S. Fish and Wildlife Service, IIFO
Matt Mangan	U.S. Fish and Wildlife Service, IIFO
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges
Jeff Houser	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Kristen Bouska	U.S. Geological Survey, UMESC
JC Nelson	U.S. Geological Survey, UMESC
Molly Van Appledorn	U.S. Geological Survey, UMESC
Scott Gritters	Iowa Department of Natural Resources
Steve Galarneau	Wisconsin Department of Natural Resources
Olivia Dorothy	American Rivers
Doug Daigle	Lower Mississippi River Sub-basin Committee
Rick Stoff	Stoff Communications
Doug Blodgett	The Nature Conservancy
Mike Klingner	Upper Mississippi, Illinois, and Missouri Rivers Association
Tom Boland	Wood

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
Janelle Gaun	Upper Mississippi River Basin Association