Minutes of the
Upper Mississippi River Restoration Program
Coordinating Committee

February 27, 2019
Quarterly Meeting

Grand River Center
Dubuque, Iowa

Andy Barnes of the U.S. Army Corps of Engineers called the meeting to order at 8:02 a.m. on February 27, 2019. Other UMRR Coordinating Committee representatives present were Brian Chewning (USACE) via phone, Sabrina Chandler (USFWS) via phone, Mark Gaikowski (USGS), Mike McClelland (IL DNR), Randy Schultz (IA DNR), Megan Moore (MN DNR), Matt Vitello (MO DoC), Jim Fischer (WI DNR), and Marty Adkins (NRCS). A complete list of attendees follows these minutes.

Minutes of the October 31, 2018 Meeting

In response to a question from Karen Hagerty, Sara Schmuecker agreed to work with UMRBA staff in clarifying the HNA-II intent as described on page A-8 of the draft minutes. Matt Vitello moved and Jim Fischer seconded a motion to approve the draft minutes of the October 31, 2018 UMRR Coordinating Committee meeting as corrected. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2019 Fiscal Update

Marshall Plumley applauded USGS, USFWS, and USEPA partners for meeting UMRR project deadlines while their respective agencies were shutdown from December 22, 2018 to January 25, 2019. Plumley explained that habitat projects could have been significantly delayed if those deadlines had been missed. But, partners demonstrated their dedication to the program while in the midst of the furloughs.

Plumley pointed to pages B-1 to B-2 of the agenda packet, which includes the newly formatted District-based quarterly fiscal reports. Plumley said the reports are generated from the UMRR Database, and will be provided regularly in the UMRR Coordinating Committee's quarterly meeting agenda packets.

Plumley reported that $4.45 million of UMRR's $33.17 million FY 2019 appropriation is obligated to-date. This is typical of UMRR's annual implementation cycle at this point in the fiscal year, with most obligation occurring in the fourth quarter. In response to a question from Andy Barnes, Plumley confirmed that Beaver Island habitat project is utilizing FY 2018 funding. Beaver Island's initial construction award was terminated following a valid protest regarding the description of work. Plumley reviewed UMRR's FY 2019 internal allocations as follows:

- Regional Administration and Programmatic Efforts – $1,100,000
- Regional Science and Monitoring – $10,295,000
    - Long term resource monitoring – $4,920,000
    - Regional science in support of restoration – $3,750,000

- Regional science staff support – $200,000
- Habitat project evaluations – $975,000
- Habitat Needs Assessment II – $450,000

- Habitat Restoration – $21,775,000
  - MVP – $7,670,000
  - MVR – $7,695,000
  - MVS – $6,310,000
  - Model certification – $100,000

FY 2020 President's Budget

Plumley said the FY 2020 budget for the federal government is scheduled to be published during the second week of March 2019. Plumley observed that UMRR's recent appropriations have been at or just slightly below the program's annual authorized funding level of $33.17 million. [Note: Subsequent to the meeting, on March 12, 2019, President Trump released his FY 2020 budget that included $33.17 million for UMRR.]

UMRR Five-Year Plan

Plumley reported that Rice Lake construction will extend into FY 2019 due to issues with the pumps. Available FY 2020 funds planned for Beaver Island will be used to advance Keithsburg Division Stage I. Plumley said he will provide an updated five-year plan extending to FY 2023 to the UMRR Coordinating Committee at its May 22, 2019 quarterly meeting.

In response to a request from Jim Fischer, Plumley said he will provide the five-year plan in the UMRR Coordinating Committee's agenda packets. In response to a question from Kirsten Wallace, Plumley confirmed that, pending UMRR's FY 2020 appropriation, all three Corps Districts will start a new "undetermined" habitat project in FY 2021 or FY 2022. These projects will likely be selected per the FY 2021-2025 UMRR next generation HREP implementation plan.

Statement of UMRR's National Significance

Plumley briefly explained that the impetus for creating a statement of UMRR's navigation significance stems from recent partnership conversations regarding desired future conditions for the Upper Mississippi River ecosystem and questions from the Administration about when the program will be done. UMRR has various tidbits of value statements, but nothing that is in a comprehensive narrative.

Plumley suggested that the story start with Congress' declaration of the Upper Mississippi River System as a "nationally significant ecosystem and a nationally significant commercial navigation system" in WRDA 1986. Plumley provided an overview of draft statements of UMRR's navigation significance as provided on pages B-4 to B-6 of the agenda packet. Plumley acknowledged that the statements are currently written from a Corps perspective and are mostly excerpts from UMRR's historical documents. The intention is to convene partnership discussions regarding the draft statements, and evolving them so that they encompass a more comprehensive partnership voice.

Megan Moore thanked Plumley for drafting the statements to stimulate the UMRR Coordinating Committee's thinking. Moore suggested having a more comprehensive narrative as well as more concise messages to fit a specific need. She expressed hope that the statements would eventually be written from a partnership perspective and requested that a description of the program partnership be

added. In response to a question from Fischer, Plumley said the process for developing the Illinois River Basin Comprehensive Plan was very challenging. Plumley said the process he offered is similar to the development of the Illinois River Basin Restoration Comprehensive Plan, which involved the states of Illinois, Wisconsin, and Indiana. This includes working from broader statements of significance to more detailed descriptions of desired future conditions. Plumley added that he would distribute the Illinois Comprehensive Plan to the Coordinating Committee as well as other system-level plans from across the country as examples. Chuck Theiling suggested that indicators be quantified and used to define desired future conditions as well as track progress from today's conditions. Plumley agreed and said much of that information is available in the HNA-II, LTRM status and trends reports, and project evaluation reports. It is a matter of organizing and structuring the information into a compelling narrative.

In response to a question from Karen Hagerty and comment from Kirsten Wallace, Plumley said he will convene a conference call with the UMRR Coordinating Committee to discuss the statements in further detail and will provide targeted questions and examples in advance. Hagerty observed that the draft statements focus on the significance of the ecosystem and suggested that UMRR's significance also be described. Mark Gaikowski suggested that UMRBA draft the statement on the river ecosystem and the UMRR Coordinating Committee draft the statement on UMRR's significance. Marty Adkins recognized the influence of the Upper Mississippi River watershed to the river main stem, including inputs of sediment and nutrients. Plumley agreed and acknowledged UMRR's limitations to address some of those larger challenges.

External Communications

Angie Freyermuth presented an updated draft UMRR communications strategy timeline, as provided on pages B-7 of the agenda packet. Freyermuth explained the strategy's planned activities from January 2019 to May 2019 – e.g., social media campaign to launch in April 2019 leading up to Earth Day. The UMRR Coordinating Committee and UMRR Communications Team are scheduled to meet jointly on February 27, 2019 to discuss the intent of Goal 3 of the 2015-2025 UMRR Strategic Plan (i.e., communications) and determine a path forward with targeted actions.

Freyermuth added that MVR will host an interactive display at the National Mississippi River Museum and Aquarium, which typically draws approximately 1,000 visitors. Hagerty said new UMRR business cards are available with a shorter url to the program's website.

Habitat Needs Assessment-II

Nate De Jager provided an overview of the HNA-II development process and how it relates to the UMRS ecosystem restoration objectives, the ecological resilience assessment, indicators of ecosystem structure and function, and hydrogeomorphic datasets. De Jager listed the location of various HNA-II reports and datasets, as follows:

- Indicators of Ecosystem Structure and Function for the Upper Mississippi River: https://pubs.usgs.gov/of/2018/1143/ofr20181143.pdf
- Habitat Needs Assessment-II: Linking Science to Management Perspectives: https://usace.contentdm.oclc.org/utils/getfile/collection/p266001coll1/id/8323
- Aquatic areas of the UMRS: https://www.sciencebase.gov/catalog/item/55929c11e4b0b6d21dd67a92
- UMRS floodplain inundation attribute rasters: https://www.sciencebase.gov/catalog/folder/5b2a51b9e4b059207627d168

De Jager described the major insights resulting from the HNA-II analysis, including the following:

- There are very strong spatial differences across the river system that could be addressed with future restoration projects
- The composition of aquatic functional classes shows distinct differences across the river system, which could be addressed through future UMRR habitat projects
- There are very strong spatial differences within navigation pools, which could be addressed through future UMRR habitat projects
- Temporal changes since 1989 at a system-wide scale have been minor and mostly isolated to certain parts of the river

De Jager observed that future conditions include a) reduction in amount of deep backwaters due to sedimentation and b) major shifts in forest type distributions and overall loss of forest cover resulting from flooding, invasive species, and successional changes.

Kat McCain explained that the HNA-II tri-chairs consulted with the three District-based river teams to interpret the HNA-II indicators and determine priorities. They facilitated a rapid assessment for each indicator in each pool cluster to determine whether the condition is desired, adequate, or inadequate and needs management intervention. In addition, the river teams were given a paired comparison evaluation to determine priorities among the indicators for each cluster of pools. The results mostly reflect general consensus among the partnership.

McCain said few of the indicators are generally valued as "good" or "bad," and depend on which structures and functions are valued by the users and stakeholders. The highest ranked indicators considered most important by UMRR partners throughout the system are aquatic functional classes, floodplain functional class, floodplain vegetation, and aquatic vegetation.

Sara Schmuecker described the river teams' efforts to determine desired condition objectives using the indicators and provided a summary of the results with the four highest ranked indicators as listed above. Schmuecker explained that improving or maintaining aquatic functional classes was a top priority in all clusters except for Pool 15 (because it is a natural gorge without much aquatic habitat diversity) and the Illinois River. Restoring floodplain topographic diversity and diversifying inundation periods as well as maintaining or restoring floodplain vegetation diversity were commonly prioritized desired future conditions in nearly all clusters.

Schmuecker said the HNA tri-chairs' recommendations for the next HNA iteration are to articulate a clear purpose of the effort early-on and to involve decision-makers from each UMRR Coordinating Committee agency on the steering committee. She noted that many things had changed since the first HNA publication, including primary purpose and audience of the final report. Additionally, there were substantial delays and miscommunication from those involved in the steering committee and agency leadership.

De Jager illustrated ways that the HNA-II can be useful to UMRR and the partnership more broadly. This includes utilizing HNA-II in UMRR habitat project fact sheets. For example, including information regarding in which cluster the project is located, the current status of HNA-II indicators, which indicators are likely to be affected by a project, and whether a project would work to improve or maintain an indicator's status. The HNA-II can also be used to determine criteria for selecting and sequencing the next generation of UMRR habitat projects and to define future conditions or project scenarios, including without project. De Jager also discussed a few examples of using HNA-II to inform project planning.

Marty Adkins applauded the HNA-II tri-chairs for their explanation of the results and ways that the information can be utilized. Adkins observed that the HNA-II findings would be very helpful for prioritizing projects at the state level, including on the river and in the floodplain and watershed.

Col. Steven Sattinger presented the HNA-II tri-chairs McCain, Schmuecker, and De Jager with certificates of service, recognizing their invaluable contribution to UMRR for their efforts in developing HNA-II. The UMRR Coordinating Committee expressed sincere gratitude for their dedication and leadership throughout the process.

Ecological Resilience

Kristen Bouska explained that the UMRR ecological resilience assessment is transitioning from its first phase of defining factors affecting the ecosystem's general resilience to the second phase of defining potential alternate regimes and specified resilience. Bouska briefly reviewed the composition and roles of the UMRR ecological resilience working group and partnership review of draft products to-date. Thus far, manuscripts have been published regarding a description of the Upper Mississippi River System and general ecological resilience conceptual frameworks.

Bouska reported that work is currently focused on describing alternative regimes and assessing specified resilience (or trends in the controlling variables, proximity to thresholds, and potential interactions among thresholds. She described three potential alternate regimes and their respective drivers of transition and restoration pathways: 1) a clear, vegetated state or a turbid, sparsely vegetated state; 2) a diverse native fish community or an invasive-dominant fish community; and 3) diverse and dynamic floodplain vegetation or invasive-dominant wet meadow.

Bouska said planned next steps for the UMRR ecological resilience work include:

- Submit manuscript regarding the alternative regimes in March 2019
- Develop a broader research framework reflecting the alternative regime conceptual models in spring 2019
- Advance one research question regarding specified resilience in 2019
- Determine whether and how ecological resilience indicators might be incorporated in the forthcoming LTRM status and trends report, planned for publication in 2020
- Hypothesize how restoration projects are thought to affect general and specified resilience in FY 2020

Jim Fischer asked how the ecological resilience models might be incorporated into UMRR habitat project fact sheets and/or selecting the next generation of habitat projects. Jeff Houser explained that the indicators of general ecological resilience are mostly integrated into the HNA-II indicators and therefore could be used in ways the HNA-II tri-chairs described earlier. Houser said there still needs to be an iterative discussion among scientists and habitat practitioners of how the information can be best used. He added that future work includes synthesizing what we know into the conceptual frameworks of alternate regimes and then better understanding thresholds.

UMRR Showcase Presentation

Marshall Plumley described the tentatively selected plan for Steamboat Island habitat project, which spans approximately 2,600 acres and is located on Corps-owned lands and managed by the UMR National Wildlife Refuge System. The existing forest stands are mostly uniform, backwater habitat is filling in with sediment, and existing islands are eroding. Following extensive evaluation of various alternatives, the project plans are to diversify flow and topography, improve backwater habitat, restore and protect islands, and improve timber stands, forest, scrub-shrub, and pollinator habitat.

Plumley said that, pending FY 2020 funding and approvals, the feasibility report for Steamboat Island is scheduled to be completed in winter 2019.

Habitat Restoration

District Reports

St. Paul District

Marshall Plumley explained that MVP is working hard to complete planning and design work on McGregor Lake and Bass Lake Ponds this fiscal year. MVP is awaiting comments from MVD regarding McGregor Lake and Bass Lake Ponds is in public review. The District's other planning priorities are Reno Bottoms and Lower Pool 10. Feasibility for Reno Bottoms will likely be completed this year and MVP is currently identifying future without project conditions for Lower Pool 10. Plumley announced that construction has been completed for Harpers Slough and a dedication ceremony is being planned. A construction contract for Conway Lake was awarded in late calendar year 2018, with the goal of starting construction in FY 2020. MVP is anticipating awarding a construction contract for Bass Lake Ponds in FY 2019.

Rock Island District

Erica Stephens explained that MVR has selected a TSP for Steamboat Island and aims to submit plans to MVD in January 2020. Lower Pool 13 and Green Island are the District's other planning priorities. A charrette is planned for Lower Pool 13 for late April 2019 and MVD approved the Green Island fact sheet. Stephens said a construction contract for Beaver Island was awarded in December 2018. MVR is working on designs for Keithsburg Division with USFWS and held a kick-off meeting. Pool 12 Overwintering, Huron Island Stage II and III, and Beaver Island Stage IB are in construction. Pool 12 Overwintering and Huron Island were demobilized due to winter conditions. ERDC staff collected and are propagating plants for use at Huron Island following willow and cottonwood harvesting. Construction contractors mobilized to Beaver Island prior to the river freezing and began tree clearing for topographic diversity. A performance evaluation was scheduled for Fox Island in FY 2018 but was postponed due to high water and will be rescheduled after water recedes. Erica Stephens will be filling in for Julie Millhollin as MVR's HREP District Manager for four months.

Marty Adkins requested that NRCS be involved in the Green Island project as they have conservation easements in the area and may be able to optimize opportunities there. Jim Fischer asked why aquatic plant propagation was chosen for Huron Island rather than utilizing a commercial vendor. Chuck Theiling and Kirk Hanson explained that local stock has a greater probability of establishing and maturing. Karen Hagerty added that cost estimates were lower for propagation.

St. Louis District

Brian Markert said MVS is working with the Forest Service in developing Oakwood Bottoms feasibility study. The District collected additional bathymetry data for Piasa and Eagles Nest. Crains Island will be the first open river project in the District and is preparing to let a construction bid in mid-May. Markert explained that construction at Crains Island includes opening a side channel and adding a sediment deflection levee, which should create and enhance diverse soils and establish a seed source in the area. Markert reported that MVS is also advancing construction of a levee setback, regrading, and reforesting high areas at Clarence Cannon and reforesting at Ted Shanks. Clarence Canon is the District's construction priority and will likely be awarded before Crains Island. Markert thanked Jasen Brown for filling in for him while he was away in Japan.

Mike Klingner noted that Clarence Cannon was damaged in 1993 flood and asked if the level of protection will be modified. Markert and Sabrina Chandler explained that the level of protection will remain the same, with the project objectives focused on managing flood waters among other ecological goals. Sabrina Chandler added that the area was severely damaged resulting from flood waters receding quickly in 1993. The project is designed to improve drainage and move water where it is needed on the Refuge during periods of high water. Markert added that the water control features will reduce the chance for head cutting.

HREP Selection Process

Marshall Plumley said the UMRR Coordinating Committee, District-based river team chairs, and District HREP managers are developing a process and guidance materials to select the next generation of UMRR habitat projects to be implemented in FY 2021-2025. An in-person meeting scheduled for January 15-16, 2019 was postponed and rescheduled in two different meetings: a March 14, 2019 conference call to discuss the role of a potential science support team and an in-person meeting on March 27-28, 2019 in Muscatine to discuss ecological criteria to be used in selecting and sequencing those HREPs. The goal is to have a suite of UMRR HREPs selected and sequenced by the end of calendar year 2019 and available to start feasibility in FY 2021-2025.

In response to a question from Jim Fischer, Plumley said that a meeting announcement was sent via email on February 25, 2019. Kirsten Wallace mentioned that the meeting was scheduled to coincide with the UMRR LTRM component meeting on March 26-27, 2019.

UMRR HREP Workshop

Plumley announced that a UMRR HREP Planning and Design Workshop is scheduled for May 6-8, 2019 in Dubuque. Workshop objectives are to:

- Build relationships and facilitate dialogue among UMRR's restoration practitioners, planners, engineers, and scientists
- Strengthen UMRR's restoration efforts by learning from insights gained over the past 5-10 years regarding project design, construction, monitoring, and OMRR&R
- Prepare for productive, innovative habitat projects corresponding with the new projects selected in the FY 2021-2025 UMRR Next Generation HREP Implementation Plan (currently under development)

Plumley added that a pre-workshop survey will be sent out to invitees to help guide development of the workshop agenda and that a series of webinars will be scheduled in advance of the workshop to ensure a base level of knowledge across all workshop participants.

Long Term Resource Monitoring and Science

FY 2019 1st Quarter Report

Jeff Houser said that accomplishments of the first quarter of FY 2019 include the publication of the following:

- Four manuscripts:
    1) Applying concepts of general resilience to large river ecosystems: A case study from the Upper Mississippi and Illinois Rivers

2) Spatial and temporal changes in species composition of submersed aquatic vegetation reveal effects of river restoration

3) Upper Mississippi River Restoration Program Long Term Resource Monitoring Element—Spatial Data Query Tool

4) Effects of flood inundation, invasion by *Phalaris arundinacea*, and nitrogen enrichment on extracellular enzyme activity in an Upper Mississippi River floodplain forest

- The technical report: *Indicators of Ecosystem Structure and Function for the Upper Mississippi River System*

Houser said several UMRR partners are participating on an informal group to explore opportunities for monitoring the ecological implications of reduced navigation traffic (i.e., barge-generated waves) during the planned Illinois River closures of the navigation system in FYs 2020 and 2023.

Houser added that he, Nate De Jager, and Jim Fischer are planning to present on UMRR data collection and use in UMRS habitat management and restoration at the June 10-14, 2019 International Association for Great Lakes Research Meeting.

A-Team Report

Matt Vitello reported that the A-Team met on February 6, 2019 at the University of Iowa's LACMRERS facility in Muscatine. The agenda included programmatic updates from Marshall Plumley and Houser, a presentation regarding ecological resilience conceptual frameworks from Kristen Bouska, and an initial scoping discussion on the next LTRM status and trends report. Houser had requested that the A-Team members provide anecdotes of using LTRM data for the next report, adding that the intent is to make the report available and interesting to a wider audience. Additionally, a major portion of the A-Team meeting was spent evaluating 10 proposals seeking FY 2019 funds allocated to science in support of restoration and management. After deliberations, the A-Team members ultimately agreed to a ranking of the proposals. Vitello expressed concern that the A-Team's first ranking was excluded from final selected proposals, which Houser will announce later in this meeting. Vitello said the A-Team will allocate time at its April 24, 2019 meeting in La Crosse. This meeting is scheduled in conjunction with the Mississippi River Research Consortium. Vitello added that the A-Team chair duties will transition to Nick Schlesser of Minnesota DNR following the April meeting.

In response to a question from Andy Barnes, Houser explained that the A-Team's highest ranking recommendation proposed to assess gaps in the existing system-wide LiDAR dataset and acquire data where currently unavailable. Houser explained that the LTRM management team (i.e., Plumley, Karen Hagerty, Houser, and Jennie Sauer) did not select the proposal due to technical concerns, including regarding prioritization of data gaps. Hagerty added that the LTRM management team also considered that a new LiDAR dataset will likely be acquired in the near future.

Megan Moore requested that the LTRM management team report back to the A-Team regarding its ultimate selection and how the A-Team's recommendations are weighted, expressing concern that the A-Team's input was not considered. Houser explained that the A-Team's rankings informed the selection, noting that the A-Team's second through fifth recommended proposals were chosen. Houser also explained that the LTRM management team considers input from USACE and USGS who are not members of the A-Team. He asked for further clarity from the A-Team regarding its concerns. Vitello responded that, for example, USACE and USGS voiced opinions during the A-Team's deliberations about rankings even though they are not members. Hagerty emphasized that LTRM management team felt compelled to decline the proposal based solely on technical issues. Jennie Sauer said she discussed options to advance the work through other opportunities with the proposal's principle investigator.

Houser acknowledged the value of LiDAR data and the proposal's overall objective, but said questions remain about how best to do that.

Nate De Jager observed that the composition of A-Team members' expertise may warrant consideration. Jim Fischer said the A-Team has discussed De Jager's comment previously and agreed that it is worthwhile to consider. Fischer recognized that the A-Team does not have final decision-making authority. Rather, the A-Team's purpose is to serve as an advisory body. Houser agreed with Moore's suggestion that the LTRM management team reflect on this process with the A-Team at its next meeting.

In response to a question from Neal Jackson, Fischer explained that the A-Team has struggled with having membership from a diversity of expertise but noted that most agency staff that are the most appropriate members of the A-Team have a fisheries background. Vitello clarified that A-Team members represent their respective agency's wide-ranging perspectives on the issues, reflecting input from river practitioners with a variety of knowledge.

FY 2019 LTRM Allocations

Houser reported that the LTRM management team selected the four proposals listed below to receive FY 2019 funds allocated to UMRR science in support of restoration. Collectively, these proposals total $583,137, and reflect input from the A-Team.

Proposal	Cost
Development of a standardized monitoring program for vegetation and fish response to environmental pool management practices in the Upper Mississippi River System	$175,482
Combining genetics, otolith microchemistry, and vital rate estimation to inform restoration and management of fish populations in the UMRS	$241,852
Reforesting UMRS forest canopy openings occupied by invasive species	$102,802
A year of zooplankton community data from the habitats and pools of the UMR	$63,001

In response to a request from Hagerty, Barnes agreed to hold a motion regarding funding for these proposals until the discussion regarding funding needs for 2020 LC/LU data acquisition.

Hagerty explained that UMRR's FY 2019 LTRM allocation is $6.17 million, including $4.92 million for base monitoring and $1.25 million for analysis under base. Additionally, $2.679 million is available to science in support of restoration and monitoring, with $2.5 million in FY 2019 allocation and $179,500 in FY 2018 carry-over funds resulting from staff vacancies. Hagerty proposed that the UMRR Coordinating Committee endorse the FY 2019 fund allocation of 1) $583,137 to the LTRM management team's recommended selection of science proposals as Houser outlined and 2) $1.982 million to the 2020 LC/LU dataset to be spent in FYs 2020-2023. The plan would be to spend $757,000 in FY 2020 for data acquisition and FY 2021 for initial processing in LTRM trend areas. Subsequently, $1.225 million would be reserved for processing in FYs 2022-2023.

In response to a question from Fischer regarding contingency plans for acquiring LC/LU data, Hagerty explained that the UMRR Coordinating Committee has historically advanced funding for the dataset to ensure resource availability when needed. Fischer asked about efforts to develop standard monitoring protocols to evaluate various restoration techniques and approaches, including water level management. Plumley explained that there is ongoing discussion about developing standardized protocols for HREPs and suggested that such discussions continue. Kat McCain mentioned that there are standardized monitoring methods for forestry. Fischer said there are several ongoing efforts to monitor river

management and restoration and suggested that the UMRR partnership have a discussion of the synthesized findings and plans for future work.

Fischer moved and Megan Moore seconded a motion to approve FY 2019 for the science proposals as recommended by the LTRM management team and the 2020 LC/LU data acquisition and processing.

Houser added that the University of Wisconsin – La Crosse offered to contribute additional funds to support work outlined in a fifth science proposal titled "The role of large wood in the restoration of habitat in the UMRS," reducing its request for UMRR funds from $82,000 to $28,000. Houser said the funds could be used from remaining FY 2018 carry-over funds. In response to a question from Fischer, Hagerty explained that the University's revised proposal eliminates funds to cover a fish crew. Hagerty said funding was allocated for this effort and, therefore, does not need a new approval from the UMRR Coordinating Committee. In response to a question from Andy Barnes, the UMRR Coordinating Committee expressed approval with advancing the research in partnership with the University.

Other Business

Future Meetings

The upcoming quarterly meetings are as follows:

- **May 2019 — St. Louis**
  - UMRBA quarterly meeting —May 21
  - **UMRR Coordinating Committee quarterly meeting — May 22**
- **August 2019 — La Crosse/UMESC**
  - UMRBA quarterly meeting —August 20
  - **UMRR Coordinating Committee quarterly meeting — August 21**
- **October 2019 — St. Paul**
  - UMRBA quarterly meeting — October 29
  - **UMRR Coordinating Committee quarterly meeting — October 30**

With no further business, the meeting adjourned at 11:40 a.m.

UMRR Coordinating Committee Attendance List
February 27, 2019

UMRR Coordinating Committee Members

Don Balch	U.S. Army Corps of Engineers, MVD [on the phone]
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges [on the phone]
Mark Gaikowski	U.S. Geological Survey, UMESC
Mike McClelland	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
Marty Adkins	Natural Resources Conservation Service

Others In Attendance

Thatch Shepard	U.S. Army Corps of Engineers, MVD
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Tom Novak	U.S. Army Corps of Engineers, MVP
Shahin Khazrajafari	U.S. Army Corps of Engineers, MVP
Kevin Hanson	U.S. Army Corps of Engineers, MVP
David Potter	U.S. Army Corps of Engineers, MVP
Col. Steve Sattinger	U.S. Army Corps of Engineers, MVR
Andy Barnes	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Jodi Creswell	U.S. Army Corps of Engineers, MVR
Kari Diedrich	U.S. Army Corps of Engineers, MVR
Angie Freyermuth	U.S. Army Corps of Engineers, MVR
Sam Heilig	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Heather Schroeder	U.S. Army Corps of Engineers, MVR
Erica Stephens	U.S. Army Corps of Engineers, MVR
Brian Johnson	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Jasen Brown	U.S. Army Corps of Engineers, MVS
Kat McCain	U.S. Army Corps of Engineers, MVS
Chuck Theiling	U.S. Army Corps of Engineers, ERDC
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges
Tyler Porter	U.S. Fish and Wildlife Service, RIFO
Sara Schmuecker	U.S. Fish and Wildlife Service, RIFO
Neal Jackson	U.S. Fish and Wildlife Service, UMRCC
Jeff Houser	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Nate De Jager	U.S. Geological Survey, UMESC
Kristen Bouska	U.S. Geological Survey, UMESC
Dave Bierman	Iowa Department of Natural Resources
Kirk Hansen	Iowa Department of Natural Resources
Tom Boland	AMEC Foster Wheeler
Eric Anderson	Cardno
Brad Walker	Missouri Coalition for the Environment
Nancy Guyton	Neighbors of the Mississippi
Bertha Mae Taylor	Neighbors of the Mississippi

Gretchen Benjamin	The Nature Conservancy
Mike Klingner	Upper Mississippi, Illinois, and Missouri Rivers Association
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