

DRAFT
Minutes of the
Upper Mississippi River Restoration Program
Coordinating Committee

August 9, 2017
Quarterly Meeting

Upper Midwest Environmental Sciences Center
La Crosse, Wisconsin

Don Balch of the U.S. Army Corps of Engineers called the meeting to order at 8:05 a.m. on August 9, 2017. Other UMRR Coordinating Committee representatives present were Sabrina Chandler (USFWS), Jeff Houser (USGS) on behalf of Mark Gaikowski, Dan Stephenson (IL DNR), Randy Schultz (IA DNR), Megan Moore (MN DNR), Matt Vitello (MO DoC), Jim Fischer (WI DNR), and Ken Westlake (USEPA) via phone. A complete list of attendees follows these minutes.

MVD Reorganization

Don Balch announced that MVD recently reorganized staff internally. Brian Chewning will now serve as the Corps' UMRR Coordinating Committee representative. Balch said this will likely be his last Coordinating Committee meeting.

Minutes of the May 24, 2017 Meeting

Megan Moore offered two corrections to the draft minutes of the May 24, 2017 UMRR Coordinating Committee meeting: 1) Change \$331.7 million to \$33.17 million in the third line on the second full paragraph on page A-2. 2) Add Moore to the attendance list on page A-9.

Jim Fischer moved and Moore seconded a motion to approve the draft minutes of the August 9, 2016 UMRR Coordinating Committee meeting as provided in the agenda packet with Moore's requested changes. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2017 Fiscal Report

Marv Hubbell recalled that Congress appropriated \$20 million of FY 2017 funding to UMRR.

Marv Hubbell reported that the Corps allocated \$13.17 million to UMRR in its FY 2017 work plan (in addition to Congress' \$20 million appropriation) bringing the program's total FY 2017 funding level to \$33.17 million. Internal allocations within the program were adjusted to reflect the additional funding as follows:

- Regional Administration and Programmatic Efforts — \$1,235,000
- Regional Science and Monitoring — \$9,385,000
 - Long term resource monitoring — \$4,610,000
 - Regional science in support of restoration — \$3,500,000
 - Regional science staff support — \$100,000
 - Habitat project evaluations — \$975,000
 - Habitat Needs Assessment II — \$200,000

- Habitat Restoration — \$22,549,000
 - Regional project sequencing — \$100,000
 - MVP — \$7,683,000
 - MVR — \$5,050,000
 - MVS — \$9,716,500

In response to a question from Jim Fischer, Hubbell said UMRR spends between \$50,000 and \$75,000 annually on public outreach and engagement activities, acknowledging that the Corps' focus on UMRR communications fluctuates. Hubbell explained that Col. Baumgartner recently readjusted the Rock Island District's communications priorities and stated that he does not want the District to favor any one particular program in its external messaging. Thus, Angie Freyermuth will no longer be able to dedicate substantial time to UMRR external communications and outreach. Recalling that the UMRR Coordinating Committee has continually requested more dedicated, focused attention to communications, Fischer requested that the Corps utilize its support services arrangement with UMRBA to implement UMRR's external communications strategies. In response, Hubbell said Col. Baumgartner does not want to outsource UMRR communications. In response to a question from Fischer, Hubbell said the Corps will continue to convene the *ad hoc* communications group.

FYs 2018 and 2019 Funding Outlook

Hubbell reported that the President's FY 2018 budget includes \$33.17 million for UMRR. The House and Senate Appropriations Committees matched that funding level in their respective FY 2018 energy and water appropriations measures. However, the final budget outcome remains unknown.

Hubbell said District staff are working with Corps Headquarters on UMRR's FY 2019 budget proposal. Due to continued funding levels at \$33.17 million in FY 2017-2018, Headquarters directed the District to plan for full federal funding in FY 2019. Corps staff are working with USFWS and the states to address planning needs so that UMRR can effectively and efficiently execute habitat restoration with the additional resources.

Hubbell discussed revisions to the six-year plan for habitat projects using the diagram below, noting that many project schedules were advanced given the increased funding in FYs 2017 and 2018.



Kirsten Mickelsen observed that there are several projects in the planning phase over the next two to three years but far less in subsequent years. Mickelsen asked if there would be any short- or long-term implications of that. Hubbell acknowledged the importance of having two to three projects in project phase in each District for mitigating risk. In response to a question from Marty Adkins, Hubbell said the O&M phase for the Corps focuses on development of the O&M manual for the project sponsor. A project is considered complete once its final O&M manual is provided to the sponsor.

Adkins asked about the status of the Corps and NRCS easement issue affecting habitat projects. Don Balch said leadership in both agencies are still in negotiations to reach a solution. Balch said the Corps' Northwest Division is taking the lead on drafting a MOA with NRCS and that indications of an achievable solution are promising. Sabrina Chandler clarified that the agreement would involve restoration projects in other program authorities across the country. A change in NRCS policy regarding title mergers is complicating the issue and is also affecting USFWS lands.

External Communications

Karen Hagerty reported that the *ad hoc* UMRR external communications team met via conference call on June 14 and August 2, 2017. Communications folders will be soon available to partners to readily distribute as opportunities arise. Hagerty asked partners to contact her to join UMRR's communications team. Hagerty said there are a number of upcoming events that will provide opportunities for UMRR outreach, including open houses at Cape Girardeau Field Station on August 8, 2017 and UMESC on September 9, 2017. The UMESC event will include a booth specifically for UMRR.

Randy Hines and Sabrina Chandler reflected on the July 11, 2017 Mississippi River Connections Collaborative's meeting in La Crosse. The Collaborative is a 10-state group to raise the Mississippi River's profile. Chandler applauded Hines on his talk to the group about possible ways for the Collaborative and UMRR to partner on outreach.

Adkins said NRCS staff are connecting Angie Freyermuth with the agency's public relations staff in each staff to amplify messages about the Upper Mississippi and its relationship with the watershed and NRCS's projects.

Megan Moore said the Discovery Channel is developing a six part series on all the great rivers of the world with the Mississippi River the focus of one part. Moore said she was one of several partners interviewed. Dan Stephenson said the Discovery Channel also interviewed Illinois DNR representatives regarding Asian carp.

Chandler said the Washington Post is developing an interactive piece on the Upper Mississippi River that will likely be published in fall 2017.

Jim Fischer said Wisconsin DNR provided a tour of the Mississippi River to Wisconsin Wetlands Association. The tour included Pool 8 Islands and a LTRM fish sampling demonstration. Fischer also mentioned that the Mississippi River Parkway Commission is scheduled to hold its annual meeting on September 19-21, 2017 in Marquette, Iowa.

Fischer expressed appreciation to Freyermuth for her effort related to UMRR's external collaboration. He advised that partners be allowed lead outreach activities for UMRR if the Corps is unable to do so. Hubbell said that Col. Baumgartner recognizes the importance of promoting UMRR but prefers that communications remains internal within the Corps.

Program Showcases

Harpers Slough

Tom Novak discussed the design of Harpers Slough and lessons learned from the project. Harpers Slough is about 3,500 acres in Pool 9 located on USFWS' McGregor District. The project goals are to:

- Maintain and/or enhance habitat in the project backwater area for migratory waterfowl birds
- Create habitat for migratory and resident waterfowl birds
- Enhance channel habitat for riverine fish and mussel species
- Create and maintain protected lacustrine habitat for backwater fish species

Harpers Slough project features include construction and protection of islands, rock mounds, groins, dredging, and restoration of emergent wetlands. The project's construction contract was awarded on September 2014 and costs nearly \$12 million. The St. Paul District completed a pre-final inspection on August 2, 2017 and anticipates project completion in spring 2018 with a dedication ceremony in May.

Novak explained the knowledge gained from Harpers Slough construction, including features to provide access to islands for critters and seeding techniques that also encourage natural volunteers like cottonwood trees. Nate De Jager asked if the Corps is considering methods to facilitate cottonwood generation. Sabrina Chandler explained that planting efforts focus on species that do not recruit naturally and rely on species like cottonwoods that can naturally establish on their own to do so. There is no effort to prevent cottonwoods from regenerating.

Fischer expressed support for including critter pathways in habitat projects. In response to a question from Fischer, Novak said he assumes that the critter pathways constructed in the L&D 3 embankment project are functioning as intended given that the Corps has not received any feedback.

Quantifying the Effects of River-Floodplain Connectivity

Bill Richardson overviewed current research at the Maquoketa confluence into the Mississippi River to quantify the effect of floodplain-river connectivity for the removal of sediment, nutrients, and carbon. The site is co-managed by USFWS, Iowa DNR, and NRCS. Richard outlined the research goals as follows:

1. Quantify linkages between flooding and floodplain retention of flood-deposited sediment, carbon, nitrogen, and phosphorus
2. Determine floodplain nitrogen removal rates (sediment denitrification) and hyporheic loss of nitrate associated with flooding
3. Scale-up nitrogen, phosphorus, carbon, and sediment retention measurements to entire delta-floodplain system and regionally with floodplain inundation models

Richardson explained that initial findings suggest that:

- Large quantities of sediment, carbon, nitrogen, and phosphorous are captured within a small reconnected section of tributary floodplain.
- Large quantities of nitrogen are permanently removed from floodplains through denitrification.
- Lack of river-floodplain connectivity hinders the process of sediment, carbon, and nutrient removal.
- Floodplain soils are primed to secure or release stored phosphorous depending on concentrations of phosphorous in floodwaters.

Andy Barnes offered that Green Island Levee may provide an opportunity for expanding the research. Marty Adkins mentioned that there are two similar tributary areas that could potentially be restored to provide these benefits, including one area south of Lake Odessa and one just south of the Maquoketa tributary. Chandler reported that USFWS is currently trying to acquire the properties that Adkins mentioned and would intentionally flood the areas. Adkins emphasized the importance of tributary restoration and Richardson's research findings to quantify the value.

Habitat Needs Assessment II

Hubbell reported that Kat McCain will now serve as the Corps' representative on the Habitat Needs Assessment II tri-chair leadership team, which also includes Sara Schmuecker and Nate De Jager. Hubbell said he and the tri-chairs developed the following anticipated schedule for the HNA II going forward:

1. September 5: Steering Committee webinar to review a draft Information Development Summary Report and determine a process for review by partner agencies and the river teams
2. September 29: Draft systemic data layers are made available to partners for review
3. October: Partner webinar to showcase available HNA data layers
4. November 7: Final systemic data layers are published
5. November 8: UMRR Coordinating Committee meeting includes an update on the HNA II development process
6. February 7: UMRR Coordinating Committee meeting includes an update on the HNA II development process
7. March 1-31: Steering Committee and river teams review the draft HNA II Report 3
8. May 2018: UMRR Coordinating Committee consider approval of HNA II Report as written for use in a public review
9. May-June: Public review of HNA II Report
10. August 2018: UMRR Coordinating Committee considers endorsement of final HNA II Report

Hubbell explained how he envisions the HNA II integrating with the UMRR's other related efforts including the development and use of ecological resilience indicators and selecting the next generation of habitat projects.

In response to a question from Kirsten Mickelsen, De Jager explained that the functional class working subgroups are subject matter experts that are being informally consulted to develop specific datasets. In response to a suggestion from Karen Hagerty, De Jager said the A-Team has not yet been consulted but expressed agreement that the A-Team should be involved going forward.

De Jager explained that the HNA II is currently transitioning from information collection to determining applications for management. De Jager, in partnership with Schmuecker, McCain, and other partners are currently developing a draft report that recommends the framework and a series of indicators. He discussed the HNA II's framework for relating the UMRS goals and objectives, Essential Ecosystem Characteristics (EECs) and quantitative measures (indicators) of ecosystem structure, function, and resilience. Pending additional input, De Jager said a draft document explaining this framework will be distributed to the HNA II Steering Committee soon. This includes developing visualization tools that synthesize multiple aspects of ecosystem structure, function, and resilience across the system at one time – e.g., spider diagrams. He acknowledged that additional efforts will be needed to identify targets for management and restoration.

In response to a question from Hagerty, De Jager said there will be a future scenario depicting no further investment in UMRR. Hagerty suggested that waterfowl habitat information is expanded, noting the potential to utilize available USFWS and state data.

Ken Lubinski expressed appreciation to De Jager for the use of David Harlow's recommendations in the HNA 2000 particularly for using the five EECs. In addition, Lubinski said Harlow emphasized the importance of involving the public when defining a desired future condition and ecological goals. In response to a question from Lubinski, De Jager said there has not been a public outreach component to the HNA II but he assumes river managers have a good perspective on public opinion. Lubinski advised the group to consult the public at some point, noting that "essential" ecological characteristics imply an associated value. Hubbell asked Lubinski to offer any suggestions for how to do that effectively, recognizing that the 2009 reach planning effort struggled with a public review process. Lubinski suggested that public relations experts be involved to help determine an approach and communicate complex terms and concepts in understandable ways.

In response to a question from Lubinski, De Jager explained that the HNA II has focused primarily on recurring ecological features throughout the system. A future next step will be to tease out unique features such as Lake Pepin. In response to a question from Megan Moore, De Jager explained that spatial scale will differ depending on the dataset characteristics.

Fischer thanked De Jager for his tremendous work in synthesizing a large amount of information into application tools that will ultimately lend high utility to river managers. Mickelsen echoed Fischer's sentiment and specifically recognized the value of the visualization tools for communicating the HNA II conclusions to external audiences. Mickelsen said she believes that these concepts will resonate with floodplain stakeholders interested in flood storage areas to reduce peak flows as well as recreationists interested in improving habitat areas for certain species. Reflecting on the earlier discussion regarding public outreach, Mickelsen requested that the Corps reevaluate its position to work through a contracting mechanism if the Corps is not able to implement the communications needs internally. Mickelsen recognized that a contracting mechanism could be structured in various ways, including developing and implementing communications strategies and products under the Corps' cover or a partnership cover. She recommended that the UMRR Coordinating Committee develop more detailed recommendations for implementing its communications goals. Fischer agreed, noting the value of being able to work with river partners and integrate habitat needs in the river's multiple-use management context. Hubbell questioned the ability to employ a public outreach campaign specific to the HNA II recognizing the short timeframe required for completing the final report. He asked if a 30-day comment period would be sufficient.

Adkins encouraged the UMRR partnership to explore innovative ways to connect with various audiences rather than the standard public comment process. For example, Adkins suggested developing informal materials to distribute at BassPro or Cabelas stores. He advised that focus groups be used to craft compelling messages. The focus groups could include a teacher, farmer, angler, hunter, etc. They could provide insight on which messages make sense and are resonating. Chandler expressed support for Adkins' comments but emphasized the need for partnership review to occur prior to any public engagement.

Moore suggested that a grading system be used to evaluate the river ecosystem. She said it could be an effective communications tool to trigger discussion about the reasoning for the grades and what can be done to improve the scores. Olivia Dorothy suggested working with *One Mississippi* and the Mississippi River Connections Collaborative to target audiences and messages.

Jeff Houser advised that the decision to employ or not employ a public engagement campaign should be documented as well as the rationale. Hubbell asked the HNA II tri-chairs to consult with the *ad hoc* UMRR communications team regarding the public review process.

Program Database

Kayleigh Thomas presented on the purposes, design, construction, and applications of the UMRR Database, as well as ongoing work to input historical program information and digitize various features. Thomas said the Database's primary purpose is to combine key UMRR information into a single database application to produce priority program- and project-level reports and analyses. The goals of the Database are to 1) standardize reporting to increase awareness of UMRR's accomplishments of its strategic goals and objectives and 2) support habitat project design, analysis, and performance monitoring to increase effectiveness of applied ecosystem restoration science. Thomas explained that UMRR developed its first HREP database in 1997 and has created several others since then, but they all experienced similar problems. These include a single-user platform that does not allow for efficient multiple-user editing; geographic data and project summary data managed in different, incompatible formats; and the inability to coordinate and standardize updates among the three UMR Districts. Because of these issues, none of the databases ever reached a stage of maturity that would allow them to be useful for analyzing restoration effectiveness. Thomas explained how those issues have been eliminated in a new, user-friendly database, which should provide long-term utility for program partners.

The new UMRR Database integrates and georeferences information related to the program's habitat projects. It is a web-based application that allows for multiple, simultaneous editors within the three UMR Districts. Thomas said the Database was created using Oracle Application Express software, which is a fully supported, no-cost, low maintenance option that includes all available Oracle editions. The software is fully embraced by USACE so it will not change in the foreseeable future. Using only a web-browser, users can develop and deploy professional applications that are both fast and secure.

Thomas listed several advantages of the Oracle Application Express software. It links all program data together, records programmatic history on key issues, standardizes and tailors reporting, allows accessibility to implementing partners, and ensures data quality and consistency. The Database is not a replacement for the program's existing data systems. Thus far in the Database's development, USACE staff have compiled current and historic habitat project data from all three UMR Districts, added habitat project total cost estimates, and combined habitat project status, spatial locations, financial costs, sponsors, documents, and other relevant information into a single framework. This will allow for generating comprehensive reports. In addition, USACE staff have developed several standardized reports, such as Congressional fact sheets; updated the user authentication model to support the definition of fine-grained user roles; performed several quality assurance checks of specific data elements; and established a standing PDT to guide continued Database development and maintenance.

Thomas explained that current efforts to develop the Database include the following:

1. Defining roles and responsibilities among USACE staff for making updates and doing quality assurance
2. Digitizing key habitat project documents and UMRR Coordinating Committee meeting packets and inputting them into the Database
3. Incorporating historical UMRR financial cost data and developing a plan for making routine updates
4. Updating points of contact for habitat project specialty areas
5. Inputting habitat project goals, objectives, and criteria
6. Automating production of UMRR Coordinating Committee quarterly meeting cost reports and plan of work reports
7. Quality assurance reviews of habitat project restoration features

Thomas illustrated example outputs for a habitat project report and a cost report. As the Database continues to mature, Thomas said USACE staff will migrate report outputs and data products to a public-facing server, input habitat project images and contacts and automate the creation of J-Sheet reports. In addition, Corps staff plan to develop reports to support the next UMRR report to Congress, develop a system for tracking and scheduling HREP evaluations, and automate habitat project web fact sheet reports.

Hubbell discussed the value of having the Database to readily respond to Congressional or Administration questions about UMRR. The Database also allows for staff to compare projects over time, such as the range of costs for planning projects.

Jim Fischer expressed appreciation for the Corps' effort to develop the Database noting the current era of accountability and scrutiny over UMRR's budget. In response to a question from Fischer, Thomas explained that the Database's information is easily exportable should a new software application be required.

Habitat Restoration

District Reports

St. Louis District

Brian Markert reported that MVS is planning several habitat projects in the open river reach, including Crains Island, Harlow Island, and Oakwood Bottoms. Design work on Clarence Cannon is complete and will be the District's primary construction investment in FY 2018. MVS is finalizing construction work on the Ted Shank's pump station and will turn that project over to Missouri DoC soon. In addition, the District recently completed the Pool 25 and 26 Islands O&M Manual and sent a close-out letter to Illinois.

Rock Island District

Hubbell reported that MVR is developing plans and specs for Beaver Island with an anticipated construction starts in FY 2018. The District's completed repairs from the Rice Lake flood damages and is planning a ribbon cutting ceremony this fall. MVR plans to turn the Rice Lake project over to Illinois by September 1. Hubbell said MVR is finalizing site visit evaluations of all completed habitat projects over the last two years.

St. Paul District

Novak reported that Conway Lake is preparing to award a construction contract this fiscal year. This project is critical to maintaining full FY 17 execution. Hubbell expressed sincere appreciation to the staff within the District and Division who worked extremely hard on the project.

Next Generation of Habitat Projects

Hubbell explained that the Corps is preparing to start a partnership process to select the next generation of habitat projects when the ecological resilience and HNA II work is complete. Efforts are underway to select a few projects within each District in the interim.

Long Term Resource Monitoring and Science

FY 2017 3rd Quarter Report

Jeff Houser reported that accomplishments of the third quarter of FY 2017 include the publication of two technical reports regarding:

- Mapping areas invaded by reed canary grass in Pools 2-13
- Detecting *Potamogeton crispus* in LTRM summer surveys, estimating its seasonal biomass and nutrient standing stocks, and linking it to water quality conditions in Pools 7 and 8

Jennie Sauer acknowledged that Audubon contributed funding to the reed canary grass mapping effort. Sauer said it offered a great opportunity to leverage resources.

Houser reported that publication is pending final review on a manuscript describing the fundamental relationships affecting the UMRS's ecological resilience. The draft manuscript of general resilience indicators will be provided to the UMRR resilience work group in early September. The indicators were updated following input at the May 2017 UMRR Joint Workshop of Ecosystem Resilience and HNA II. Next steps of the ecological resilience 4 effort include 1) analyzing data for developing specified resilience indicators and 2) hosting a resilience work group web-based conference call in September.

FY 2017 Science Proposals

Karen Hagerty explained that, in light of UMRR's increased FY 2017 budget, an additional \$2.5 million is available for science-related projects. The funds will be used to advance four field station research proposals and landscape pattern research, refresh equipment, further operationalize ecosystem resilience concepts, test the camera for use in acquiring the 2020 LC/LU dataset, and modernize the water quality lab. Hagerty said that Marv Hubbell plans to submit a formal proposal in mid-August to the UMRR Coordinating Committee for funding specific research and equipment needs and will ask the Committee for its review in September. The Committee's endorsement will be needed with sufficient time for the Corps to execute funding agreements before the end of FY 2017.

Hagerty explained that two SOWs for LTRM will be developed again in FY 2018, with a SOW developed for LTRM base monitoring and a second SOW developed for science in support of restoration and management. Hagerty said the two SOWs together amount to what the UMRR Coordinating Committee determined to fully fund LTRM. Hagerty said a request for science proposals will be distributed to partners in late August and will focus on themes relating to the UMRR's 2015-2025 Strategic Plan and research frameworks, ecosystem health and resilience, systemic efforts and analyses, and UMRR contributions to the overall UMRS.

Hagerty said she anticipates that the A-Team will review the FY 2018 proposals for science in support of restoration and management at its January 2018 meeting. The proposals would then be presented to the UMRR Coordinating Committee at its February 2018 quarterly meeting for consideration of endorsement.

Hagerty reviewed allocations of LTRM's FY 2018 budget of \$5.76 million as follows:

- Field Stations
 - Pool 4 — \$560,555
 - Pool 8 — \$536,9393
 - Pool 13 — \$464,996
 - Pool 26 — \$414,703
 - Open River — \$385,605
 - Illinois River — \$472,791
 - Science meeting travel — \$7,363
- UMESC — \$2,840,624
- Corps technical representatives — \$80,000

Houser said brief descriptions of the seven submitted proposals are provided on pages C-1 to C-3 of the agenda packet. He provided more detailed information about the four FY 2017 research proposals. These include:

1. The role of crustacean zooplankton in the overall plankton community dynamics in Lake Pepin
2. Water clarity in Pool 8: the contributions of changes in external inputs and changes in internal conditions to long term trends
3. Developing methods estimating submersed aquatic vegetation biomass in the UMR to expand capabilities in the UMRR and improve the utility of the long term vegetation data
4. Using measurements of age, recruitment, growth rates, and mortality to understand population demographics of smallmouth buffalo in the UMRS

A-Team Report

Matt Vitello reported that the A-Team met remotely on August 1, 2017. Discussion topics included the UMRR ecological resilience effort, science research proposals, and the next Status and Trends Report. In addition, Sara Tripp presented on managing the UMRS as a migratory swimway for fish. The A-Team's next meeting will be held in conjunction with the UMRCC Fish Tech Group on October 3, 2017 in Lake Pepin.

Other Business

Appreciation to UMRBA Staff

Marv Hubbell expressed appreciation to Dave Hokanson for his contributions to UMRR over his tenure with UMRBA. Hokanson accepted a new position at Minnesota Department of Health. Hubbell congratulated Kirsten Mickelsen on her promotion to Executive Director of UMRBA.

Future Meetings

The upcoming quarterly meetings are as follows:

- **November 2017 — St. Paul**
 - UMRBA quarterly meeting — November 7
 - **UMRR Coordinating Committee quarterly meeting — November 8**
- **February 2018 — Quad Cities**
 - UMRBA quarterly meeting — February 6
 - **UMRR Coordinating Committee quarterly meeting — February 7**
- **May 2018 — St. Louis**
 - UMRBA quarterly meeting — May 15
 - **UMRR Coordinating Committee quarterly meeting — May 16**

With no further business, the meeting adjourned at 12:20 p.m.

**UMRR Coordinating Committee Attendance List
August 9, 2017**

UMRR Coordinating Committee Members

Don Balch	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]
Dan Stephenson	Illinois Department of Natural Resources
Randy Shultz	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

Brian Chewning	U.S. Army Corps of Engineers, MVD via phone
Tom Novak	U.S. Army Corps of Engineers, MVP
Andy Barnes	U.S. Army Corps of Engineers, MVR
Jody Creswell	U.S. Army Corps of Engineers, MVR
Marvin Hubbell	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Kayleigh Thomas	U.S. Army Corps of Engineers, MVR
John Peukert	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Tim Eagan	U.S. Army Corps of Engineers, MVS
Sharonne Baylor	U.S. Fish and Wildlife Service, UMR Refuges
Sam Finney	U.S. Fish and Wildlife Service, UMR Refuges
Sara Schmuecker	U.S. Fish and Wildlife Service, RIFO
Amy Beussink	U.S. Geological Survey, Missouri Water Science Center
Kelly Warner	U.S. Geological Survey, Iowa-Illinois Water Science Center
Kristen Bouska	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Nate De Jager	U.S. Geological Survey, UMESC
David Grey	U.S. Geological Survey, UMESC
Bill Richardson	U.S. Geological Survey, UMESC
Jim Rogala	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Molly Van Appledorn	U.S. Geological Survey, UMESC
Steve Galarneau	Wisconsin Department of Natural Resources
Olivia Dorothy	American Rivers
Ken Lubinski	(No Affiliation)
Brad Walker	Missouri Coalition for the Environment
Gretchen Benjamin	The Nature Conservancy
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association