

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

**May 6, 2015
Quarterly Meeting**

**Hampton Inn-Gateway Arch
St. Louis, Missouri**

Tim Yager of the U.S. Fish and Wildlife Service called the meeting to order at 8:00 a.m. on May 6, 2015. Other UMRR Coordinating Committee representatives present were Mark Moore (USACE), 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) via phone, Ken Westlake (USEPA) via phone, and Jon Hubbert (NRCS). A complete list of attendees follows these minutes.

Minutes of the February 11, 2015 Meeting

Bob Clevestine offered a correction to the third paragraph of page A-10 of the February 11, 2015 UMRR Coordinating Committee meeting minutes. The correction would clarify that Huron Island is located on General Plan lands owned by the Corps and managed under terms of successive cooperative agreements between the Corps, USFWS, and Iowa DNR. The project MOU places responsibility for operation, maintenance, repair, rehabilitation, and replacement (OMRR&R) with the Iowa DNR. Marv Hubbell requested that, on page A-1 of the draft minutes, the amount of FY 2015 funding allocated to habitat project evaluations be corrected to \$655,000. Dan Stephenson moved and Randy Shultz seconded a motion to approve the draft minutes of the February 11, 2015 meeting as corrected. The motion carried unanimously.

Regional Management and Partnership Collaboration

FY 2015 Budget Update and Scope of Work

Marv Hubbell reported that UMRR's FY 2015 work plan has been slightly revised since the February 11, 2015 quarterly meeting. The program's updated internal allocations are as follows:

- Regional Administration and Programmatic Efforts – \$861,000
- Regional Science and Monitoring – \$8,126,000
 - Long term resource monitoring – \$5,495,000
 - Regional science in support of restoration – \$1,907,000
 - Regional science staff support – \$69,000
 - Habitat project evaluations – \$655,000
- Habitat Restoration – \$24,183,000
 - Regional project sequencing – \$70,000
 - MVP – \$7,234,000
 - MVR – \$9,645,000
 - MVS – \$7,234,000

Hubbell said the program's FY 2015 habitat project obligation rate is currently 45 percent, with MVP at an 88 percent obligation rate, and is on track to obligate all habitat project-related funds by the end of FY 2015. Hubbell said the program's science funding is also expected to be fully obligated by the end of the fiscal year.

FY 2016 and 2017 Appropriations Progress Report

Hubbell said that, on May 1, 2015, the House approved \$19.787 million for UMRR in its FY 2016 energy and water appropriations bill. This represents a decrease of \$13.383 million from FY 2015, and is a result of increased competition from other USACE ecosystem restoration projects for construction funding, particularly the Everglades and Chesapeake Bay. Hubbell acknowledged that the final appropriation is unknown. And, there may also be additional funding available in USACE's work plan for UMRR above the enacted appropriation.

Hubbell said District staff are developing recommendations for UMRR's FY 2017 budget. As a next step, the three UMR Districts and MVD will discuss budget priorities before submitting the proposal to Headquarters for review. [This discussion topic continues after the following discussion on partner advocacy.]

Partner Advocacy

Dru Buntin of UMRBA and Gretchen Benjamin of TNC discussed their visits with House members and the Administration this spring. While there is strong bipartisan support for UMRR in Congress, the earmark ban prevents members from increasing UMRR's appropriation above the President's budget request for the program. Benjamin said several UMR House delegation members submitted FY 2016 appropriations requests to fund UMRR at its full annual authorized level of \$33.17 million, but these requests were denied as they are considered earmarks. According to Benjamin, the primary reason that the Administration decreased its funding request for UMRR, compared to the past few years, is the result of increased competition from other ecosystem restoration programs that are now construction-ready. Congress and the Administration remain very supportive of the program. Benjamin and Buntin said they are hopeful that the final FY 2016 energy and water appropriations measure will include additional construction funding for USACE's ecosystem restoration programs that the Administration could then allocate to UMRR. They are planning to work with Senate delegation members to include sufficient funding for an additional funding line item in its FY 2016 energy and water appropriations measure.

Benjamin said the Administration indicated its preference for the Everglades' approach to discussing its budget priorities and funding requirements. The Everglades' non-federal sponsors have provided the Administration with the funding levels necessary to optimally implement the program's planned restoration projects and the benefits that would be lost if that funding is not provided. The Administration suggested that UMRR non-federal partners present its budget requests in the same way, rather than simply requesting a lump sum. Benjamin and Buntin have contacted District staff to request these figures for future use in discussions with the Administration and Congress. Hubbell emphasized the importance of the partnership's great working relationships and communication exchanges. This feedback will help District staff improve its budget communication and documentation to the Administration as well as to partners. In response to a question from Jim Fischer, Benjamin explained that the Administration requested a detailed explanation of what funding amount is necessary to optimally deliver projects and implement the program — i.e., to most effectively and efficiently complete projects. The Administration cited the Everglades' five-year budget plan. Hubbell acknowledged that this is a slightly different approach to USACE's arrangement of its budget documents, whereas before the program was asked to provide implementation scenarios at various funding increments. He said UMRR's budget documents have always been kept internal prior to publication of the Presidents' budgets. So District staff will need to communicate with Headquarters about the program's approach going forward.

Jennie Sauer asked whether the Administration provided any perspectives regarding science-related performance metrics. Buntin said he and Benjamin asked that question while expressing concern over the continuing decreases in funding for long term resource monitoring relative to the program's overall budget. The Administration was not specific in its preference for reporting on science efforts and is relatively open about how it is done. However, Buntin and Benjamin observed the importance of defining the context for the program's science activities and explaining how the science contributes to the program's overall goals and restoration work. Hubbell emphasized the importance of the FY 2015-2025 UMRR Strategic Plan for explaining the importance of science for generating knowledge of the river's ecosystem and restoration approaches to improve its health and resilience. Benjamin said she and Buntin were able to use the Strategic Plan in their meeting with the Administration to illustrate how all of UMRR's work ties together, and the value of the long term resource monitoring and six field station network. It seemed to resonate well.

Recognizing that the term resilience is receiving considerable attention from the Administration, Charlie Hanneken said the 2015-2025 UMRR Strategic Plan is an asset from Headquarters' perspective. Hanneken observed that the Strategic Plan will allow the partnership to place a five-year plan in context of larger, longer-range goals. Hubbell noted that this discussion is very valuable to the program, as Corps staff will use this feedback to improve its budgeting documents and presentation.

Fischer asked for clarification on whether the Administration's focus on optimal spending will require changing UMRR's budget presentation or how habitat projects are packaged and constructed. Hubbell said the answer may include a little of both. USACE staff will have to consider its annual allocation of habitat project funds among the three Districts, considering workload capabilities, risk distribution, and execution efficiencies. All of these factors contribute to optimal project completion in the near term and long term. For example, MVP executed a contract for Harpers Slough in the first quarter of FY 2016 that obligated most of its available funding for this fiscal year. This contracting approach resulted in considerable cost savings. MVS will employ a similar approach to contracting the construction of Ted Shank's pump station.

FY 2016 and 2017 Appropriations Progress Report (Continued)

Hubbell reported that, under the \$19.787 million funding scenario for FY 2016, UMRR's internal program allocations would be as follows:

- Regional Administration and Programmatic Efforts – \$741,000
- 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 – \$12,479,000
 - Regional project sequencing – \$100,000
 - MVP – \$3,425,000
 - MVR – \$4,745,000
 - MVS – \$4,209,000

[Note: The District habitat project 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 noted that the combined allocations for long term resource monitoring and regional science in support of restoration equal the partner-calculated costs to implement base monitoring.

Hubbell reported that sequestration is scheduled to take effect on October 1, 2015 per the 2011 Budget Control Act. Should this occur, UMRR would receive a five percent cut from its final FY 2016 appropriation. In response to a question from Janet Sternburg, Hubbell said federal agencies will not know in fact whether sequestration will occur until an FY 2016 appropriations bill is enacted. It is also possible that UMRR could receive additional funding through USACE's work plan allocations.

Hubbell said he convened conference calls on February 19, 2015 and March 24, 2015 with the long term resource monitoring field station leaders, UMESC, UMRR Coordinating Committee members, and UMRBA staff regarding FY 2016 budget planning. He has not yet consulted with the program's *ad hoc* funding committee. Hubbell asked the UMRR Coordinating Committee for its preference on USACE's future communications with partners regarding FY 2016 budget matters. The Committee expressed support for continuing to engage with the individuals who participated on the two calls earlier this year, noting that many of the individuals overlap with the *ad hoc* funding committee.

Jennie Sauer said UMESC is preparing its FY 2016 scope of work earlier than usual in order to be prepared should end-of-year FY 2015 funds become available. This means that UMESC is asking that the field stations submit their budget proposals earlier as well. Hubbell expressed appreciation for the advanced work on the FY 2016 science scope of work, noting the importance of having plans in place to quickly execute funds and on projects that are based on partners' priorities. Hubbell said UMRR's network of federal and state agencies and nonprofit partners is an incredible asset, including for providing flexibility in resource allocation and the necessary expertise for the program's implementation. Sauer requested that Hubbell provide UMESC with USACE's plans regarding habitat project evaluations so that science staff can identify opportunities to assist in their development. Hubbell agreed and said he is looking forward to greater coordination among all UMRR partners. He said USACE is increasing its emphasis on determining biological responses to project features and will likely seek assistance from science staff in formulating monitoring strategies.

2015-2025 UMRR Strategic Operational Plan

Hubbell reported that the 2015-2025 UMRR Strategic Operational Planning Team held conference calls on April 9, 2015 and April 28, 2015 to refine implementation actions for Goals 1 and 2 of the Strategic Plan. The team's next call is scheduled for May 26, 2015 to discuss Goals 3 and 4. The team will then share the draft operational plan with partners for review. Kirsten Mickelsen said the team is striving to balance the level of detail necessary to provide partners with adequate direction for implementing the program to achieve the goals and objectives while also encouraging innovation and providing flexibility. She said the team members agreed to share the plan with select individuals within their respective agencies to see if the plan makes sense and strikes the correct balance.

Lean Six Sigma

Hubbell recalled that Nicole Lynch, MVR's process improvement specialist, presented on Lean Six Sigma concepts at the UMRR Coordinating Committee's February 11, 2015 meeting, and provided initial direction for selecting programmatic areas to examine. Hubbell said this effort is an outcome of the September 18, 2014 UMRR Leadership Summit where partner agency leaders' discussed challenges of their staff to be fully engaged as UMRR's appropriations have increased but their respective resources remain limited. The leaders suggested employing a Lean Six Sigma evaluation on selected pieces of the program to identify efficiency improvements. Included on page B-6 of the agenda packet is a questionnaire worksheet to solicit recommendations for focusing and organizing a Lean Six Sigma evaluation.

Janet Sternburg recalled that MVR Commander Col. Mark Deschenes recommended, at the August 6, 2014 UMRR Coordinating Committee meeting, that UMRR implement a Lean Six Sigma evaluation to address concerns raised regarding habitat project planning and design and to proactively seek efficiencies in implementation. Sternburg suggested evaluating ways to streamline the planning process, clearly document and communicate milestones achieved (e.g., decision points), and reduce the level of review on these projects as they are relatively low risk. She acknowledged that the program has made great strides in improving efficiencies in project planning, but said there are still opportunities to save time and money. Noting that the program has successfully completed a comprehensive evaluation of its long term resource monitoring, Sternburg said it is now time to do an evaluation of the program's habitat project planning.

Hubbell agreed with Sternburg's observation that there are opportunities to improve the habitat project planning process. He acknowledged partners' substantial contributions throughout the planning phase and the need to make the most efficient use of their time. The program has made substantial progress in planning projects more efficiently and meeting USACE's 3x3x3 planning rule, but there is more room for improvement. Hubbell suggested that partners breakdown the elements of project planning and select areas to focus on that have flexibility to be modified. Monique Savage noted that there are several planning requirements and approval needs that are out of the Districts' control. Savage emphasized the need to first understand those things that partners cannot address.

Sternburg said her comments are based on completed projects where there were major inefficiencies. For example, there may be significant lag between when a fact sheet is submitted, approved, and initiated. Then once initiated, there may be staff turnover, USACE staff pulled to emergency missions, or disagreements on decision points that force repetitive discussions and evaluations. Sternburg noted that turnover in partners' staff also trigger these same issues. Fischer echoed Sternburg's comments, and said it would be helpful to better document and hold to decisions and other milestones. He recognized that much of USACE's planning requirements are mandated and agreed with suggestions to identify areas that partners can improve.

Tim Yager suggested addressing the processes and requirements for incremental cost-benefit analyses. Yager volunteered to develop a one page summary of the issues. Kirsten Mickelsen said involvement of project sponsors throughout project design could be a potential area to evaluate. Jon Hubbert suggested addressing how best to coordinate project partnership agreements with other key players in order to identify constraints and any other potential issues.

Lynch offered that she could help partners outline the project planning process and identify key areas to address through a Lean Six Sigma evaluation, and then work through these areas through small stages. Hubbell requested that partners send him any additional recommendations for programmatic areas to address through Lean Six Sigma by May 29, 2015.

2016 UMRR Report to Congress

Hubbell reported that, on February 27, 2015, USACE awarded a \$75,000 contract to UMRBA to prepare the 2016 UMRR Report to Congress. This includes serving as the primary author on the full report, facilitating partnership collaboration in the report's development as well as two reviews, graphic design, and printing. Under a separate support services agreement, UMRBA staff have been working with USACE and USGS to define compelling messages about UMRR's science efforts that stem from the 2015-2025 UMRR Strategic Plan. This includes the value of the long term resource monitoring database, network of six field stations, and research and analysis findings and capabilities. These messages will be used in the 2016 UMRR RTC, as well as other communications and outreach efforts.

Hubbell outlined the anticipated development schedule for the RTC. He said that a first draft plan is scheduled to be distributed for partner review in August 2015, with a second review anticipated for late December 2015. Headquarters and MVD's official review is scheduled for spring 2016, with a final report incorporating graphics submitted to Headquarters in November 2016. The report outline is anticipated to include an introductory section of UMRR's history and background and chapters dedicated to UMRR's accomplishments in enhancing restoration, accomplishments in advancing knowledge, the interagency partnership, implementation issues, and conclusions and recommendations.

In response to a question from Sternburg, Kirsten Mickelsen said the report will describe the UMRR's 2015-2025 Strategic Plan, including its four goals and strategies. Jennie Sauer asked if partners' contributions to the program's implementation would be provided in the report. Mickelsen said that, similar to the previous UMRR RTCs, partner contributions will be described in a variety of ways. The report will document partners' in-kind and other resource contributions since 2010 and describe how partners are involved in the program's implementation in various areas of the report. In response to a question from Sauer, Mickelsen explained that, in addition to the formal reviews, various partners will be contacted to help develop portions of the report on which they have expertise. For example, Jeff Houser with UMESC is currently helping to develop the structure and content of the science accomplishments chapter and he will be working with the field stations and other UMRR science staff to get input. This will occur on an *ad hoc* basis. Gretchen Benjamin advised partners to be honest with their estimated contributions, and not underestimate them. She suggested including overhead and travel costs, as well as monitoring equipment.

Mickelsen explained that the RTCs are an opportunity for program partners to articulate implementation issues and articulate any policy recommendations. The UMRR Coordinating Committee held an April 2, 2015 conference call to identify any policy recommendations to include in the RTC. As a result, the Committee agreed to include policy recommendations related to project partnership agreements and the UMRR/NESP Transition Plan. A summary of these issues as agreed to by the Committee is provided on pages B-7 to B-9 of the agenda packet. Mickelsen noted that there have already been full partnership discussions and agreements on issue resolutions for PPAs and the Transition Plan and therefore are fairly straightforward from a USACE and partnership perspective. Kevin Stauffer expressed support for these two policy recommendations as described in the write-up and offered no changes. Jim Fischer recognized challenges of articulating when a transition to NESP would be appropriate. Mickelsen explained that the Transition Plan, which USACE submitted to Congress in 2012, outlines expectations for a seamless transition. Since the RTC is a USACE document submitted to Congress, it will simply articulate those same expectations and will not add much detail beyond that. Karen Hagerty pointed to the last sentence of the Transition Plan's recommendation write-up in the packet, which states "The program's non-federal partners advocate that NESP should be funded at levels well above UMRR's authorized level before a transition occurs so that NESP is an enhancement to UMRR's current implement." The UMRR Coordinating Committee agreed that that statement would be appropriate and relevant to include in background information of the Transition Plan. Hubbell said he will coordinate with MVD and Headquarters regarding the report's articulation of the Transition Plan.

External Communication and Outreach

External Communications Plan (Goal 3)

Kevin Bluhm said that, per Hubbell's request, he developed a proposed process for developing UMRR public outreach messages and images. The goal of this effort would be "to build a toolbox of communication materials that will help all stakeholders unify and enhance reporting and communicating in the UMRR program." A communications committee would be convened in June 2015 to lead the effort, but will involve program partners as the messages, images, and tools are developed. Bluhm said he plans to seek partners' perspectives through a questionnaire this summer and use the responses to

identify theme analyses and trends, and then develop communications tools including concept designs for imaging and key messages. Bluhm said he will present these results and the identified themes and trends at the UMRR Coordinating Committee's August 5, 2015 meeting. Then, throughout fall 2015, the communications committee will refine the messages and develop external communications plans with more specific detail, as well as more detailed designs of the images and key messages. At the UMRR Coordinating Committee's November 18, 2015 meeting, Bluhm anticipates sharing draft communications tools and messages and facilitating a discussion about partners' priorities for their use. Bluhm emphasized the importance of having strong, compelling, unified, and consistent messages for communication about the program externally. He said the Everglades program serves as a great model for external communications, and the communications committee will consider the Everglades program's successes. Bluhm asked partners to contact him by May 29 if they are interested in participating on the communications committee.

Gretchen Benjamin asked which aspects of the Everglades program Bluhm sees UMRR incorporating. Bluhm said there is a lot to be learned from the Everglades program's successes in external communication, including its methods and toolbox, utilization of social media, branding, and education tools to engage young audiences. Everglades used professional firms to develop its communications materials and UMRR would likely benefit from doing that as well. Bluhm said UMRR's external communications toolbox would require multiple layers with cross-platforms for communicating to multiple, diverse audiences. Bluhm acknowledged that UMRR could greatly benefit from equipping all partners with soundbites and other messages and images to tell the program's story, including its breadth and depth of work, in their various interactions with various external audiences. He said UMRR needs to consider how to best utilize the social media revolution to its advantage.

In response to a question from Karen Hagerty, Bluhm said the communications committee will develop a program logo as part of imaging. The committee will first seek input from partners on the program's external communications needs and sequence activities based on agreed-upon priorities. Benjamin said the Everglades invested a significant amount of resources upfront to develop its communications messages and images, with an ongoing commitment to support outreach and engagement. She asked what USACE anticipates spending on external communications initially and on an ongoing basis. Bluhm said Everglades spent over \$2 million in two or three years for external communications, but its scope was much larger than UMRR's current proposal. Everglades faces different challenges, including serving English- and Spanish-speaking audiences. But, through the program's communications efforts, it has received significant visibility and rewards. According to Bluhm, while these external communications efforts have a cost, they can produce lasting and larger benefits. In response to a question from Tim Eagan, Bluhm estimated that the Everglades allocates between \$82 million and \$110 million annually to external communications and outreach.

Ken Barr suggested that the communications committee contact the USFWS's communications coordinator for the Eastern Tallgrass Prairie and Big Rivers Landscape Conservation Cooperative (LCC). Bluhm said he anticipates that the committee will reach out to communications specialists working on programs and projects relevant to the UMRS.

Hubbell said he anticipates that the UMRR communications committee will include representation from USFWS, Randy Hines from USGS, and Karla Sparks from USACE, as well as other partner volunteers. Sauer suggested that one or two state representatives serve on the committee. Bluhm agreed and said he hopes that the committee will include representation from various partners while remaining manageable in size. Stauffer offered to identify a staff member from Minnesota DNR to participate on the committee.

Ken Westlake emphasized the need for UMRR to have explicit approaches for seeking and incorporating input from the public and other stakeholders, so that external communication functions

as a two-way street. Bluhm agreed and said UMRR's external communications efforts should operate in an interactive mode that facilitates feedback and check-ins. Jim Fischer said he found the public to be less engaged in UMRR's implementation when seeking input on a draft version of the 2015-2025 UMRR Strategic Plan. Fisher expressed support for reinvigorating public engagement in the program. He said personal boat tours of the UMRS with USACE and USGS headquarters' leadership and restoration and science staff have proven successful ways to facilitate dialogue and express important messages in ways that are resonating. Bluhm said school tours on the river have also been successful. He also noted that there are opportunities for UMRR to coordinate with *Our Mississippi*. Fischer encouraged using social media as a means for connecting to the public. Bluhm agreed, and said USACE has had several success stories from using Twitter and other social media sites, including the Great Lakes and Mississippi River Interbasin Study (GLMRIS).

In response to a question from Hagerty, Bluhm recognized the challenges with developing and maintaining websites as a primary forum for external communications, including maintaining relevance over short and long timeframes. But he said the communications committee would consider how the UMRR website can help advance the program's external communications objectives.

Brian Markert acknowledged that external communication is often not a primary focus for USACE. Markert expressed optimism for Bluhm's proposed path forward and the potential benefits to UMRR.

Jerica Richardson emphasized the importance of considering the different needs and communications approaches for various audiences, including local governments and other entities (economic development, recreation), state and federal agencies, and the general public. Bluhm agreed, and suggested that the communications committee first develop tools and messages that are relevant to many audiences to achieve some quick and relatively easy successes in order to gain momentum. Bluhm said he intends for the UMRR's branding effort to involve greater partnership collaboration and input than *Our Mississippi's* branding effort, which was under time constraints. He emphasized the importance for all partners to be involved in branding development so that the entire partnership has ownership over the ultimate products.

In response to questions from Kirsten Mickelsen and Fischer, Hubbell said Bluhm's proposal relates only to public engagement right now. Following this effort, UMRR will focus more on the UMRR Strategic Plan's objectives related to external outreach to other UMRS-relevant programs and projects. Stauffer suggested that Bluhm participate in the UMRR strategic operational planning discussion regarding Goal 3, or the "external engagement and collaboration" goal.

Public Involvement and Outreach Activities

Hubbell said the August 2015 Biennial Symposium of the International Society for River Science (ISRS) is scheduled for August 23-28, 2015 at UMESC. Benjamin said she is serving on the Symposium's Steering Committee. The Symposium will focus on the connectivity of large river systems, including how human uses such as commercial navigation have affected the UMRS and are projected to shape the Amazon. Speakers will talk about restoration efforts to improve rivers' ecological health. Benjamin said Hubbell has agreed to present on UMRR's experiences and accomplishments in river restoration and science, highlighting that UMRR serves as a premier aquatic ecosystem restoration program. Hubbell said he is pleased that UMRR will be showcased in this Symposium and can be a leader for other regions. He said this is a great opportunity to demonstrate the program's relevance. Sauer said Jeff Houser is also scheduled to moderate dialogue among national and international scientists about large-scale, long-term data sets in a session titled "Big rivers, big data."

Hubbell said Illinois has asked him to participate, on behalf of UMRR, at the Illinois Nutrient Monitoring Council's May 13, 2015 meeting. Sauer noted that USGS's Illinois Water Science Center is setting up a continuous monitoring "super station" as part of Illinois' Nutrient Monitoring Strategy.

Fischer reported that Wisconsin Natural Resources Magazine published a feature in its April 2015 edition about Wisconsin DNR's UMRR long term resource monitoring field station.

Karen Hagerty asked that partners send her any articles published about UMRR to upload on the program's website.

Habitat Rehabilitation and Enhancement Projects

District Reports

St. Louis District

Brian Markert said the St. Louis District has been very active in advancing UMRR habitat projects. Markert expressed appreciation to project sponsors for their continued involvement as UMRR's increased appropriations in the past few years have resulted in accelerated timelines. He said District staff and Illinois DNR are scheduled to meet soon regarding Rip Rap Landing. Design work on that project is pending receipt of a sponsor support letter from Illinois DNR. MVS continues planning work on Piasa and Eagles Nest Islands and Harlow and Wilkinson Islands. Markert said District staff are doing post-project monitoring on Calhoun Point. The District's design efforts continue on Clarence Cannon and Ted Shanks, and construction continues on Ted Shanks and Pools 25 and 26 Islands. Marv Hubbell noted that the accelerated funding has allowed for completing feasibility studies for habitat projects within three years. Gretchen Benjamin asked if contracting out parts of the habitat project development is desired under increased appropriations. Markert said that contracting is occurring in some instances when appropriate.

St. Paul District

Marv Hubbell said MVP is planning to complete the feasibility report for North and Sturgeon Lakes this fiscal year. The District initiated construction on Harpers Slough this spring and plans to finalize construction on Capoli Slough Islands this fall. Kevin Stauffer explained that new flood risk reduction regulations are challenging North and Sturgeon Lakes' design planning. An alternative design has not yet been selected.

Rock Island District

Hubbell said MVR is maintaining an aggressive habitat project schedule, with five projects in planning, two in design, and six in construction. The District will initiate planning on Keithsburg soon, followed by Boston Bay. In response to a question from Ken Westlake, Hubbell explained that The Nature Conservancy requested that the Emiquon East habitat project is suspended until the project partnership agreement issues are resolved. These issues are beyond UMRR's control. Hubbell said District staff are evaluating reshaping Sunfish Lake for tree preservation given the potential uplisting of the northern long eared bat's status to endangered. Bryan Hopkins requested that a presentation is given at a future UMRR Coordinating Committee quarterly meeting about the northern long-eared bat's use of UMRR habitat projects and how the tree preservation requirements per its potential endangered status might affect the construction of projects. Hubbell agreed, and said it may be worthwhile for USACE, USFWS, and other partners to consider this issue systemically. He said some monitoring for the bat species is being conducted at habitat project sites. Kraig McPeck agreed with Hubbell's suggestion to examine the effects systemically and said the bat is likely to be uplisted. Thus it should be on partners' radar as an emerging issue that will likely need to be addressed. Hubbell noted that UMRR's current policy is to avoid cutting trees during sensitive time periods.

Sponsor Involvement in Project Planning and Design

Hubbell and Tim Yager discussed how the Pool 12 Overwintering habitat project underscored the need to better document and understand decision points in the planning and design process. Throughout the planning phase, it is common for partners to misinterpret decisions or request a reexamination of agreed-upon decisions. Although the reasons may be very valid, reevaluating questions may result in significant cost escalations and project delays. In addition, planning for the project has generated interest in exploring how UMRR can better address emerging or increasing ecological problems that are affecting the river's ecological health and resilience, such as sedimentation, floodplain forest diversity, and climate change. Yager explained that USFWS is increasingly concerned with the state of the UMRS floodplain and would like to focus more attention on restoring that habitat since the river floodplain is a crucial flyway for many important migratory waterfowl. In addition, the Service would like partners to examine the ongoing and increasing sedimentation challenges facing the river ecosystem's health.

McPeck added that these factors (such as sedimentation) will need to be considered as UMRR strives to improve the resilience of the UMRS's ecological health. Janet Sternburg said NESP's Feasibility Study examines sedimentation and associated restoration tools and should be used as a reference. Sternburg also noted that reach planning resulted in specific habitat projects, such as water level management, that should be considered, rather than going back to the drawing board. She also emphasized the need to coordinate more with NRCS on project identification and selection. Jon Hubbert agreed with the need to examine ways to address sedimentation, but acknowledged that the issues are very complex and there are not simple solutions. For example, sedimentation is a challenging discussion nationally as the needs are different in various regions (e.g., Missouri River and UMR's open river reach). The different messages about whether sedimentation is too much or is lacking is sometimes perceived as conflicting. Jim Fischer also expressed agreement with the need to examine sedimentation challenges, including in-stream erosion. Fischer said sediment loads have been decreasing with improved agricultural practices. UMRR's island designs have also improved to better increase sediment resuspension. Fischer said that, while he agrees with the need to improve the UMRS's floodplain forests, the aquatic areas remain in need of restoring.

Hubbell noted that USACE issued a new requirement for habitat projects to consider the implications of climate change, including increased flood frequencies.

Planning New Starts: Identifying Projects to Enhance Ecological Resilience

Hubbell reported that, in April 2015, USACE has executed a contract with USGS to lead an interdisciplinary team that will define indicators of ecosystem health and resilience and link the indicators to the process of identifying habitat projects. It is anticipated that the team will begin this effort in spring or summer 2015 and complete the project at the end of FY 2017. Jeff Houser anticipates that the team will include staff from USFWS, USGS, and a state field station. The team will lay the groundwork for developing a conceptual model for UMRR's application of resilience concepts. At a fall or early winter 2015 workshop, the team will facilitate a larger partnership conversation on the resilience conceptual model. The model will utilize UMRR's long term resource monitoring data and will be used to inform the program's habitat restoration, including updates to the habitat needs assessment. Jennie Sauer reported that USGS is currently soliciting applications for a part time staff person to help lead this effort.

In response to a question from Monique Savage, Houser said he does not have a preconceived idea for invitees to the workshop, but said he anticipates it will mostly be attended by LTRMP staff and some habitat project staff with relevant expertise. In response to a question from Savage, Sauer said UMRR's land cover data as well as other habitat project monitoring data and other information will be incorporated

into the conceptual model. In addition, other relevant non-UMRR data sources will be used – e.g., USACE’s UMRS forestry data. Houser said he anticipates this will be a broad, interactive process. The interagency team will serve as a small advisory group that will frequently seek input from various partners throughout the process.

Hubbell said a team to identify the next generation of habitat projects will be convened in fall 2015. This resilience effort will be very important to informing that process.

Habitat Restoration Highlight: Harlow and Open River Islands

Tim Eagan presented on the potential designs of three open river restoration opportunities, including Harlow Island, Crains Island, and Wilkinson Island. In terms of habitat restoration, the open river faces many challenges given the limited sponsor availability and willingness. In addition, the open river experiences highly variable flood levels, lacks side channel connectivity, has a low forest community diversity, and lacks ridges and swale systems. MVS recently completed a qualitative inventory of existing resources. A project delivery team was established in December 2014 to consider restoration opportunities, and has identified three promising island projects including Harlow Island, Crains Island, and Wilkinson Island.

Eagan said the initial plans for Harlow Island includes two miles of side channel excavation and reconnection, 2.5 miles of sediment deflection berms, degradation of three miles existing agricultural levees, and 150 acres of reforestation. Together, these actions are intended to reconnect the side channel, create backwater habitat, and increase forest diversity. Crains Island would include two miles of side channel excavation and reconnection and 75 acres of reforestation as a means to reconnect side channel and increase forest diversity. For Wilkinson Island, the plans include creating backwater habitat and increasing forest diversity through the construction of 1.5 miles of sediment deflection berms, degradation of 3 miles of existing agricultural levees, and 225 miles of reforestation.

As next steps, Eagan said the project delivery team will:

- 1) continue evaluating problems and opportunities,
- 2) host a value engineering and planning charrette workshop in July 2015,
- 3) define and measure all project alternatives and then determine a tentatively selected plan for public review, and
- 4) complete the feasibility report with an integrated environmental assessment.

Long Term Resource Monitoring and Science

Highlights

Jeff Houser reported on LTRMP’s major activities and accomplishments in the second quarter of FY 2015. Houser said a completion report was published that describes the spatial and temporal dynamics of submersed aquatic vegetation (SAV) and metaphyton communities in Pool 4. The research concluded that there has been a community shift over time of native SAV species increasing in richness and abundance. The research shows that vegetation communities can better recover when river conditions improve.

Houser said a seamless elevation data set, termed “topobathy,” has been developed that merges LiDAR and bathymetry data. UMESC hosted a long term resource monitoring component meeting in La Crosse on April 14-15, 2015. One primary objective was to ensure that consistent sampling methods are being applied across field stations in order to maintain high data integrity.

USACE Science Update

Karen Hagerty said that, in FY 2015, the program's science in support of restoration work will include research, analysis, model development, and the identification of ecosystem resilience indicators. The specific activities are listed on pages D-12 to D-13 of the agenda packet.

Update on UMRR Invasive Species Policy Paper

Hagerty reported that the UMRR Coordinating Committee has finalized an invasive species policy for the program. The policy's primary purpose is to communicate to implementing partners about UMRR's roles and responsibilities related to invasive species. Hagerty recalled that, at the UMRR Coordinating Committee's February 11, 2015 meeting, the Committee endorsed the policy paper with a couple of minor corrections. The revised policy paper as agreed on by the Committee via email is included on page D-14 of the agenda packet.

A-Team Report

Shawn Giblin explained his intentions as the recently named A-Team Chair, which are to focus the Team's discussions on data syntheses, such as threshold analyses and defining measurable outcomes to improve the river's ecological integrity.

Science Highlight: Asian Carp Influences on Native Fishes on the UMR

Quinton Phelps presented analyses of UMRR's monitoring data showing the impacts of Asian carp on native fish species by comparing pools with high and moderate abundance and no presence of Asian carp, as well as pre- and post-invasion data. Phelps explained that there are many parameters needed to thoroughly evaluate the forces that influence the fish community to make informed management decisions, including the role of invasive species on native fishes. He emphasized the importance of understanding the various factors that influence the structure and function of the UMRS's ecosystem, including invasive species. Long term resource monitoring data that incorporates pre- and post-invasion can provide the best insight regarding such influence. Phelps said the upper three study reaches have not been invaded by silver carp and therefore serve as a control. The lower three study reaches have established silver carp populations.

Phelps provided background about the introduction of Asian carps to the Midwest and the traits that make the fish a great invader. He said silver carp are widely understood to alter habitats, compete with native species, and disrupt the ecosystem. However, the actual effects remain largely unknown since Asian carp are fairly recent invaders. To understand these effects better, researchers recently explored the following research questions: what are the effects of silver carp invasion?, what are the effects of silver carp in UMRS floodplain lakes?, if there is negative interaction between silver carp and native fishes, is competition the mechanism driving this relationship?

Phelps explained the research objectives, methods, and results, as described below:

1. Objective: To compare native planktivore relative abundance before and after invasion.

Results: Using beyond before-after-control-impact analyses with data collected between 1993 and 2013, the data indicate that, following silver carp invasion, gizzard shad and bigmouth buffalo had significant declines in mean catch per year.

2. Objective: To evaluate short-term fish community changes in Mississippi River floodplain lakes with varying densities of silver carp.

Results: Sampling four UMR floodplain lakes to compare present/absence of dominant taxa, the results show that there is no change in fish community where there is not silver carp invasion, minor changes where there is moderate invasion, and drastic changes where there is high invasion (or abundance).

3. Objective: To determine if competition exists between gizzard shad/bigmouth buffalo and silver carp in a controlled setting, and whether that competition is direct or indirect.

Results: Comparing growth and survival of young-of-youth of silver carp, bigmouth buffalo, and gizzard shad in a laboratory as well as post-hoc behavioral experiments, the results indicate that silver carp out-compete the other fish because they are more effective at consuming prey.

Phelps concluded that there are multiple lines of evidence that suggest Asian carp may be impacting fish community composition and thus historic function. He said future study efforts could include evaluating potential management strategies that could effectively minimize effects on the UMRS, determining what stretches of the UMRS are the most important to invasive carp reproduction, the effects of Asian carp on the diets of piscivores and whether that alters community composition, and evaluating early life history and its role in recruitment and management efforts.

In response to a question from Ken Dalrymple, Phelps said UMRS scientists are making substantial progress in terms of evaluating control techniques and will likely be moving forward with implementing some control technologies soon.

Other Business

Bob Clevestine announced that Bob Delaney recently passed away. Clevestine recognized Delaney's significant contributions to the UMRR and the UMRS. He will be missed. Meeting participants took a moment of silence in his memory.

Future Meetings

The upcoming quarterly meetings are as follows:

- **August 2015 — La Crosse**
 - UMRBA — August 4
 - **UMRR Coordinating Committee — August 5**
- **November 2015 — St. Paul**
 - UMRBA — November 17
 - **UMRR Coordinating Committee — November 18**
- **February 2016 — Quad Cities**
 - UMRBA — February 23
 - **UMRR Coordinating Committee — February 24**

With no further business, the meeting adjourned at 12:57 p.m.

**UMRR Coordinating Committee Attendance List
May 6, 2015**

UMRR Coordinating Committee Members

Mark Moore	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 [On the phone]
Jon Hubbert	Natural Resources Conservation Service
Ken Westlake	U.S. Environmental Protection Agency, Region 5 [On the phone]

Others In Attendance

Charlie Hanneken	U.S. Army Corps of Engineers, Headquarters
Kevin Bluhm	U.S. Army Corps of Engineers, MVP
Ken Barr	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Marvin Hubbell	U.S. Army Corps of Engineers, MVR
Nicole Lynch	U.S. Army Corps of Engineers, MVR [On the phone]
Mike Feldmann	U.S. Army Corps of Engineers, MVS
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
Monique Savage	U.S. Army Corps of Engineers, MVS
Jerica Richardson	U.S. Army Corps of Engineers, MVS
Bob Clevestine	U.S. Fish and Wildlife Service, UMR Refuges
Ken Dalrymple	U.S. Fish and Wildlife Service, UMR Refuges
Jon Duyvejonck	U.S. Fish and Wildlife Service, RIFO
Kraig McPeck	U.S. Fish and Wildlife Service, RIFO
Jason Wilson	U.S. Fish and Wildlife Service, UMR Refuges
Jeff Houser	U.S. Geological Survey, UMESC
Dave Herzog	Missouri Department of Conservation
Quinton Phelps	Missouri Department of Conservation
Harry Bozoian	Missouri Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Lorisa Smith	Missouri Department of Natural Resources
Robert Stout	Missouri Department of Natural Resources
Shawn Giblin	Wisconsin Department of Natural Resources
Tom Boland	AMEC Foster Wheeler
Brad Walker	Missouri Coalition for the Environment
Gretchen Benjamin	The Nature Conservancy
Todd Strole	The Nature Conservancy
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association