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

## February 8, 2017
## Quarterly Meeting

### Holiday Inn and Conference Center
### Rock Island, Illinois

Don Balch of the U.S. Army Corps of Engineers called the meeting to order at 8:00 a.m. on February 8, 2017. Other UMRR Coordinating Committee representatives present were Sabrina Chandler (USFWS), Mark Gaikowski (USGS), Dan Stephenson (IL DNR), Randy Schultz (IA DNR), Kevin Stauffer (MN DNR), Matt Vitello (MO DoC), Jim Fischer (WI DNR), and Ken Westlake (USEPA). A complete list of attendees follows these minutes.

**Minutes of the November 16, 2016 Meeting**

Karen Hagerty said the total available funding for science projects in FY 2017 is approximately $137,500, but it is noted as $98,150 on page A-11 of the draft minutes of the November 16, 2016 UMRR Coordinating Committee quarterly meeting. Hagerty requested that the draft minutes be revised to reflect the actual amount. Jim Fischer moved and Randy Schultz seconded a motion to approve the draft minutes as amended. The motion carried unanimously.

**Regional Management and Partnership Collaboration**

*FY 2017 Fiscal Report*

Marv Hubbell reported that, on December 12, 2016, Congress enacted a second continuing resolution authority (CRA) for FY 2017 that expires on April 28, 2016. Hubbell explained that the Corps' obligation authority under the CRA is $20 million, which is the least funding amount included for UMRR in either the FY 2017 President's budget or the House or Senate energy and water appropriations measure. Hubbell acknowledged that the final appropriation is unknown. Assuming it remains at $20 million for FY 2017, the internal allocations would be as follows:

- Regional Administration and Programmatic Efforts — $761,000
- Regional Science and Monitoring — $6,714,000
  - Long term resource monitoring — $4,610,000
  - Regional science in support of restoration — $1,000,000
  - Regional science staff support — $129,000
  - Habitat project evaluations — $975,000
- Habitat Restoration — $12,525,000
  - Regional project sequencing — $150,000
  - MVP — $4,005,700
  - MVR — $4,363,000
  - MVS — $4,005,700

*FY 2018 President's Budget*

Hubbell said the FY 2018 budget for the federal government has not yet been released. Per guidance issued on April 29, 2016, the Office of Management and Budget (OMB) requested formal budget submissions under the typical process though it would not provide a formal budget pass-back. In response to a question from Jim Fischer, Hubbell said any additional FY 2017 work plan funding depends on whether Congress includes additional discretionary funding as it has been doing the past few years. That is unknown at this point. In response to a question from Ken Westlake, Hubbell said the Corps provides spending plans at the funding levels of last fiscal year's appropriation as well as two other increments. One increment is always at UMRR's full annual authorized funding level of $33.17 million.

*2016 UMRR Report to Congress*

Hubbell reported that MVD submitted the final draft 2016 UMRR Report to Congress (RTC) to Headquarters on December 23, 2016. The Office of Council requested revisions to the issues facing non-federal HREP sponsors in executing cost-share agreements. With those changes, Headquarters is scheduled to formally transmit the report to ASA(CW) on February 10, 2017. Hubbell explained that District staff did circulate a notice of the changes to the UMRR Coordinating Committee, other non-federal, and agencies and organizations that submitted a letter of support for the report.

Jim Fischer said a Wisconsin DNR legal review of the cost-share issues found that the state can in fact enter into the Corps non-federal agreements. Dating to the origins of UMRR, Wisconsin determined that the benefits of cost-sharing UMRR's habitat projects outweighed the costs.

Karen Hagerty said the full 2016 RTC and brochure are located on UMRR's website on the "Key Documents" page.

*External Communications and Outreach*

Hubbell reported that an *ad hoc* external communications group met via conference call on January 12, 2017 to review its objectives and brainstorm initial ideas for expanding UMRR's public outreach efforts. Group members include Angie Freyermuth and Karen Hagerty (Corps), Harland Hiemstra (Minnesota DNR), Randy Hines (UMESC), and Kirsten Mickelsen (UMRBA). On the January 12 call, participants discussed possibilities of involving representatives from USFWS, NRCS, USEPA, TNC and any other interested organizations. Potential ideas for future outreach included developing a resources folder with talking points on selected issues, a UMRR-specific web site and social media pages, and signage at HREP and field station sites. Hubbell asked that partners interested in participating in that group contact Angie Freyermuth.

Buntin said the UMRBA Board invited the state UMRR Coordinating Committee members to a February 6, 2017 meeting to discuss the Association's 2018-2023 strategic initiatives related to ecosystem health. The clear consensus is that dedicated public outreach and engagement is lacking and that a more concerted effort is needed in order to continue competing for limited resources in the federal budget. The Board directed staff to increase its resources on public communication and outreach, making it the top priority for the Association's ecosystem health work. Hubbell said the Corps has not dedicated sufficient resources to public outreach, but that it intends to ramp up funding in future years. Jim Fischer recommended that the Corps engage UMRBA staff to support UMRR-related outreach activities.

Marty Adkins asked to what extent UMRR actively communicates to the public. Hubbell said efforts are relatively mixed given the interagency staff involved and the timing – e.g., how much funding is available and what projects are being implemented and where. He said that, on average, MVP is fairly active while MVR and MVS are less so. Tom Novak said MVP staff participate in high school events and involve students in tree plantings at HREP sites on Earth Day. Adkins urged partners to think of

UMRR as part of a larger effort to make the river cleaner and healthier, noting possibilities to do joint efforts with Living Lands and Waters for example. Hubbell said the UMRR communications group is thinking through potential opportunities such as that. Karen Hagerty noted that the River Action non-profit showcased UMRR last year as the single best effort to raise the grade.

Sabrina Chandler acknowledged the need for a dedicated staff person in order to make UMRR communication and outreach successful. Chandler asked what the expectations would be for individuals serving on the UMRR communications team. She also noted the news article that incorrectly attributes the great ice fishing conditions at Stoddard Lake HREP to zebra mussels, and said UMRR needs to get out in front of those kinds of things.

Hubbell recognized the need for a more proactive approach to public outreach. Hubbell said he expects to be doing outreach like what Buntin and Adkins had suggested and anticipates being more active in the coming years, particularly now that Col. Craig Baumgartner has directed Freyermuth to spend a third of her time on UMRR outreach. Buntin said he remains convinced that UMRR needs a dedicated staff person, recognizing the payoff for other aquatic ecosystems throughout the nation that invest in outreach. Noting that the UMRR communications group has only had one call so far, Buntin encouraged the Corps to more actively pursue opportunities rather than on an *ad hoc*, inconsistent basis. Hubbell agreed and said he will coordinate with Col. Baumgartner on increasing internal resources for outreach.

Mark Gaikowski asked whether the dedicated staff person would need to be held within the Corps or could be from another agency, such as UMRBA. Hubbell said he will ask Col. Baumgartner for his recommendation on that. Fischer asked the Corps to consider funding a support services contract with UMRBA staff.

In response to a suggestion from Fischer for agencies to coordinate on social media, Chandler recognized Sharonne Baylor for generating great public attention to the Refuge's Facebook sites that are reaching people beyond immediate followers. Fischer agreed and expressed appreciation for Baylor's work. He pointed out that the federal and state agencies can repost each other's Facebook statuses and link to one another. Hagerty said the Corps explored having a dedicated UMRR Facebook page, but leadership decided that posts about programs and projects should all come from the District's Facebook. Kara Mitvalsky emphasized the value of social media in reaching the public in fun, quick, and accessible ways. Mitvalsky said the USFWS' pages are great examples, and encouraged the rest of the partnership to engage in similar ways.

Fischer also suggested having ambassadors at boat landings that can explain generally about the ecosystem and what UMRR is doing to improve it and learn more about it. Fischer said ambassadors could be given business card with general information to hand out.

**UMRR Showcase Presentations**

*Keithsburg Habitat Project*

Ron Knopik provided a brief historical overview of the 1,600-acre Keithsburg area located in Pool 18. Land use dominated by logging and agriculture in the 1800s, the Keithsburg drainage district formed in 1906 and constructed the levee that surrounds the project site and allowed for farming. The Corps purchased the site in 1941 and then transferred management authority to the USFWS in 1945. The Service then established it as a Refuge in 1958 and has been primarily managed for migratory waterfowl, threatened and endangered species, and wetlands. Some farming remained on the site until 1984 and water control structures were added in the 1960s and 1970s. The 1993 flood cause a large break in the south levee that allows for some connectivity. However, water level management capability remains limited. Tributary rivers exist just north and south of the Port Louisa Refuge.

In a 2009 workshop for the Keithsburg Division project, Knopik said participants utilized many data sources to use in resource issue identification and project planning, as well as information needs. This includes an HGM assessment, contaminant assessment, USFWS water resource inventory and assessment, water quality sampling, wildlife surveys, forest inventories, and fisheries sampling. Knopik explained that vegetation is a primary resource issue at Keithsburg, with large blooms of blue-green algae and duckweed stemming from high inputs of nutrients from the northern portion of the project area. And, declines in forest area began in 1995 and continue today. Knopik said water management capability is needed to provide more natural water regimes, including helping to ensure that drawdowns can be effectively implemented when relatively minor to modest late summer flood events occur. The objective would be to manage for periodic drying periods, with alternating flooding over seasons and years. He mentioned that the closest USFWS office is 45 minutes from the project site and therefore management capabilities should be kept in mind as project features are considered. For example, a fuel pumping every day would not be feasible.

Knopik also described the ecological issues at the site due to loss of acreage and diversity of native floodplain forest. The habitat project aims to restore and enhance the age, composition, structure, and diversity of the floodplain forest on the site, also improving connectivity among forest patches systemically.

Kara Mitvalsky explained that constraints to project planning have included real estate, water levels required for the 9-foot navigation channel, program authority, environmental laws and regulations, and levees for flood control. There are two primary goals for the Keithsburg habitat project. One, increase quantity and quality of off-channel aquatic and wetland habitat by restoring mudflat and shallow water habitat for shorebird use as well as submerged and emergent vegetation for migratory waterfowl. This will be achieved by enhancing water level management capabilities, deepening backwater channels, rehabilitating the existing levee and spillways and, planting various native wetland species. Two, restore floodplain forest habitat to increase hardwood, mast-producing trees, improve the year-round scrub-shrub plant community, and improve the year-round bottomland hardwood habitat. Project features associated with this goal include enhancing water control capabilities, planting trees, and improving the existing timber stand health.

Mitvalsky explained that the trick is figuring out how to best manage the water levels to produce the desired ecological outcomes. She provided an overview of the various project features and alternatives considered. Knopik summarized the synthesis of various bird monitoring information to illustrate that dabblers, divers, and shorebirds visit the Keithsburg site at different times throughout the year. Therefore, optimal water levels can be adjusted to maximize the overall benefits to waterfowl to accommodate their specific needs. The timing and duration at which the water level is held are also important considerations for managing for the floodplain forest plant species. Mitvalsky visually illustrated through a graph how the enhanced water level management capabilities will allow for achieve success in providing the habitat requirements for dabblers, divers, and vegetation.

Mitvalsky described the suite of features recommended in the Keithsburg habitat project's draft tentatively selected plan. Sabrina Chandler reflected on how the Corps and USFWS are integrating lessons learned from other projects to inform the design of Keithsburg. Chandler noted that Trempealeau habitat project involved a water control structure that costs about $20,000 per year to maintain, not including the electricity expenses. In response to a question from Jim Fischer, Chandler explained that electric-powered water control structures would have an average cost of about $7,000 annually. Fuel-powered pumps are about equal in annual costs because of additional labor required. Chandler observed that the annuals cost of Keithsburg would be significantly lower than Trempealeau because of smaller pump size and design.

Mitvalsky said the next step in the project development is to undergo an independent review (i.e., value engineering study) that examines ways to reduce costs, increase efficiencies, and add benefits. Pending

sponsor confirmation on the tentatively selected plan, Mitvalsky said construction is likely to being in 2020. Chandler noted that land acquisition is a critical component of the project that is remaining to be resolved, but expressed optimism that it will work out. In response to a question from Randy Shultz, Mitvalsky explained that Illinois and Iowa did share fisheries monitoring information. The interagency planning team did explore options for an overwintering fish habitat feature but it was determined to not be feasible because it would require piercing the clay levee.

In response to a question from Ken Westlake, Hubbell said the Keithsburg project does not include a pool-scale drawdown but it is something that the Corps could explore as a feature. Chandler expressed support for that idea. In response to a question from Dan Stephenson, Mitvalsky said the project area the public can get into the areas within the embankment but there is no access to the river for fishing. Mitvalsky said the Corps and USFWS hosted a public meeting early in the planning process that received very positive engagement and feedback.

*Simulating SAV Occurrence at the HREP Scale*

Yao Yin presented on the development of a new model to predict the occurrence of submersed aquatic vegetation at the HREP scale. When tested against sampling results, it was found that the "old" model for predicting submerged aquatic vegetation (SAV) was consistently underestimating the actual presence. This is mostly because the model did not adequately account for connectivity. Yin illustrated this effect through a series of maps and charts comparing the predicted and actual values.

Yin explained that a new model was developed for the Stoddard Bay habitat project, having localized parameters set within the immediate and adjacent pseudo-control area rather than the entire pool. In addition, the new model modified local turbidity by flow velocity. In a trial attempt, the connectivity indicator including both velocity and travel distance showed some promise but ultimately did not work effectively. Yin explained the model development over a series of iterations. This included running the model with a dummy variable; turbidity only; turbidity and depth; turbidity and velocity; and turbidity, velocity, and turbidity*depth*velocity. The latter showed the greatest associated statistical significance.

Yin said the new model provides important insights about the predicted effects of the proposed design of Sturgeon Lake habitat project in Pool 3. This includes that the two of the four proposed sites would generate significant enhancements in vegetation, while the smallest island would not create a significant response. The southernmost island is predicated to have a less significant initial response due to residual flow velocity, while it may have substantial responses over a longer term. If a faster response or higher degree of confidence is desired, Yin suggested that the project design is modified to further reduce flow velocity behind the southernmost island.

In response to a question from Mike Griffin about how the model accounts for vegetation associated with different velocities, Yin explained that velocity is less of a determining factor of vegetation species further north where there is less turbidity. Velocity becomes a greater factor where there is more turbidity. In response to a question from Monique Savage, Hubbell said this model was developed with the intent that it be useable by all three Districts.

**Long Term Resource Monitoring and Science**

*FY 2016 2nd Quarter Highlights*

Jeff Houser reported that accomplishments of the first quarter of FY 2017 include publications of five manuscripts:

- Changes in aquatic vegetation and floodplain land cover in the Upper Mississippi and Illinois Rivers

- Development and assessment of a new method for combining catch-per-unit effort data from different sampling gears: multi-gear mean standardization (MGMS)
- Fish associations among un-notched, notched, and L-head dikes in the Middle Mississippi River
- Mesohabitat associations in the Mississippi River Basin: a long term study on the catch rates and physical habitat associations of juvenile silver carp and two native planktivores
- Population trends and a distributional record of selected fish species from the Illinois River

In response to a question from Marty Adkins, Houser and Dave Bierman said there is not sufficient information about the fish communities in the tributaries to make conclusions about whether these same findings would be true there. However, given that the tributaries face some of the same fundamental environmental challenges (e.g., nutrients), there could very likely be some connections.

*FY 2017 Science Proposals*

Karen Hagerty reported that the FY 2017 allocation to LTRM is $5.61 million, with $4.61 million for base monitoring and $1 million for science research and analysis in support of restoration and management. FY 2016 carry-over funds of $232,044 and pass through adjustment of $318 make the total available funding for LTRM in FY 2017 $5.842 million. Hagerty recalled that the UMRR Coordinating Committee agreed to spend $36,706 to fund a backwaters sediment proposal, leaving $149,490 available for additional research and analysis.

Hagerty reported that, at its January 9, 2017 meeting, the A-Team reviewed six proposals for the available funding and selected four proposals to recommend to the UMRR Coordinating Committee for its consideration. Background information on the four recommended proposals is provided on pages C-11 to C-30 of the agenda packet.

Houser reviewed the objectives of the four science proposals and their potential management objectives. They include:

1) Estimating backwater sedimentation resulting from alluvial fan formation
2) Advancing understanding of habitat requirements for fish assemblages using multi-species models
3) Investigating metabolism, nutrient processing, and fish communities in floodplain water bodies of the Middle Mississippi River
4) Mapping the thermal landscape of the Upper Mississippi River

Jim Fischer said Wisconsin DNR did an internal review of the four proposals and concluded that they each attempt to address important management questions. Kevin Stauffer indicated that Minnesota DNR staff reviewed the proposals and is supportive of the four recommended. In response to a question from Matt Vitello, Hagerty explained that the other two research proposals had outstanding questions and were not ripe for funding at this point. They may be candidates in future years. Sabrina Chandler said USFWS would like to see the mussel habitat research move forward and will assist in developing that proposal for future consideration.

Marty Adkins said he would like to be able to share these findings to NRCS' internal technical experts. Houser said NRCS staff could become more involved in the A-Team discussions and also extended an offer to visit various NRCS offices to talk through the research being done through UMRR. Kirsten Mickelsen mentioned that the 2015-2025 UMRR Strategic Plan explicitly calls for enhanced communications of increased knowledge to the agencies and individuals whose management in the watershed may affect the health and resilience of the main stem ecosystem. Mickelsen suggested that this would be an appropriate task for the UMRR communications team.

In response to a question from Bryan Hopkins, Houser explained that UMRR published a research paper several years ago that quantified the effects of UMRR restored backwaters on sequestration, making several broad assumptions. The research found that denitrification in backwaters was detectable but modest.

Hagerty mentioned that the UMR Research Consortium held annually in La Crosse is a great opportunity to exchange information among resource practitioners.

In response to a question from Don Balch, the UMRR Coordinating Committee endorsed the four research proposals.

*A-Team Report*

Shawn Giblin reported that the A-Team's January 9, 2017 meeting focused mostly on the four research proposals (as discussed above) as well as two new potential fish indicators to evaluate ecological health. Giblin explained that, after considerable debate, the A-Team is recommending that migratory and backwater fish assemblages replace the suite of individual fish species as indicators of ecological health. An executive summary of a manuscript explaining these two new fish indicators are included on pages C-31 to C-32 of the agenda packet.

Hagerty clarified that this effort to explore new indicators is a product of a 2013 A-Team recommendation to create indicators that were more comprehensive of ecological health for future status and trends analyses. Marv Hubbell mentioned that the larger goal of focusing more broadly on ecosystem health and resilience is a direct result of the 2015-2025 UMRR Strategic Plan. Hubbell explained that these indicators are meant to directly connect the LTRM base monitoring information to habitat restoration and management.

Tim Yager asked whether fish indicators associated with lentic and lotic habitats would be included, recognizing that many UMRR habitat projects are creating new lentic areas and would inform their success. Giblin explained that the new fish indicators would replace most single species indicators but that future iterations could explore incorporating certain species for that purpose. Sabrina Chandler expressed support for Yager's comment. Chandler moved and Jim Fischer seconded a motion to endorse the new migratory and backwater fish indicators with the understanding that lotic and lentic indicators will be incorporated in the future. The motion was approved by the Committee.

Hubbell recognized that the next UMRS status and trends analysis is scheduled to be developed soon and suggested that the lotic and lentic indicators question be addressed soon. Giblin said he will pose that question to the A-Team at its next meeting.

**Habitat Restoration**

*UMRR Six Year Plan*

Marv Hubbell discussed the Corps' scheduled six-year plan, using the following chart to show the anticipated work flow of various habitat projects:


Hubbell emphasized the importance of maintaining flexibility in making adjustments to the schedule in order to effectively manage risk. In response to a question from Mike Griffin, Hubbell explained that the Corps would follow the guidelines outlined in the 2012 UMRR/NESP Transition Plan should such a transition occur.

*Project Partnership Agreements*

Hubbell reported that the Water Infrastructure Investment for the Nation (WIIN) Act of 2016 (P.L. 114-322) was signed into law by President Barack Obama on December 16, 2016. Section 1161 of the Act caps non-federal sponsors' OMRR&R obligations to 10 years following the Corps' determination that the project's physical features are functioning as intended. This decision process would be integrated into adaptive management evaluations of individual projects.

*District Reports*

St. Paul District

Tom Novak reported that MVP is accelerating construction of Conway Lake with an anticipated close-out this fiscal year. The District's next construction priorities include McGregor Lake followed by Pool 10 Islands and then Peterson Lake. Novak mentioned that the project partnership agreement issues stopped the implementation of North and Sturgeon Lakes. Kevin Stauffer expressed appreciation to Novak for his effort to make that project work via number of avenues. Hubbell credited Novak for the efficient execution of Conway Lake planning so that it could be ready for construction.

St. Louis District

Tim Eagan reported that MVS is finalizing draft plans and specs for Rip Rap Landing. Eagan said Division staff have been extremely helpful in streamlining progress for that project and increasing coordination to move through feasibility planning much faster. MVS will be increasing its focus on restoration opportunities in the open river reach, with a kick-off event and site visit to Oakwood Bottoms this summer. Eagan reported that, while still in design, MVS is developing the O&M manual for

Ted Shanks so that it can be closed out more readily following construction. The District will be employing OMRR&R inspections for all constructed projects within its respective boundaries this summer, capturing any lessons learned regarding how project features are working and how they are being maintained.

Rock Island District

Hubbell announced that MVR is planning ribbon-cutting ceremonies for Lake Odessa Stage I and Rice Lake this spring. The District is also continuing planning work on Beaver Island, Keithsburg, and DeLair habitat projects. Construction of Pool 12 remains on schedule, with a construction contract recently awarded for Stage II that includes an option for advancing Stage III. Hubbell said that District staff are considering ways to complete O&M manuals more readily so that maintenance information is provided as soon as possible following construction. For example, the Corps is considering developing the manuals for each project stage that can handed over to the sponsor independent of progress on subsequent stages.

*Ecosystem Resilience*

Jeff Houser provided a brief overview of the first major stage in the UMRS ecological resilience assessment effort, which is to describe the river ecosystem's fundamental characteristics in a simplified way. A draft manuscript is provided on pages D-1 to D-36 of the agenda packet that details the "agreed upon" system description – the fundamental characteristics of the system. This includes valued uses and ecosystem services, major ecological resources needed to support those uses and services, and major controlling variables that affect those major resources. It characterizes the river ecosystem in three major subcategories: lentic areas, lotic channels, and floodplains. The manuscript reflects both substantial discussion among the interagency partners about how it views the primary components of the river ecosystem as well as a synthesis of significant existing research and analysis.

Houser explained the meanings of general and specified resilience and how that relates to the UMRS ecosystem. The primary principles for enhancing general resilience are maintaining diversity and redundancy, managing connectivity, and managing and accounting for slow variables and feedbacks, such as sedimentation, catchment land use, and climate. Specified resilience evaluates the relationship between the major resources and controlling variables to known and potential thresholds.

Houser said the next steps include 1) developing metrics for assessing the UMRS ecosystem's general resilience and 2) assessing the ecosystem's specified resilience in the context of conceptual models. In FYs 2017 and 2018, Houser anticipates publishing a series of manuscripts that describe the system characteristics, the ecosystem's general resilience using existing data, the ecosystem's specified resilience using a set of selected indicators, and synthesizing management implications.

Houser reported that a joint meeting of the ecosystem resilience and habitat needs assessment teams is being planned for April 2017. [Note: Subsequent to the meeting, partners agreed to hold the joint meeting on May 16-18, 2017 in the Quad Cities.]

*Habitat Needs Assessment II*

Eagan described the planned schedule for developing the HNA II. He reported that the Steering Committee held conference calls on December 5 and 20, 2016 to discuss system-wide data development and the use of a worksheet to obtain input from restoration practitioners regarding habitat objectives. Eagan explained how the HNA will build from the ecological resilience conceptual models and information, using the determined relationships as a basis for making assessments of existing conditions including identifying stressors and desired states. The tri-chairs (Eagan, Sara Schmuecker, and Nate De Jager) are coordinating with the District-based river resource teams.

Eagan anticipates that the HNA II development process will be similar to the 2000 HNA, where subject matter experts and resource managers reviewed the quantitative physical and chemical attributes of the ecosystem and floodplain reach objectives to assess existing conditions. According to Eagan, the resulting questions will be 1) do we want more or less of certain habitats (using the 2010 data layer) and 2) how do these wants mesh with the future projections.

In response to a question from Ken Westlake, Nate De Jager said there has not yet been a decision regarding at what timeframe to base future desired conditions. De Jager observed that a decadal basis associated with the land cover/land use data acquisition may make the most sense. In response to a question from Jim Fischer, De Jager said LTRM has a lot of data for defining chemical parameters, which may include things like overwintering and late summer conditions and low water aquatic areas using land cover data.

Eagan outlined the major milestones of the anticipated HNA II development schedule as follows:

- HNA II steering committee and ecological resilience team discuss the a habitat objectives questionnaire in April 2017
- Presentation of key pool data and methods and discussion of non-key pool data development at the UMRR Coordinating Committee's May 24, 2017 quarterly meeting
- Presentation of system-wide data and discussion of the qualitative assessment at the UMRR Coordinating Committee's August 9, 2017 quarterly meeting
- In-person meeting of the HNA steering committee to initiate the qualitative assessment and needs of the ecosystem
- Development of a system-wide data geo-database, assessment of the UMRS ecosystem habitat needs, and identification of other information needs in November 2017
- Draft HNA II report in February 2018
- Final HNA II report in March 2018

**Other Business**

*Wisconsin DNR Realignment*

Jim Fischer reported that Wisconsin DNR recently underwent a major realignment. The agency's Mississippi River programs and projects are now in a new Office of Great Waters, which also includes Great Lakes efforts. Fischer observed that the more inclusive office should bring wider attention to the Mississippi River within the state.

*Future Meetings*

The upcoming quarterly meetings are as follows:

- **May 2017 — St. Louis**
  - UMRBA quarterly meeting —May 23
  - **UMRR Coordinating Committee quarterly meeting — May 24**
- **August 2017 — Onalaska/UMESC**
  - UMRBA quarterly meeting —August 8
  - **UMRR Coordinating Committee quarterly meeting — August 9**

- **November 2017 — Twin Cities**
  - UMRBA quarterly meeting — November 7
  - **UMRR Coordinating Committee quarterly meeting — November 8**

With no further business, the meeting adjourned at 12:27 p.m.

**UMRR Coordinating Committee Attendance List**
**February 8, 2017**

**UMRR Coordinating Committee Members**

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| Don Balch | U.S. Army Corps of Engineers, MVD |
| Sabrina Chandler | U.S. Fish and Wildlife Service, UMR Refuges |
| Mark Gaikowski | U.S. Geological Survey, UMESC |
| Dan Stephenson | Illinois Department of Natural Resources |
| Randy Shultz | Iowa Department of Natural Resources |
| Kevin Stauffer | Minnesota Department of Natural Resources |
| Matt Vitello | Missouri Department of Conservation |
| Jim Fischer | Wisconsin Department of Natural Resources |
| Ken Westlake | U.S. Environmental Protection Agency, Region 5 |

**Others In Attendance**

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| Thatch Shepard | U.S. Army Corps of Engineers, MVD |
| Gabe Harris | U.S. Army Corps of Engineers, MVD |
| Tom Novak | U.S. Army Corps of Engineers, MVP |
| Shahin Khazrajafari | U.S. Army Corps of Engineers, MVP |
| Andy Barnes | U.S. Army Corps of Engineers, MVR |
| Mark Cornish | U.S. Army Corps of Engineers, MVR |
| Rebecca Costello | U.S. Army Corps of Engineers, MVR |
| Michael Dougherty | 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 |
| Davi Michl | U.S. Army Corps of Engineers, MVR |
| Kara Mitvalsky | U.S. Army Corps of Engineers, MVR |
| Jim Ross | U.S. Army Corps of Engineers, MVR |
| Marshall Plumley | U.S. Army Corps of Engineers, MVR |
| Heather Schroeder | U.S. Army Corps of Engineers, MVR |
| Jackie Veninger | U.S. Army Corps of Engineers, MVR |
| Brian Johnson | U.S. Army Corps of Engineers, MVS |
| Tim Eagan | U.S. Army Corps of Engineers, MVS |
| Monique Savage | U.S. Army Corps of Engineers, MVS |
| Deanne Strausser | U.S. Army Corps of Engineers, MVS |
| Ron Knopik | U.S. Fish and Wildlife Service, UMR Refuges |
| Kraig McPeek | U.S. Fish and Wildlife Service, RIFO |
| Sara Schmuecker | U.S. Fish and Wildlife Service, RIFO |
| Tim Yager | U.S. Fish and Wildlife Service, UMR Refuges |
| Scott Morlock | U.S. Geological Survey, Midwest Region |
| Victoria Christensen | U.S. Geological Survey, Minnesota Water Science Center |
| Jeff Ziegeweid | U.S. Geological Survey, Minnesota Water Science Center |
| Amy Beussink | U.S. Geological Survey, Missouri Water Science Center |
| Jim Stefanor | U.S. Geological Survey, Southwest Region |
| Nate De Jager | U.S. Geological Survey, UMESC [On the phone] |
| Jeff Houser | U.S. Geological Survey, UMESC |
| Jennie Sauer | U.S. Geological Survey, UMESC |
| Yao Yin | U.S. Geological Survey, UMESC |
| Kyle Bales | Iowa Department of Natural Resources |
| Dave Bierman | Iowa Department of Natural Resources |
| Mike Griffin | Iowa Department of Natural Resources |

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|---|---|
| Megan Moore | Minnesota Department of Natural Resources |
| Robert Stout | Missouri Department of Natural Resources |
| Bryan Hopkins | Missouri Department of Natural Resources |
| John Petty | Wisconsin Department of Agriculture, Trade and Consumer Protections |
| Steve Galarneau | Wisconsin Department of Natural Resources |
| Shawn Giblin | Wisconsin Department of Natural Resources [On the phone] |
| Olivia Dorothy | American Rivers |
| Tom Boland | AMEC Foster Wheeler |
| Brad Walker | Missouri Coalition for the Environment |
| Gretchen Benjamin | The Nature Conservancy |
| Kristian Starner | Upper Mississippi, Illinois, and Missouri Rivers Association |
| Dru Buntin | Upper Mississippi River Basin Association |
| Dave Hokanson | Upper Mississippi River Basin Association |
| Kirsten Mickelsen | Upper Mississippi River Basin Association |