

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

**February 24, 2016
Quarterly Meeting**

**InterContinental St. Paul Riverfront
St. Paul, Minnesota**

Don Balch of the U.S. Army Corps of Engineers called the meeting to order at 8:00 a.m. on February 24, 2016. Other UMRR Coordinating Committee representatives present were Tim Yager (USFWS) on behalf of Sabrina Chandler, Jennie Sauer (USGS) on behalf of Mark Gaikowski, Dan Stephenson (IL DNR), Randy Schultz (IA DNR), Kevin Stauffer (MN DNR), Janet Sternburg (MO DoC), Jim Fischer (WI DNR), Ken Westlake (USEPA), and Marty Adkins (NRCS). A complete list of attendees follows these minutes.

Minutes of the November 18, 2015 Meeting

Randy Schultz moved and Janet Sternburg seconded a motion to approve the draft minutes of the November 18, 2015 UMRR Coordinating Committee meeting as written. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2016 Fiscal Report

Marv Hubbell reported that, on December 18, 2015, Congress enacted the FY 2016 Consolidated Appropriations Act, which funds UMRR at \$19.787 million and includes \$20 million for the Corps' environmental restoration and compliance (ERC) programs and projects. Hubbell said the Corps published its FY 2016 work plan on February 9, 2016 that allocates an additional \$1.387 million of the ERC money to UMRR. This brings UMRR's total FY 2016 budget to \$21.174 million.

Hubbell discussed UMRR's FY 2016 internal allocations under the \$21.174 million planning scenario, as follows:

- Regional Administration and Programmatic Efforts — \$891,000
- Regional Science and Monitoring — \$6,567,000
 - Long term resource monitoring — \$4,500,000
 - Regional science in support of restoration — \$963,000
 - Regional science staff support — \$129,000
 - Habitat project evaluations — \$975,000
- Habitat Restoration — \$13,716,000
 - Regional project sequencing — \$250,000
 - MVP — \$3,631,000
 - MVR — \$6,318,000
 - MVS — \$3,515,000

[Note: The District habitat restoration funds are not reflective of the historical split based on river mileage, and instead are reflective of the project priorities as identified in the budget process.]

Hubbell introduced Heather Schroeder who works diligently and quickly to keep track of UMRR spending and update the program's financial spreadsheets, which allows the District to readily respond to Headquarters' questions about rates of execution and additional spending capacity. Hubbell said he is working with Schroeder to revamp the fiscal spreadsheets that are typically included in the UMRR Coordinating Committee's quarterly meeting agenda packets, in order to make them more readable and transparent to all implementing partners and the public.

FY 2017 President's Budget

Hubbell reported that the President's FY 2017 budget request includes \$20 million for UMRR. Hubbell expressed appreciation to District staff for working incredibly hard to successfully compete with other Corps ecosystem restoration projects for limited resources. He also thanked Dru Buntin and Gretchen Benjamin for their efforts in communicating to the Administration about the non-federal support for UMRR.

Buntin explained that the earmarks ban prevents members from increasing the funding levels for individual programs and projects above the President's budget. Congress instead appropriates a large sum of money to its major budget categories. Non-federal sponsors can advocate that Congress appropriate sufficient funding in those categories to adequately fund these categories, such as the Corps' ecosystem restoration programs and projects that would include UMRR. Non-federal sponsors can then communicate to Headquarters, ASA(CW), and OMB staff the importance of allocating some of the additional discretionary funding to particular programs and projects. This budgeting process creates a more circuitous route for non-federal sponsors to advocate for specific funding needs. Buntin acknowledge the successful efforts of Olivia Dorothy in gathering support of the many nonprofit interest groups that support UMRR to create a powerful voice in D.C. this year.

Major Steps Toward Achieving UMRR's Strategic Vision: A Framework for Near Term Activities and Long Range Plans

Hubbell acknowledged that there are several ongoing new initiatives as a result of the 2015-2025 UMRR Strategic Plan. There is a need to provide clarity in their respective contributions to the plan's implementation and how they relate and inform each other. Hubbell outlined a road map for implementing the Strategic Plan that includes the following steps:

- 1) Advance the 2015-2025 UMRR Strategic and Operational Plans' guidance for program implementation regarding the four goals for enhancing restoration and advancing knowledge of the UMRS ecosystem, engaging and collaborating with other key individuals and organizations in-river and in the watershed, and facilitating a strong, unified interagency partnership in implementing the program.
- 2) Define ecological resilience concepts as they apply to the UMRS ecosystem, including developing quantifiable indicators of ecosystem resilience to measure the status and trends of various resilience attributes.
- 3) Renew the UMRR Habitat Needs Assessment (HNA) that incorporates the best available knowledge and ecological resilience concepts.
- 4) Identify a suite of new habitat projects that improve the UMRS ecosystem's health and resilience, using the Project Planning and Sequencing Framework and reflecting insights gained from the renewed HNA.
- 5) Formulate and construct the identified suite of habitat projects, using ecological resilience and health principles.

- 6) Evaluate and learn from constructed habitat projects in an effort to inform future restoration and management of the UMRS ecosystem.
- 7) Evaluate UMRR's progress in advancing the 2015-2025 UMRR Strategic Plan and continue to learn and improve as a program and in implementing restoration and science techniques.

Jim Fischer asked how the ecological resilience and the HNA efforts will inform the selection of the next generation of projects. Hubbell explained that the two efforts should allow for considering habitat projects within a broader framework of ecological needs such as at the pool and geomorphic and floodplain reach scales. The selection process will certainly still rely on the input of restoration practitioners. Resilience concepts will examine multiple scales and provide direction on the different needs and actions for making various factors more or less resilient. We learned that the 2000 HNA was valuable in collectively identifying habitat needs that resulted in effective projects. The 2000 HNA also identified several information needs that have since been acquired. Partners have requested that a new HNA is developed in preparation for selecting the next generation of habitat projects, in order to intentionally develop management and project objectives that are based on habitat needs at various spatial scales. Jeff Houser added that there is overlap in terms of people serving on both the ecological resilience and HNA *ad hoc* teams so there will be some inherent connections and integration. The idea behind UMRR exploring resilience concepts is to get a better handle on the fundamental drivers affecting the things that are valued (e.g., habitat) and understanding how management actions can augment or alter those drivers to improve and sustain the valued things.

Fischer and Marty Adkins suggested developing a one- or two-page summary that outlines how these efforts will be integrated and used to inform the identification and selection of the next generation of habitat projects. This is also help to communicate the intentions of these efforts within partners' respective agency leadership and other staff.

Hubbell said this road map has received positive feedback from OMB and Corps leadership, noting that these efforts help to show UMRR's relevance and need well into the future. Mike Griffin expressed concern that the conceptual models will not consider multiple factors in selecting placement of habitat projects and strongly urged that any models developed are only used as a tool in decision making and not as the ultimate controlling factor. Often times, there are value decisions that models cannot determine, such as deciding whether UMRR should work to save the best habitat or rehabilitate the worst. Hubbell concurred, and stressed that the ultimate identification and sequencing of projects will rely on the experience and expertise of restoration practitioners. The human factor is essential to interpreting model outputs and understanding what is being presented. Houser said the questions about protecting the best or rehabilitating the worst are subjective, and that data can help restoration practitioners lessen the subjectivity.

Kraig McPeek acknowledged that there will be a challenge in simplifying and presenting how these concepts shape the what, why, and how of UMRR's habitat projects and overall implementation to the general public. McPeek suggested developing simplified messages for engaging with the public and communicated to agency leadership about this process and any outcomes.

Fischer recalled that, at the November 18, 2015 UMRR quarterly meeting, MVD District commander Craig Baumgartner suggested evaluating a no-action alternative. In response a question from Fischer, Hubbell said that a no-action alternative is being considered and will be examined.

Regarding Fischer and Adkins earlier suggestion, Eagan said he will work with the HNA and ecosystem resilience leads to develop a one-or two-page summary of how the efforts are integrated and will inform the next generation of UMRR habitat projects. Eagan noted that there is a lot of interconnectedness among the discrete products. Janet Sternburg suggested adding the roles and membership of any workgroups and subgroups to help with internal agency discussions. In addition, it should outline a communications scheme to facilitate integration among the various ongoing efforts and avoid working

in silos. Houser added that the communications scheme should also consider how the river teams will be involved. Adkins and Sternburg suggested considering how the efforts will connect with local stakeholders and watershed programs and projects.

Kirsten Mickelsen suggested considering how nonprofit organizations are involved given that they can now serve as cost-share sponsors of habitat projects. Hubbell emphasized Mickelsen's suggestion, noting that strong nonprofit and public support is essential to UMRR's ultimate success and existence. Jennie Sauer suggested developing a simple web page for the two teams to access documents and other information and to communicate planned next steps.

Draft FY 2015-2025 UMRR Strategic Operational Plan

Hubbell recalled that the UMRR Coordinating Committee endorsed the 2015-2025 UMRR Strategic Plan at its November 19, 2014 quarterly meeting, and at the same time, called for an operational plan to identify the implementation actions necessary to best achieve the Strategic Plan's goals and objectives. An *ad hoc* team developed the draft 2015-2025 Strategic Operational Plan, as included on pages B-7 to B-33 of the agenda packet, and is recommending it for the UMRR Coordinating Committees consideration of endorsement.

According to Hubbell, major outcomes of the operational plan include the development of a communications plan and a revised HNA; increased transparency among implementing agencies and to the Administration, Congress, and public; and greater utilization of the UMRR Coordinating Committee for facilitating interagency endeavors and communication. Recommendations specific to habitat projects include:

- Enhanced communication and coordination with the river teams
- Facilitate more detailed discussions of habitat projects at UMRR Coordinating Committee quarterly meetings
- Provide web-based access to UMRR Coordinating Committee quarterly meetings to allow more people to participate
- Make greater use and accessibility to the UMRR program database
- Utilize the HNA II Committee to address issues
- Hold biennial restoration/science meetings
- Refine communications tools including fact sheets
- Reach a common understanding of how adaptive management concepts are applied to UMRR's habitat projects

In response to a request from Don Balch, Jim Fischer moved and Randy Schultz seconded a motion to approve the draft 2015-2025 UMRR Strategic Operational Plan, dated January 29, 2016. The motion carried unanimously.

Hubbell expressed appreciation to the individuals who contributed time and resources in participating in the 2015-2025 UMRR strategic and operational planning efforts.

2016 UMRR Report to Congress

Hubbell said a second draft of the 2016 UMRR Report to Congress (RTC) is scheduled for distribution in early to mid-March. Hubbell said he will request MVD's and Headquarters' input on the draft report, focusing the request most specifically on the draft conclusions and policy recommendations to Congress. He said this report will be an important document to demonstrate UMRR's successes and future relevance.

UMRR Branding Design Concepts

Marv Hubbell explained that the 2015-2025 UMRR Strategic Plan elevates the need and value of external engagement and outreach to the same degree as restoration, science, and partnership communication and coordination. Goal 3 includes coordinating with relevant programs and projects, communicating about UMRR's justification and the river's ecological importance to the public and decision makers, and sharing information nationally and internationally. UMRR involves a tremendous amount of information and numerous venues for reaching target audiences, including collaborative meetings, public open houses, and non-federal partners discussions with Congress. Today's discussion regarding branding with a logo and tagline are exciting for the program as they will serve as an interface with the public and other external organizations and individuals.

Kevin Bluhm provided an overview of the draft logo designs and taglines and the process of, and feedback received through, partnership consultation since the November 18, 2015 UMRR Coordinating Committee meeting. Partnership consultation included interviews with 24 individuals of UMRR partner federal and state agencies and nonprofits, and web-based conference calls on January 25, 2016 and February 8, 2016. Bluhm also provided this information in a hard copy packet to meeting participants, and was emailed to the UMRR distribution list on February 16, 2016. Bluhm offered the following logo designs and taglines for the UMRR Coordinating Committee's consideration:

Logo options:

Option A: Infinity logo



Option B: Landscape logo



Option C: Water logo



Tagline options:

- 1) 30 years of Partnering, Restoring, Innovating
- 2) Partnering · Restoring · Innovating
- 3) Reviving Our River
- 4) New Thinking for a Natural Treasure
- 5) [No Tagline]

Bluhm provided a few examples of communications tools using each logo to illustrate its portrayal, including in various sizes. Bluhm said that, in a poll of February 23, 2016 UMRBA meeting participants, the landscape logo had 47 percent of the votes, the infinite logo had 36 percent, and the water logo had 17 percent. According to Bluhm, UMRR could greatly benefit from a concerted, strategic external communications effort that would reach various audiences and tell the story of the program's successes and relevance to the nation, particularly to people outside of the UMRS region.

Colin Wellenkamp requested more frequent communications of key messages about UMRR's accomplishments and planned near-term implementation in order for MRCTI and other groups to elevate the program on the national stage.

In response to a question from Olivia Dorothy, Kevin Bluhm said the landscape logo had enough tone differences to have the best appearance in black and white print. Bluhm said the infinity logo is more difficult to see in black and white print. Ken Westlake suggested adding more features to help distinguish the raptor, such as feathers. Bluhm noted that smaller details may get lost in smaller sizes.

Marty Adkins expressed preference for the infinity and landscape logos. Doug Blodgett noted that the infinite logo fits well with the ongoing ecosystem resilience effort. Bluhm said UMRR's website and other communications pieces can explain how the program interprets the logo and the inclusion of certain aspects. Kim Schneider observed that the infinity logo represents the program's history, integrating the past, present, and future. Jim Fischer said the infinity logo is a current fad in the teenage culture and wondered whether it would be too trendy. Brian Johnson suggested modifying the line in the infinite logo to have a few separated lines. Westlake mentioned that the water logo does not include provide a complete message about the scope of restoration, particularly because biota is missing. Olivia said the bird and fish in the landscape logo do not look like UMRS species. She also observed that the water logo would not be easily understood or recognized on its own.

Kevin Stauffer acknowledged that the general public will likely not be as concerned about the particular features on the bird or fish. Randy Shultz expressed preference for the landscape logo, recognizing that it may be more meaningful and relatable to the general public. Schneider offered that the landscape logo has forward movement in the abstract. Janet Sternburg expressed preference for the font used in the landscape logo, and said she is not particularly fond of the infinite logo. Kirsten Mickelsen said she likes the landscape logo as it has depth and is dynamic, and links in recreationists and other various river users. Mike Griffin recognized to keep it simple and bold. Griffin said he prefers the infinite logo and that the landscape logo may inadvertently suggest that UMRR works in the uplands.

Kara Mitvalsky said she employed a small poll among engineers who associated the infinite logo with a tattoo. Mitvalsky cautioned against thinking too much about the appearance of the fish and bird, noting that the features likely will not be as important beyond today's meeting participants.

Kraig McPeck suggested portraying the fish as a catfish from the top-down. McPeck suggested considering future audiences and trends that will resonate with them, such as the infinity logo. Schneider said it is a balance between iconic species and a general river feel. The graphics designer attempted to model a sturgeon but with less detail. Nicole Manasco observed that yellow is more attractive than other colors making the landscape logo stand out in comparison to the infinite and water logos. Karla Sparks recognized that the landscape logo is very similar to the National Mississippi River Museum and Aquarium's logo. Jeff Houser recognized that initial reactions are likely the most valuable indicators. Doug Blodgett said the infinite logo indicates the perpetual need for UMRR on the UMRS and relevance of the program to everyone.

Tom Boland said he prefers the landscape logo because it is simple yet bold and generically descriptive. Ann Guissinger recalled that Corps' initial guidance was to target an outreach campaign to the general public as the primary audience. The thought was to illustrate the natural beauty and wilderness associated with the UMRS. Dorothy explained that UMRR works on an iconic river that is home to many iconic species. For that reason, she prefers that the species' features are reflected in the logo.

Bluhm discussed the challenges in refining and selecting a tag line. The branding development team tested words like "mighty" to reflect the culture and history of the UMRR with Mark Twain's words, or innovative to showcase the program's cutting edge restoration and science. The team also cited taglines used in other large ecosystem restoration programs. So far, feedback received tells us that words like

reviving and rewilding are too radical and would require a lot of education about their meaning for UMRR. The proposed taglines provide an array of options – new age, new thinking, or a three-word phrase.

Schultz said he prefers option 2, and cautioned against highlighting “30 years” in the logo. Bluhm explained that the “30-year” tagline option would only be used in the Anniversary year. It could be used as a hook in news stories to capture attention and create pieces around UMRR’s history and maturity. Don Balch recognized that restoration is already captured in the logo options and so he suggested using a tagline with broader key messages, rather than being redundant. Bluhm noted that option two could be effectively integrated with one of the logos to provide those broader encompassing messages. Manasco and Westlake suggested adding resilience or sustaining in the tagline paired with the infinite logo. Janet Sternburg acknowledged that the general public may not be familiar with terms like ecological resilience or restoration, and instead suggested “habitat for generations” or “resilience: habitat for generations.” Dorothy expressed support for the word “innovative” given that adaptive management and learning are priorities for the program. Schneider mentioned that innovation is also captured in the tagline option four, “new thinking for a natural treasure.”

Doug Blodgett suggested broadening the tagline to reflect the diverse array of program partners, such as “for everyone, forever.” Angie Freyermuth expressed preference for tagline option two as the three words (partnering, restoring, innovating) align with the 2015-2025 UMRR Strategic Plan.

Bluhm said next steps to consider for UMRR include the consistent use of branding tools in documents and outreach communications tools, a social media campaign, media relations outreach and hosting, development of a photo and video library, website and education materials, and dedicated communications staff. Dru Buntin emphasized the need for a dedicated effort and lead staff person to successfully implement an outreach campaign. Mickelsen asked about the potential role(s) for the 2015-2025 Strategic Plan’s proposed communications team. Bluhm said the Corps and UMRR Coordinating Committee will need to consider a dedicated funding stream to support a communications and outreach staff person. Hubbell said this and other recommendations for the program’s future communications and outreach strategies will be presented at the May 25, 2016 UMRR quarterly meeting, with a formal recommendation report included in the agenda packet. The Corps is still planning to establish a multi-partner communications team to consider messaging and outreach strategies.

In response to a question from Schultz, Bluhm said the Everglades has a dedicated communications staff person and has allocated \$5 million in the first year and then \$3 million each year after. The Everglades has many communications challenges, including serving bilingual communities. Mitvalsky recognized the relative ease and low-cost of social media as a communications outlet, where many partners can contribute.

UMRR Database

Michael Dougherty reported that District staff are currently in the process of recalibrating the project boundaries of all UMRR’s completed habitat projects based on maps and other information. This effort is meant to 1) ensure acreages reported in the 2016 UMRR Report to Congress are accurate, 2) use a consistent mapping definition for all UMRR habitat projects, 3) align with the highest resolution geospatial data, and 4) correct minor mapping inconsistencies between UMRS Districts and early and current habitat projects. Dougherty explained that the process for delineating boundaries and mapping capabilities have evolved substantially over the years, creating some discrepancies and minor inaccuracies in project boundary delineations. Staff are using the projects’ feasibility study area to determine the acres benefited, and have developed a white paper to outline the process for future use. This is the Corps’ standardized approach to delineating boundaries for all of its projects nationally.

Dougherty explained that each UMRS District completed an internal review of its respective projects and will soon distribute the proposed updated boundaries to project sponsors for review. He said the Corps evaluated project boundaries based on a suite of references, including goals, objectives, maps, and diagrams in feasibility reports, as-built drawings, O&M manuals, current and historic aerial photos, real estate boundaries, and LiDAR-derived terrain surfaces. The white paper provides “best management practices” or a guide for project boundary delineation process. Dougherty illustrated how realignment of Bertom McCartney Lakes project boundary using more sophisticated mapping software and to reflect the study area detailed in its feasibility report. Dougherty pointed out that the project delineation is now based on the studied area in the feasibility report, not the area benefitted or constructed. He acknowledged that more information about biological responses is needed in order to define benefitted areas.

Dougherty said the next step is to seek project sponsor input on the updated project delineations and asked if one week would be sufficient review time. Tim Yager said more review time would be needed. USFWS would like to compare the new delineations with its GIS data. Hubbell noted that the white paper will be foundational to helping sponsors review the updates and said it will be included in the Corps’ transmittal seeking input on the specific project boundaries. Dougherty said he will send USFWS and the states’ UMRR Coordinating Committee members the project boundary delineation white paper and the updated project boundaries with a request for their review.

In response to a question from Dru Buntin, Hubbell confirmed that UMRR’s total acres restored will remain above 100,000 and thus will not be problematic for previous acreage reporting. In response to Kara Mitvalsky about delineating pool-scale projects, Dougherty said the boundaries will include the areas under direct analysis. For example, the delineations for Pool 11 Islands would include the analyzed areas around Mud and Sunfish Lakes. He emphasized that there may be certain anomalies that the Districts will need to make judgment decisions. In response to a question from Kirsten Mickelsen, Dougherty explained that all the Corps’ ecosystem restoration programs and projects report acres restored based on feasibility areas. Hubbell said this standard approach will ensure consistency in reporting project acres throughout planning, design, and construction in subsequent budget documents. Brian Johnson said UMRR reported 8,300 acres restored in FY 2015, when the total Corps’ ecosystem restoration acres was 10,000.

UMRR’s 30th Year of Success Event

Hubbell said District staff have begun initial planning discussions for the UMRR’s 30th year of success event. It will likely be held in August 2016 in La Crosse in conjunction with the Mississippi River Commission’s low water inspection trip and the UMRR’s quarterly meeting. Hubbell explained his preference to focus the event on UMRR’s inception as a means for compromise and facilitate a multi-purpose management approach on the river, and a comparison of what exists today to what existed before the program was authorized and what we have learned about the UMRS ecosystem as a result of the program.

In response to a request from Hubbell, Jennie Sauer and Jeff Houser (USGS), Tim Yager (USFWS), Jim Fischer (WI DNR), Gretchen Benjamin (TNC), and Kirsten Mickelsen and Dru Buntin (UMRBA) volunteered to serve on a planning committee for the UMRR’s 30th year of success. Any other individuals interested in volunteering are asked to contact Marv Hubbell. The planning committee will provide a proposed plan at the UMRR Coordinating Committee’s May 25, 2016 meeting.

Long Term Resource Monitoring and Science

FY 2016 2nd Quarter Highlights

Jeff Houser reported that accomplishments of the first quarter of FY 2016 include:

- Publication of the fish habitat suitability models on the internet at http://www.umesc.usgs.gov/data_library/fisheries/habitat_models.html.
- Completion of the spatial query tool, which includes long term resource monitoring, land cover, and bathymetric data. It is available at http://www.umesc.usgs.gov/ltrmp/spatial_data_query_tool.html.
- Publication of 1) a technical report, Accuracy assessment/validation methodology and results of 2010–11 land-cover/land-use data for Pools 13, 26, La Grange, and Open River South, Upper Mississippi River System; and 2) a General Classification Handbook for Floodplain Vegetation in Large River Systems.

Houser explained that, which anticipated implications for name changes were very minor, there has actually been a substantial amount of work to update files on the USGS's UMRR website. Since the changes in naming convention from EMP to UMRR and LTRMP to LTRM, USGS has completed substantial work in changing naming instances on its UMRR LTRM website. When the name changes occurred in November 2015, there were 14,917 instances of long term resource monitoring and 69,467 instances of LTRMP in 13,340 web files. As of February 1, 2016, there were 7,986 instances of long term resource monitoring and 52,827 instances of LTRMP in 12,174 web files.

2016 Science Coordination Meeting

Houser reported that the February 16-18, 2016 UMRR Long Term Resource Monitoring Science Meeting was attended by 50 interagency program partners. The meeting included a series of presentations and discussions about where we've been – research completed and ongoing work, where we are – updates on current research frameworks, and where we are going – ideas for new frameworks and future work. In addition, the meeting included discussions on assessing the UMRS's resilience and the HNA II. Kirsten Mickelsen said the meeting was very productive and informative, and expressed appreciation to Houser and Jennie Sauer for their efforts in making the meeting successful. Hubbell agreed, and said he was impressed by the sense of integration among the scientists and restoration practitioners. Ken Barr also offered thanks to Houser and Sauer.

Developing Ecological Resilience Conceptual Models

Houser provided an overview of UMRR's effort to define and apply the concepts of ecological resilience to the UMRS. A workgroup convened a January 5-7, 2016 workshop to discuss the theoretical definitions of resilience and begin to brainstorm how conceptual models might be used to understand resilience at different spatial scales, at different locations, and in terms of different ecosystem processes. The meeting was facilitated by two experts in the field of ecological resilience, Lance Gunderson and Allyson Quinlan. Based the meeting's discussions, a suite of draft conceptual models is being developed with input from many various program partners. Houser said he is scheduled to present at the March 15-17, 2016 Upper Mississippi River Conservation Committee (UMRCC) meeting about the ecological resilience concepts and the framework and possible applications for conceptual models of resilience for the Upper Mississippi River ecosystem. The intention is to seek feedback and initial reactions from the restoration practitioners, particularly about the ability to relate the conceptual models to restoration and management. Houser said he will provide more refined, draft conceptual models of UMRS ecological resilience at the May 25, 2016 UMRR Coordinating Committee quarterly meeting.

USACE Science Update

Karen Hagerty said total available for science in FY 2016 is \$5.463 million, including \$312,774 in FY 2014 and FY 2015 carry-over mostly due to unfilled vacancies. Hagerty said that \$5.463 million is allocated in the FY 2016 SOWs, with \$4.5 million for long term resource monitoring and 963,000 for analysis under base funding. With \$180,745 remaining, the UMRR LTRMP management team agreed to allocate \$28,386 to continued telemetry work to support the Pool 12 Overwintering habitat project's adaptive management analysis and \$52,000 for Corps staff participation in the ecological resilience effort. That left \$100,359 in available money for science analyses in support of restoration. The UMRR LTRMP management team includes Hubbell, Hagerty, Mark Gaikowski, Houser, and Jennie Sauer. Since the November 18, 2015 UMRR Coordinating Committee meeting, Hagerty and the UMRR LTRMP management team discussed the merits of employing a request for proposals but thought that the amount of funding available was too little to warrant the efforts. Instead, the team agreed to allocate the funds to 1) ongoing, partner-endorsed efforts (namely the \$55,980 to spatial patterns of mussels and \$7,775 to fish trajectory analysis) and 2) \$33,130 for a proposal from Wisconsin DNR to evaluate biological shifts due to invasion by curly-leaf pondweed.

Hagerty acknowledged that the team's approach deviated from the established process for expending salary savings and partnership coordination on allocating science funding. She said Houser consulted with each of the field stations in advance of today's meeting. Houser also worked with the Illinois Havana field station to improve an FY 2015-submitted proposal, but that proposal still has some unresolved issues. Hagerty noted that Deanne Drake presented on Wisconsin's curly-leaf pondweed proposals at the February 16-18, 2016 UMRR Science Meeting. Hagerty apologized that the established coordination policy was not followed this year. She asked for the Committee's endorsement in moving forward with the funding allocations.

While acknowledging that this is a small amount of funding, Janet Sternburg expressed concern of setting precedent of allocating science funding without partner consideration and opportunity for all field stations to compete for funding. Kevin Stauffer echoed Sternburg's comments and requested email correspondence early-on when situations like these arise. Houser and Hagerty explained that the amount of salary savings from Wisconsin DNR was significant and an anomaly. There is a process for addressing salary savings, but this became a grey area when the amount of savings was realized. Tim Yager asked if there is time to the Committee to do a quick review of proposals. Sauer confirmed that Houser did connect with each of the field stations to seek other options for utilizing the available money. Jim Fischer said he will abstain from the voting since the Wisconsin field station would be receiving the funding in question.

Houser said it will be a priority this year for him to develop a smoother contingency planning process. Sternburg commented that these types of complications are not new, and noted that the process for allocating science funding changes every few years. Marty Adkins suggested developing requests for proposals as a way to be prepared to execute funding quickly and based on program priorities.

Scott Gritters said the A-Team has reviewed the mussels and fish trajectory analyses, but not the curly-leaf pondweed research. In response to a question from Gritters, Hagerty confirmed that no other proposals were put forward. Houser reiterated that the curly-leaf pondweed proposal was discussed at the February 2016 UMRR Science Meeting. In response to a question from Sternburg, Hagerty said all equipment needs have been funded. Tim Yager expressed support for this research for informing management.

Hubbell proposed that the Committee consider endorsing the allocation of the mussels and fish trajectory work, and that the Corps follow-up in an email explaining the curly-leaf pondweed proposal to give Committee members more time to consider the request and consult within their agencies and respective field stations. Hubbell expressed desire to get contracts let for the first two science efforts.

Stauffer moved and Sternburg seconded a motion to endorse the allocation of \$55,980 to spatial patterns of mussels and \$7,775 to fish trajectory analysis as these are continuing research efforts, and to consult with their respective agency staff and provide Karen Hagerty, with a vote of yay or nay in an email within a week of whether to fund the curly-leaf pondweed proposal. [Note: Subsequent to the meeting, the Committee endorsed the recommendation to fund the curly-leaf pondweed proposal in FY 16.]

A-Team Report

Shawn Giblin reported that A-Team met via web-based conference call on January 28, 2016. The call focused on the ongoing efforts that integrate science and restoration, including discussion on ecological resilience, HNA II, and fish indicators. The next A-Team meeting is scheduled for April 27, in conjunction with the Mississippi River Research Consortium in La Crosse. Giblin said the A-Team will continue to include presentation and discussions related to restoration and how science informs restoration. For example, hydraulic connectivity is a potential future agenda item.

Giblin also mentioned the challenges to UMRR's habitat project cost share sponsors associated with railroad trespass issues. In some areas, it is illegal to cross tracks and that is preventing public access to habitat restoration sites that have become important recreational areas.

Science Highlight: Management-Relevant Fish Habitat Models for the UMRS

Brian Ickes presented on new and improved fish habitat suitability models that incorporate UMRR's long term resource monitoring data and use a statistical approach to predict the sample-site probability of occurrence of 28 UMRS fish species. Ickes acknowledged the interagency partnership effort involved. Ickes explained that UMRR's habitat projects require a pre-project assessment of predicted benefits for a range of scenarios that are typically derived from models. These models must be certified by the Corps in order to be used in such planning. The UMRR's Aquatic Habitat Appraisal Guide (Guide) is a frequently-used regional community model that estimates species-specific response curves to predict habitat-related benefits from proposed management actions. However, a 2011 Corps scientific review of the Guide concluded that it was outdated, included too many uncertainties, and lacked necessary field validation, and recommended 1) incorporating long term resource monitoring data to improve the response curves and 2) conducting post-project biological evaluations to assess the accuracy of the predictions.

In response, UMRR undertook an effort to address these criticisms and apply long term resource monitoring data to quantify the relation of species distribution to environmental variables. The ultimate objective was to create a statistical modeling approach to predicting the sample-site scale probability of occurrence of 28 UMRS fish species. Ickes compared the differences between the old (AHAG 1.0) and new Guides (AHAG 2.0). Whereas the AHAG 1.0 was based on professional judgment that required users to input value changes and weight importance in a spreadsheet, AHAG 2.0 is based on the best large river fisheries data in the world, is predictive, and directly links the species response (i.e., occurrence) to the environmental variables that actually determine site occupancy. AHAG 2.0 is spatially-explicit, can be used regionally beyond the long term resource monitoring study reaches, and is reproducible. Validation test can be performed and AHAG 2.0 offers a much cleaner, easier interface. It also applies to more species than were available in AHAG 1.0.

Ickes discussed the methodology used for long term resource fish monitoring and how that data is populated and analyzed to predict occurrences as a function of 17 different environmental variables. Model outputs include both predicted equations and maps of probable occurrence. Ickes said 33 regional models passed the goodness of fit test and nine species yielded good regional fits for both lotic and generalist regions. Good fits for lentic species were only achieved in the upper reaches of the UMRS. Ickes illustrated the information provided by the mapping outputs through two examples of rock bass and bluegill probable occurrence in Pool 8.

Ickes explained that the model offers an objective approach to habitat project planning. The maps can be used to evaluate habitat suitability, assess pool and study reach scale species-specific habitat suitability, and identify species upon which suitability assessments should be based. The maps can also provide information on the influence of environmental variables on species occurrence in particular sites and how habitat restoration can meet quantitative goals for improving site occurrence by adjusting the environmental variables.

Ickes said the full manuscript about the development and use of AHAG 2.0 is available at <http://pubs.usgs.gov/mis/ltrmp2014-t002/pdf/ltrmp2014-t002.pdf>, and maps and raster data is available at http://www.umesc.usgs.gov/data_library/fisheries/habitat_odels.html.

Bob Clevenstine asked how the AHAG 2.0 may support the Habitat Needs Assessment (HNA) II effort. Ickes explained that the first HNA was based on professional judgment. The AHAG 2.0 models provide a less subjective approach to modeling habitat and associated probability of occurrence. Ickes said the equations relating environmental factors and specific species occurrence can be used to make conclusions about habitat needs and restoration opportunities. Kraig McPeck recognized the brilliance of UMRR's founding partners in creating the long term resource monitoring sampling methods and scheme and building the database that now allows for making scientific conclusions that are so important to fish and wildlife habitat restoration and management that would not otherwise be possible.

UMRR Branding Design Concepts (Continued)

A poll was taken where each meeting participant was asked to place dots on their preferred tagline and logo as presented on large poster displays. By a very large margin, tagline option 2 was selected – leading, innovating, partnering. Participants used a green and yellow dot, where the green dot represented the first choice and the yellow dot the second choice. The landscape logo won by total votes, receiving 38 while the infinite logo received 37. However, the infinite logo had more first-choice dots of 23 versus 17 for the landscape logo.

After removing the water logo, participants discussed preferences between the two and which would resonate more with the public and eventually sided with the landscape logo. Marty Adkins moved and Janet Sternburg seconded a motion to select the landscape logo, with some minor adjustments to the bird and fish. In response to a request from Don Balch, Randy Schultz moved and Jim Fischer seconded a motion to select tagline option two – leading, innovating, partnering.

Bluhm said that the contractor will submit a high resolution logo image once the graphics modifications are finalized that can be used in small and large visuals. Kara Mitvalsky requested guidelines for using the logo in standard program documents.

Habitat Restoration

Thank You to Gary Meden

Marv Hubbell expressed a sincere thank you to Gary Meden for his incredible, steady leadership not only to the UMRR but also to Upper Mississippi River management more broadly for the Rock Island District. Meden is retiring on February 29, 2016, and his leadership and guidance will surely be missed. Dennis Hamilton will be MVR's new Deputy for Programs and Project Management.

Keithsburg Division

Karla Sparks (USACE) and Cathy Henry (USFWS) presented on the Keithsburg Division habitat project, which is located in Pool 18 and within the Port Louisa National Wildlife Refuge. Sparks introduced the project and said the 1,400-acre habitat project is currently under feasibility.

Henry provided a brief historical overview of the site's management. 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, T&E 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, Henry said participants gathered 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. Henry 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.

Henry 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. She 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.

Sparks provided the planned schedule for project development over the next six months and year. In the next six months, this includes a workshop to discuss project features, perform preliminary quantities for levee upgrades and geotechnical borings, address real estate requirements, and employ various modeling and sampling needs. Over the next year, team will hold a public meeting, complete a biological assessment and floodplain analysis, develop the draft feasibility report, and complete environmental assessment coordination. Sparks anticipates that design work will be completed in late spring 2017 and a construction award will occur in FY 2018 or FY 2019.

In response to a question from Marty Adkins, Sparks explained that the planning team considered opening the leveed area to the river like Horseshoe Ben, but ultimately decided against it because of potential negative implications to the high quality fisheries habitat. The desire is to keep invasive species such as Asian carp out of the project area. Henry added that preservation of aquatic vegetation in the area is also important. Darron Niles noted that there are concerns of button bush invasion. Sparks and Henry mentioned that there are NRCS easements surrounding the project site and that USFWS is hopeful that more lands will be enrolled in conservation programs the future.

District Reports

Rock Island District

Hubbell reported that MVR is replacing Boston Bay with Turkey River Bottoms in the planning queue and is considering constructing DeLair habitat project before Boston Bay as well based on USFWS's

preference. MVR's design work is focusing on Huron Island Stage II and Pool 12 Overwintering Stage III. The District is fully funding construction of Huron Island Stages I and II and Pool 12 Overwintering Stage III in FY 16. Rice Lake habitat project sustained some damages to the electrical box in the water control structure pumps as a result of two historic floods this year on the Illinois River. The Corps anticipates repairing the damages soon. Sparks noted that construction of Rice Lake was scheduled for last year, but the major flooding prevented any work from occurring. She also reported that the Corps is currently reshaping Pool 12 Sunfish Lake to rectify a potential problem from underestimating the amount of material required at the top of the berm to create the proper slope.

St. Paul District

Hubbell said MVP is doing about \$1 million to \$2 million additional dredging work in North and Sturgeon Lakes. Tim Yager said a dedication ceremony for Capoli Slough is scheduled for May 13 in Ferryville, Wisconsin.

St. Louis District

Brian Markert reported that MVS's current planning priorities are Rip Rap Landing, Piasa and Eagles Nest Islands, and Harlow and Open River Islands. The District is working on performance evaluation reports for Calhoun Point, Dresser Island, and Clarksville Refuge. MVS continues design work on Clarence Cannon and Ted Shanks and construction on Ted Shanks, Pools 25 and 26 Islands, and Batchtown. It is anticipated that Batchtown will be closed out in FY 16.

Lean Six Sigma

Hubbell anticipates that, at the May 25, 2016 UMRR Coordinating Committee quarterly meeting, District staff will present on the four stages of habitat project development that the Committee agreed to evaluate using Lean Six Sigma techniques for potential process improvements, as well as a proposed process for undertaking the evaluation. The four stages include initial feasibility planning, evaluation of the existing ecological condition, plan formulation, and draft environmental assessment report. As requested by the Committee, the Corps will develop fact sheets that explain these stages in greater detail including partners' roles.

Habitat Needs Assessment II

Tim Eagan reported that, since the November 18, 2015 UMRR Coordinating Committee meeting, he and the tri-team chairs have been working together to develop a project management plan (PMP) for the HNA II effort. The tri-team chairs include Eagan, Sara Schmuecker, and Nate De Jager. The planned scope, interagency coordination teams, and timeline of the HNA II development are included in the agenda packet. Eagan clarified that this effort is not intended to identify or select the next generation of habitat, but rather create an information source for that effort. In response to a request from the UMRR Coordinating Committee, Eagan said he will send the Committee an email outlining the scope and purpose of an HNA technical team with a request for members to name an individual from their respective agency to serve on the team.

Sternburg mentioned that travel costs will likely be challenging for state agencies. She said travel reimbursement from the Corps or holding other UMRR meetings in conjunction is helpful. Jim Fischer reiterated the need for a brief summary that outlines how the ecological resilience and HNA II efforts will be integrated and used to inform the identification and selection of the next generation of habitat projects.

USFWS Natural Resources Inventory

Schmuecker presented on the USFWS's newly updated Natural Resource Inventory (NRI). The inventory is used for land-use planning; impact assessment; environmental permit review; natural area selection, design, and stewardship; and resource management. Schmuecker provided an overview of resources inventoried and data layers available. She explained that the interface is very user friendly and accessible, and makes substantial improvements from the previous 1984 version. She illustrated the many customized maps and visualizations that the NRI offers, with point descriptions of the geographic area. Instructions for using the NRI are available on page D-4 of the agenda packet. Schmuecker said questions and input can be directed to her.

McPeck applauded Schmuecker on her efforts to revamp the NRI to a sophisticated, user-friendly interface that has many important applications to river management, including planning, permitting, and spill response.

Habitat Project Workshop

Kara Mitvalsky announced that the Corps and USFWS are teaming up to co-chair an HREP workshop in late August or September 2016. These workshops used to be held biennially. The last one was held in 2006. The workshops provide an opportunity for sharing lessons learned and discussing issues associated with project development. Mitvalsky said more information will be provided at the May 25, 2016 UMRR Coordinating Committee meeting.

Other Business

Future Meetings

The upcoming quarterly meetings are as follows:

- **May 2016 — St. Louis**
 - UMRBA quarterly meeting — May 24
 - **UMRR Coordinating Committee quarterly meeting — May 25**
- **August 2016 — La Crosse**
 - UMRBA quarterly meeting — August 9
 - **UMRR Coordinating Committee quarterly meeting — August 10**
- **November 2016 — Twin Cities**
 - UMRBA quarterly meeting — November 15
 - **UMRR Coordinating Committee quarterly meeting — November 16**

With no further business, the meeting adjourned at 2:55 p.m.

**UMRR Coordinating Committee Attendance List
February 24, 2016**

UMRR Coordinating Committee Members

Don Balch	U.S. Army Corps of Engineers, MVD
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges [On behalf of Sabrina Chandler]
Jennie Sauer	U.S. Geological Survey, UMESC [On behalf of Mark Gaikowski]
Dan Stephenson	Illinois Department of Natural Resources
Randy Shultz	Iowa Department of Natural Resources
Kevin Stauffer	Minnesota Department of Natural Resources
Janet Sternburg	Missouri Department of Conservation
Jim Fischer	Wisconsin Department of Natural Resources
Marty Adkins	Natural Resources Conservation Service
Ken Westlake	U.S. Environmental Protection Agency, Region 5

Others In Attendance

Thatch Shepard	U.S. Army Corps of Engineers, MVD
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Kevin Bluhm	U.S. Army Corps of Engineers, MVP
Ken Barr	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
Angie Freyermuth	U.S. Army Corps of Engineers, MVR
Nicole Manasco	U.S. Army Corps of Engineers, MVR
Kara Mitvalsky	U.S. Army Corps of Engineers, MVR
Darron Niles	U.S. Army Corps of Engineers, MVR
Heather Schroeder	U.S. Army Corps of Engineers, MVR
Karla Sparks	U.S. Army Corps of Engineers, MVR
Chuck Theiling	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
Tim Eagan	U.S. Army Corps of Engineers, MVS
Kat McCain	U.S. Army Corps of Engineers, MVS
Bob Clevenstine	U.S. Fish and Wildlife Service, UMR Refuges
Cathy Henry	U.S. Fish and Wildlife Service, UMR Refuges
Kraig McPeek	U.S. Fish and Wildlife Service, RIFO
Aleshia Kenney	U.S. Fish and Wildlife Service, RIFO
Sara Schmuecker	U.S. Fish and Wildlife Service, RIFO
Jeff Houser	U.S. Geological Survey, UMESC
Brian Ickes	U.S. Geological Survey, UMESC
Dave Bierman	Iowa Department of Natural Resources
Andy Fowler	Iowa Department of Natural Resources
Mike Griffin	Iowa Department of Natural Resources
Scott Gritters	Iowa Department of Natural Resources
Kirk Hansen	Iowa Department of Natural Resources
Adam These	Iowa Department of Natural Resources
Robert Stout	Missouri Department of Natural Resources
Lorisa Smith	Missouri Department of Natural Resources
Shawn Giblin	Wisconsin Department of Natural Resources [On the phone]
Olivia Dorothy	American Rivers

Tom Boland	AMEC Foster Wheeler
Ann Guissinger	Gulf South Research Corporation
Colin Wellenkamp	Mississippi River Cities and Towns Initiative
Brad Walker	Missouri Coalition for the Environment
Kim Schneider	Schneider Communications
Don Powell	SEH Inc.
Gretchen Benjamin	The Nature Conservancy
Doug Blodgett	The Nature Conservancy
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association