Minutes of the
Upper Mississippi River Restoration Program
Coordinating Committee

August 21, 2019
Quarterly Meeting

Upper Midwest Environmental Sciences Center
La Crosse, Wisconsin

Brian Chewning of the U.S. Army Corps of Engineers called the meeting to order at 8:04 a.m. on August 21, 2019. UMRR Coordinating Committee representatives present were Sabrina Chandler, Jeff Houser (USGS) on behalf of Mark Gaikowski, Randy Schultz (IA DNR), Dave Glover (IL DNR) via phone, Megan Moore (MN DNR), Matt Vitello (MO DoC), Jim Fischer (WI DNR), Verlon Barnes (NRCS) via phone, and Ken Westlake (EPA) via phone. A complete list of attendees follows these minutes.

Minutes of the May 22, 2019 Meeting

Randy Schultz moved and Megan Moore seconded a motion to approve the draft minutes of the May 22, 2019 UMRR Coordinating Committee meeting as written. The motion carried unanimously.

Regional Management and Partnership Collaboration

Marshall Plumley said that he and UMESC staff met with Congressional staffers and USGS leadership on August 20, 2019. The visit included a boat tour of Pool 8 and a discussion of UMRR, HREPs, fish and water quality field work, as well as the importance of federal-state partnerships. Plumley said he has visited the three northern field stations in the past year and soon plans to visit the southern field stations. He also noted that MVR Commander Colonel Steve Sattinger plans to electrofish with field station staff in the future.

Plumley reported that UMRR has obligated over $15 million of its $33.17 million FY 2019 allocation and noted that budget reports for each district are available in the meeting packet. Plumley said the MVR budget report includes regional program administration costs. Anticipated construction contracts that will be awarded this fiscal year include Bass Ponds and Keithsburg. Plumley said that six firms submitted bids for Keithsburg and that the low bid was engaged in a question and answer process. Brian Markert added that Clarence Cannon contract was awarded August 5, 2019. Plumley explained that, due to the government shutdown and delays on some projects, contingency plans were created to ensure full obligation of FY 2019 funds. Contingencies include modifications to Beaver Island HREP, such as increased island elevations, and outyear funding for Illinois Waterway monitoring. Plumley said he was confident with the options available for obligating funds and emphasized the importance of fully obligating funds to remain competitive in future budget requests.

FY 2020 Budget Outlook

Plumley said that the President's FY 2020 budget was released on March 11, 2019 and includes full funding for UMRR. On June 19, 2019, the House passed its FY 2020 energy and water appropriations measure that includes $33.17 million for UMRR. The Senate has not yet acted. [Note: Subsequent to the meeting, on September 12, 2019, the Senate Energy and Water Appropriations Subcommittee passed

its FY 2020 appropriations measure that includes $33.17 million for UMRR. On September 27, 2019, a continuing resolution authority (CRA) was enacted for FY 2020 appropriations that expires on November 21, 2019.] Plumley said the FY 2020 plan of work is mostly similar to FY 2019, with adjustments reflecting anticipated completion of work and a slight funding increase for habitat evaluation.

In response to a question from Jim Fischer, Plumley explained that the public outreach budget does not reflect any potential work associated with the Lower Illinois River communication pilot project as the budget was developed in advance of discussions around the pilot.

In response to a question from Brian Chewning, Plumley outlined the major construction projects in each district. Plumley said the St. Paul District is continuing design efforts on McGregor Lake and Bass Ponds, Rock Island District is finishing all design elements of Keithsburg Division Stage 1, and St. Louis District is primarily focused on Crains Island with some additional work on Clarence Cannon.

UMRR Five-Year Plan

Plumley said the UMRR five-year plan chart is updated through FY 2023 as included in the agenda packet. He plans to provide a 10-year plan chart in future meeting packets. In response to a question from Fischer, Plumley said the District-based river teams are going through a project selection process that will identify additional HREPs for implementation over the next five years. The river teams will provide recommendations for HREP sequencing to the UMRR Coordinating Committee for its consideration. In response to a question from Fischer, Plumley said that science funding for current years is incorporated in the chart and projections could be considered for outyears. Fischer suggested that the LTRM thematic areas identified at the January 14-16, 2020 UMRR LTRM Meeting be used to align priorities in outyears. Plumley said he would like to incorporate monitoring and adaptive management as well to reflect total investment in projects. In response to a question from Megan Moore, Plumley said development of the third LTRM Status and Trends Report will also be included in future five-year plan reports.

In response to a question from Olivia Dorothy, Brian Markert said and Robert Mier agreed that USDA and Corps policies currently preclude the development of HREPs on lands with conservation easements. Sabrina Chandler added that easement restrictions on lands purchased by USFWS supersede agency authority to construct HREPs on those properties. Plumley said the issue has been identified in the past and was elevated for discussion at Corps Headquarters as a nation-wide issue. In response to a question from Fischer, Plumley said that, in his experience, five to six projects (not inclusive of UMRR) have been significantly impacted or deemed unable to construct due to this issue.

Statements of UMRR's National Significance

Plumley recalled that, at the August 15, 2018 UMRR Coordinating Committee meeting, Major General Richard Kaiser asked when UMRR would complete its mission. This question has been asked by Congress and the Administration from time to time. The consensus of the Coordinating Committee at that time was to define the desired future condition for the system. Plumley introduced a Corps model for defining the desired future condition that begins with identifying what is significant about the UMRS. Plumley said the Corps model consists of three categories of significance – i.e., institutional, public, and technical. An example of statements of significance regarding the Illinois River Basin Ecosystem was included in the meeting packet. Acknowledging that the draft statements of UMRS significance provided at the February 27, 2019 UMRR Coordinating Committee quarterly meeting were written from a Corps perspective. Plumley said he plans to schedule a call with the UMRR Coordinating Committee in the coming months to incorporate a more partnership-based viewpoint. On that call, Plumley anticipates discussing the process and schedule for developing the statements of UMRS

significance and defining a desired future condition for the UMRS. In response to questions from Brian Chewning and Kirsten Wallace, Plumley said he would request that UMRR Coordinating Committee members submit a one- or two- page summary of how their respective agencies view UMRS significance. In response to another question from Chewning, Plumley said the Corps' model for defining these statements begins with identifying the significance of the system, setting the stage for defining the desired future condition.

Plumley displayed photos from the August 20, 2019 boat tour with Congressional staffers, noting that it was a tremendous opportunity to share the story of UMRR.

UMRR Lower Illinois River Communication Pilot Project

Andrew Stephenson provided an overview of an initial draft communication plan framework for the Lower Illinois River communications pilot project. He described how the effort related to Goal 3 of the 2015-2025 UMRR Strategic Plan: "engage and collaborate with other organizations and individuals to help accomplish the UMRR vision." Stephenson recalled that, at the February 27, 2019 communications meeting, the UMRR Coordinating Committee and Communications Team discussed the Strategic Plan's intent to invest external communications to help advance the program's vision for a healthier and more resilient river ecosystem by targeting outreach to individuals or organizations who have influence on the primary drivers affecting the ecosystem. The Coordinating Committee and Communications Team formed an *ad hoc* group to develop a communications strategy focusing on total suspended solids (TSS) in HNA-II-defined Lower Illinois Reaches. Stephenson said the goal of the project is to engage organizations and individuals within the Lower Illinois River watershed who can address external stressors outside the jurisdiction of UMRR to improve the health and resilience of the river by reducing TSS inputs from the watershed. The objectives are to 1) create new relationships with organizations and individuals in the Lower Illinois River watershed 2) integrate water quality monitoring and knowledge in the watershed with LTRM datasets; and 3) reduce TSS inputs to the Lower Illinois River. Stephenson said the group identified target audiences and will focus on drafting key messages as a next step.

Megan Moore expressed appreciation for the effort and said she was excited to see how this could be applied in other areas such as the Minnesota River or Lake Pepin. Fischer and Matt Vitello agreed and noted that the program has struggled in the past to implement a communications and outreach strategy as part of the strategic plan. In response to a question from Fischer, Stephenson said the *ad hoc* group had not discussed adding economic benefits to the list of key messages but would in the future. Gretchen Benjamin suggested reducing jargon and clarifying the message to our intended audiences – e.g., to refer to soil erosion rather than TSS. Dorothy said this was a good development and having it in place would allow for taking advantages of programs such as floodplain easements.

External Communications

UMRR partners reported on the following communication and outreach activities since the May 22, 2019 UMRR Coordinating Committee meeting:

- Jennie Sauer reported that a staffer from Congressman Ron Kind's office visited UMESC and discussed the planned introduction of the Upper Mississippi River Basin Protection Act. Col. Steve Sattinger toured UMESC on August 19, 2019 and visited with LTRM scientists. USGS hosted a delegation of 15 Congressional staffers and USGS leadership on August 20, 2019, including a tour of UMESC, the LTRM water quality lab, and Pool 8. The boat tour included discussions of UMRR HREPs and the programs water quality, fish, and vegetation sampling. Sauer thanked USFWS for providing pontoons and Tim Yager and Tim Miller for being the tour guides.

- Kirsten Wallace said UMRBA, The Nature Conservancy, and Waterways Council, Inc. met with OMB, ASA, and USACE Headquarters on August 1-2, 2019 and discussed UMRR. They were asked questions about what projects will be done going forward.

- Sabrina Chandler reported that Deputy Assistant Secretary of Fish, Wildlife, and Parks Aurelia Skipwith toured UMRR projects during a recent visit to the area. Skipwith is nominated to be Director of U.S. Fish and Wildlife Service.

- Jim Fischer said he, Jeff Houser, and Marshall Plumley all presented on different aspects of UMRR at the June 10-14, 2019 International Association for Great Lakes Research annual conference in Brockport, New York.

- Gretchen Benjamin shared that the Wisconsin TNC Board toured Pool 8 by land from Stoddard to Genoa. Benjamin mentioned that she also provided a personal tour of Pool 8 to a staffer from Congressman Ron Kind's office.

UMRR Showcase Presentation

MVP HREP After Action Review Meetings

Tom Novak said that McGregor Lake HREP had some delays due to furloughs and high water and MVP wanted to conduct an after action review (AAR) to learn from the experience. Novak introduced Sierra Keenan who facilitated the AAR meetings to determine what went well, what did not, and what could be done differently in the future. Keenan said an online survey was used to collect feedback from HREP team members from USACE and partner agencies. The survey was sent to 53 individuals, 28 of whom responded. To allow for detailed feedback, the survey consisted of seven open-ended questions:

1) What did the PDT do well?
2) What could have been done better?
3) What can USACE do to improve the HREP study process?
4) What can partnering agencies do to improve the HREP study process?
5) Tools and practices that improve HREP studies/implementation
6) Communication techniques/strategies to improve flow of information
7) Additional feedback or suggestions

Qualitative analysis was used to identified overarching themes within and across responses, including study process, data, roles and responsibilities, communication, and decision making. These themes were used to guide discussions and solicit additional feedback in facilitated meetings after the survey. At a final joint HREP partnership meeting, individuals reflected on survey responses and identified 17 recommendations for best practices for future projects. The recommendations were related to documenting decisions, data sharing, identifying roles and responsibilities early, team building, and improving communication.

Megan Moore said LTRM has a great data repository and suggested exploring storage and sharing through USGS. Jennie Sauer indicated a willingness to discuss that going forward and Jeff Houser noted that up front work would include identifying the type of data to be hosted, how access should be regulated, and the duration of storage. In response to a question from Stephenson, Keenan said Google drive, SharePoint, and some other common data sharing tools were ruled out due to limited access across agencies. The Corps is moving to cloud storage in the future that may be an option. In response to a question from Plumley, Keenan said storage would be needed for both project-scale data and data-to-day file sharing. Karen Hagerty said final documents can be shared through the web, but active

sharing on working documents is difficult. Sauer mentioned that USGS is exploring Amazon cloud storage for eDNA and permission could be extended to partners to use that platform. Chandler said USFWS has an FTP file sharing website that can host files for up to one year. In response to a question from Fischer, Keenan said the primary issue identified relates to agency IT and access across agencies. Fischer suggested that if USGS was moving to Amazon cloud storage, the states and Corps could consult with their respective IT departments to determine if they would be able to access that service. Jennifer Dieck said representatives from Amazon cloud hosting were coming to UMESC in September 2019 and may be able to provide input on this question. Houser suggested creating a table of agency online repository access to crosswalk capabilities.

Chandler noted that the data storage was just one part of the recommendations from the AAR and suggested discussing how to improve communication throughout the process. Fischer agreed and said the decision log and decision escalation plan were good practices but would work best if the technical barrier to sharing documents in real time could be addressed. Fischer said some internal feedback he received from staff involved on PDTs suggested elevating questions to the UMRR Coordinating Committee if the PDT can not workout a solution. Plumley said the decision log was discussed at the UMRR HREP workshop and would be easy to distribute, but requires the team to keep it updated. Chandler agreed and acknowledged that teams do not always spend the effort to update decision logs or produce meeting notes as they seek to meet deadlines. She also said many problems stem from issues not being addressed or followed-up on and that could be prevented or resolved by updated decision logs. Chandler commended St. Paul District for taking the initiative to conduct this after action review and underscored the value of the feedback.

Ken Westlake also expressed appreciation for the effort and distillation of information and asked if the issues resonate across the program. Brian Markert said he anticipates similarities would be raised in St. Louis District and believed there would be a benefit to conducting a similar approach in the future. Julie Millhollin concurred, saying that the Rock Island District would look to replicate this process as well. Plumley said that some of these issues were also noted in the May 6-8, 2019 UMRR HREP pre-workshop survey, but that this effort represents a deeper dive into the issues. Chandler noted the potential for different issues to arise after each project. Wallace recalled MVR Col. Mark Deschenes' recommendation to use Lean Six Sigma to evaluate HREP process improvement and suggested reviewing notes on those meetings.

Evaluating Aquatic Management Techniques to Maximize Wildlife Habitats

Jeff Houser introduced Danelle Larson as the new USGS-LTRM Aquatic Vegetation Lead. Houser said Larson grew up in La Crosse, completed a post-doctorate on large rivers as social/ecological systems at Idaho State University, and, most recently, worked for the Minnesota Department of Natural Resources on science in support of waterfowl habitat.

Larson said she has worked on interdisciplinary research with social scientists, ecologists, city planners, engineers, and the general public. Most of her major research questions and hypotheses were developed in conjunction with wildlife managers and natural resource practitioners to ensure questions are relevant and applicable to management actions and decisions. Larson briefly explained her previous research as follows:

— The Portneuf River Vision Study - survey respondents identified a naturally functioning river with aquatic plants as wildlife habitat above recreation as restoration priorities.

— Effects of patch-burn grazing on headwater streams - grazing treatments resulted in higher total nitrogen in streams. Fire in combination with light grazing was correlated with increased SAV and tadpole populations.

— Influences of sediment excavation on developing plant communities - excavations expose seed beds and increase plant diversity within the first few years, but wetlands were cattail-choked by the fourth year, emphasizing the importance of long-term monitoring.

— Response of migrating waterfowl to shallow lake management - management activities that turn lakes from turbid to clear-water states improve in-lake habitat for waterfowl. Ducks were more attracted to managed lakes with high SAV and rice, compared to the unmanaged lakes.

Larson explained that the LTRM vegetation data is invaluable for looking at systemic health of the river and she is looking forward to investigating why wild rice is increasing in some pools and not others and the drivers that maintain or change the state of the Mississippi River.

In response to a question from Sauer, Larson said Portneuf River researchers are working with the Corps on a feasibility study to remove existing concrete channels. Jim Fischer welcomed Larson to the position and said the field crews she will be working with are excellent. In response to a question from Fischer, Larson said that the models generated for the study on waterfowl response to shallow lake management explained 40 percent of the variation and that duck use can be influenced by many other factors. In response to a question from Chandler, Larson stated that, with the limited data available, there is not a scientific explanation regarding the resurgence of cattails in excavated wetlands, but that the areas are under adaptive management.

Habitat Restoration

District Reports

Tom Novak explained that MVP is using an MVR planner to complete planning on Lower Pool 10. MVP completed planning on McGregor Lake and Bass Ponds and Reno Bottoms is the last approved project in the District in planning. Novak said a design contract for Bass Ponds is out for solicitation and an architectural engineering task order is being used to design McGregor Lake with construction contracts anticipated in September 2019 and mid-FY 2020, respectively. In response to a question from Megan Moore, Novak explained that they would usually go to the other districts for assistance first, but all personnel are busy so they used a task order, which has been done before. Novak said that Bass Ponds will consume the construction budget this year. In calendar year 2020, the District anticipates having three projects in construction for the first time, with Conway Lake beginning construction in FY 2020. Island W2 at Harper's Slough has experienced substantial erosion along 500 linear feet and is undergoing repairs. Its project dedication is scheduled for fall 2019. In response to a question from Chandler, Novak said a site visit would be required to see if the island the island experienced additional damage from that it sustained last year. Novak said the district is planning for Lower Pool 10 to enter feasibility in 2020, resulting in two projects in construction and two in planning. In response to a question from Fischer, Chandler said that the Minnesota Valley National Wildlife Refuge visitor center has an UMRR pull-up banner and business cards to advertise HREPs.

Julie Millhollin explained that MVR selected a TSP for Steamboat Island in February 2019 and held an IPR with MVD on April 11, 2019. MVR is running a hydraulic model for the project area and the PDT is drafting feasibility chapters in anticipation for public review in November 2019. Millhollin said the project is facing permitting challenges associated with the head of the island meeting floodplain requirements. Lower Pool 13 and Green Island are the District's other planning priorities. A site visit to Lower Pool 13 occurred on August 19, 2019 and the PDT is holding monthly meetings. A kick off meeting for Green Island is planned for early fall 2019. Bids for designing Keithsburg Stage 1 were due August 20. Millhollin stated that high water continued to delay construction on Pool 12 Overwintering and Huron Island Stage II. ERDC and MVR staff planted aquatic vegetation at Huron Island Stage III on August 12-15, 2019. The rock closure structure, chevron, and Albany bankline are complete at

Beaver Island and a contractor is dredging. Plumley said MVR will soon submit the Pool 12 Forestry project fact sheet to Division for review.

Brian Markert reported that MVS is on schedule to complete the Oakwood Bottoms feasibility report by the end of FY 2020. Work on Harlow Island is paused. MVS will reach out to new Illinois DNR staff regarding necessary updates to Rip Rap Landing feasibility report and progress on Piasa and Eagles Nest hydraulic model, floodway permits, and an engineering workshop in September 2019. Markert said that Crains Island is the first open water project and the District anticipates awarding the construction contract in the second quarter of FY 2020. A contract was awarded for the berm setback at Clarence Cannon and the District is working with USFWS to address significant damage from a breach in the exterior berm due to flooding. Markert explained they were modifying the contract so USFWS can use equipment and staff to help. There are three contractors on location and restoring the breach quickly is best for everyone. Other construction at Clarence Cannon includes interior water control structures and berms and pump station with contractors putting double crews on the water control structures. The O&M manual for Ted Shanks was submitted to the sponsor. In response to a question from Chewning, Markert said construction is complete and that the District is addressing warranty issues with mechanicals and will assess reforestation needs after the flood waters recede. MVS is conducting evaluations at Swan Lake, Batchtown, and Pool 25 & 26 Islands and monitoring at Crains Island, Piasa & Eagles Nest Islands, and Stump Lake. Markert said the RRAT Tech and RRAT Exec teams held a two-day workshop to identify new fact sheets.

Plumley reported on a new figure showing acreage restored since FY 1985 and projected to be restored through FY 2030 based on full authorized funding levels. UMRR has the potential to restore 65,180 acres in the next 11 years. Full authorized funding continues to result in more acres being restored in a shorter period of time.

HREP Selection Process

Plumley said the District-based river teams continue to develop the next generation of HREPs for implementation in FYs 2020-2025. He thanked the river team chairs for their efforts under the tight timeline.

Long Term Resource Monitoring and Science

FY 2019 3rd Quarter Report

Houser said accomplishments of the third quarter of FY 2019 include publication of the manuscript, "Spatially explicit modelling of floodplain forest succession: interactions among flood inundation, forest successional processes, and other disturbances in the Upper Mississippi River floodplain." The driving research question was how the abundance of different forest types will change in response to flooding and Emerald Ash Borer outbreaks? Houser outlined the major findings of the manuscript as follows:

- Silver maple declined while others like swamp white oak, American elm, and boxelder increased
- Largest decreases in overall forest cover through time were associated with the combined effects of flooding and Emerald Ash Borer
- Forest loss occurred in low-lying areas where young trees were vulnerable to flood-related mortality – forests could not regenerate in those locations
- Similar trajectories of forest change toward later-successional species (e.g., oaks and hickories) for all scenarios, regardless of disturbance or hydrology

Houser noted that the impacts of other forest disturbances of known importance (e.g., reed canary grass) were not modeled but could be, and uncertainty remains in how mortality rates of different species and age classes relate to flooding.

Houser said that UMESC supported the publication of the manuscript, "Light exposure along particle flowpaths in large rivers" through facility and equipment use. Houser explained that the research was part of John Gardner's PhD dissertation. The study used a naturally buoyant light monitor called a hydrosphere to investigate two questions: 1) what is the overall light environment experienced by a particle flowing down the river?, and 2) how does that compare to what you measure with a fixed sensor in the water and various models of light in rivers? The research was conducted at two sites, Pool 8 Goose Island side channels and the Neuse River in North Carolina. A video abstract is available at https://youtu.be/_LkBcKHx9jI.

Houser reported that the purpose, objectives, intended audience, level of technical detail, draft outline, and timeline for completion of the third UMRR LTRM status and trends report have been drafted. Next steps include composing a list of specific indicators for each section. The A-Team will review an expanded draft outline at its October 2019 meeting. An updated draft will be presented to the UMRR Coordinating Committee at its next quarterly meeting. Writing and analysis will be completed during FY 2020 and a final product is anticipated by early FY 2021.

Houser said a UMRR science meeting is scheduled for the week of January 13-17, 2020. It will follow a similar approach as the 2018 science meeting with specific proposals developed for work to be done using 2020 funds. Planning for this meeting will be a substantial topic of discussion at the October A-Team meeting beginning with a review of unaddressed 2018 focal areas. A webinar will be held in October or November 2019 to solicit UMRR partnership input.

Houser reported the LTRM vegetation component field day was held June 12 and 13, 2019. The field day included one day in the field for annual pre-season field "calibration," training new technicians, and discussing challenges of sampling during high water. The second day at UMESC included identifying the specimens collected on day one, discussing logistics of high water, and meeting with Ben Schlifer regarding updates to the field data entry applications.

Houser said pre-lock closure aquatic vegetation sampling on the Illinois River consisted of three crews sampling approximately 300 sites. Vegetation was minimal with two total SAV species found at two or three sites, a few emergent species at a few sites, and one lotus bed.

Houser introduced new staff. Danelle Larson joined USGS UMESC as the UMRR LTRM vegetation component leader. Eric Hine joined the INHS Great Rivers Field Station as assistant large rivers fisheries ecologist position and will work on LTEF and LTRM.

USACE LTRM Report

Karen Hagerty provided an overview of the FYs 2018 and 2019 LTRM budgets as listed below.

	FY 2019 Work Plan	**FY 2020 Work Plan**
— Total funds:	$8.67 million	$8.8 million
— Base monitoring:	$4.92 million	$5.0 million
— Science in support of restoration	$1.25 million	$1.3 million
— Additional science-related work:	$2.5 million	$2.5 million

In response to a question from Matt Vitello, Plumley said FY 2018 funds saved from contract funded initial monitoring work on the Illinois Waterway, but that funds for outyear work have not been designated. Plumley noted that end of year obligations could help fund outyear work.

A-Team Report

Nick Schlesser reported that the A-Team met via webinar on July 31, 2019. The meeting included a UMRR update from Marshall Plumley and a discussion regarding LTRM science planning. Jeff Houser led a discussion regarding preparations for the 2020 science meeting and progress on the third LTRM status and trends report. Following a presentation from Kristen Bouska, the A-Team unanimously endorsed the scientific framework for resilience research on the Upper Mississippi River System. The framework will be available on the A-Team website. Schlesser said the A-Team also discussed impacts and observations related to extended high-water including movement of Asian carp and paddlefish into Minnesota, the absence of vegetation in Pool 13, and high numbers of zebra mussels and low numbers of silver carp in the Illinois River. Jeff Houser noted that growth was delayed by about one month in Pool 13. Schlesser agreed and said the same was true for Pool 4. The next A-Team meeting is scheduled for mid-October in Dubuque or the Quad Cities, pending availability. [Note: Subsequent to the meeting, the A-Team meeting was scheduled for October 17, 2019 in Dubuque.]

Other Business

Plumley expressed appreciation for the work on the status and trends and noted it is critical for the report to congress in 2022. Plumley said that hardcopies of HNA-II are not yet available due to a printer error, but the document is available online and a reprint is planned.

Plumley said the UMRR Advisory Groups Charter signed in 2013 includes the last HREP selection process. The Committee may want to revise the Charter to reflect the updated project selection process. Karen Hagerty said the current charter is available on the UMRR site under key documents.

Jennie Sauer said hardcopies of the *Indicators of Ecosystem Structure and Function for the Upper Mississippi River System* report are available. Sauer also wanted to commend LTRM staff for their hard work as they are currently tracking a record number of products outlined in Appendix C-2 of the meeting packet. Hagerty thanks Jason Rohweder and Michael Dougherty for their GIS support to HREP.

Upcoming quarterly meetings are as follows:

- October 2019 – St. Paul
  - UMRBA quarterly meeting – October 29
  - **UMRR Coordinating Committee quarterly meeting – October 30**
- February 2020 – Moline
  - UMRBA quarterly meeting – February 25
  - **UMRR Coordinating Committee quarterly meeting – February 26**
- May 2020 – St. Louis
  - UMRBA quarterly meeting – May 19
  - **UMRR Coordinating Committee quarterly meeting – May 20**

With no further business, the meeting adjourned at 11:28 a.m.

UMRR Coordinating Committee Attendance List
August 21, 2019

UMRR Coordinating Committee Members

Brian Chewning	U.S. Army Corps of Engineers, MVD
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges
Jeff Houser	U.S. Geological Survey, UMESC [on behalf of Mark Gaikowski]
Dave Glover	Illinois Department of Natural Resources [on the phone]
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
Verlon Barnes	Natural Resources Conservation Service [on the phone]
Ken Westlake	U.S. Environmental Protection Agency, Region 5 [on the phone]

Others In Attendance

Ben Robinson	U.S. Army Corps of Engineers, MVD
LeeAnn Riggs	U.S. Army Corps of Engineers, MVD
Chris Erickson	U.S. Army Corps of Engineers, MVP
Tom Novak	U.S. Army Corps of Engineers, MVP
Sierra Keenan	U.S. Army Corps of Engineers, MVP
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Julie Millhollin	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Brian Markert	U.S. Army Corps of Engineers, MVS
Greg Kohler	U.S. Army Corps of Engineers, MVS
Brandon Schneider	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 [on the phone]
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges
Sara Schmuecker	U.S. Fish and Wildlife Service, RIFO
Neal Jackson	U.S. Fish and Wildlife Service, UMRCC
Jennie Sauer	U.S. Geological Survey, UMESC
KathiJo Jankowski	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Jason Rohweder	U.S. Geological Survey, UMESC
Nathan DeJager	U.S. Geological Survey, UMESC
Jim Rogala	U.S. Geological Survey, UMESC
Molly Van Appledorn	U.S. Geological Survey, UMESC
Brian Ickes	U.S. Geological Survey, UMESC
Danelle Larson	U.S. Geological Survey, UMESC
Carol Lowenberg	U.S. Geological Survey, UMESC
Robert Mier	Natural Resources Conservation Service
David Pfeifer	U.S. Environmental Protection Agency, Region 5 [on the phone]
Kevin Stauffer	Minnesota Department of Natural Resources
Nick Schlesser	Minnesota Department of Natural Resources
Tom Boland	Amec Foster Wheeler
Olivia Dorothy	American Rivers
Rob Ebbing	Quincy Bay Area Restoration and Enhancement Association
Gretchen Benjamin	The Nature Conservancy
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