Minutes of the
Upper Mississippi River Restoration Program
Coordinating Committee

November 19, 2014
Quarterly Meeting

Crowne Plaza Riverfront Hotel
St. Paul, Minnesota

Tim Yager of the U.S. Fish and Wildlife Service called the meeting to order at 8:00 a.m. on November 19, 2014. Other UMRR Coordinating Committee representatives present were Mark Moore (USACE), Mark Gaikowski (USGS), Dan Stephenson (IL DNR), Diane Ford (IA DNR), Kevin Stauffer (MN DNR), Janet Sternburg (MO DoC) via phone, Jim Fischer (WI DNR), Ken Westlake (USEPA) via phone, and Jon Hubbert (NRCS). A complete list of attendees follows these minutes.

Retirements

Tim Yager expressed sincere appreciation to Diane Ford and Barry Johnson for their many extraordinary contributions to UMRR. Ford said she will retire on December 19, 2014 and her retirement plans include travel and volunteer advocacy for her favored programs and issues, including Upper Mississippi River issues. Johnson said he is set to retire on December 31, 2014. Johnson has enjoyed working with all those involved in implementing UMRR. His plans are to relax during retirement. Johnson said his position as UMESC Science Director will be split, with Jennie Sauer assuming administrative duties and Jeff Houser providing science leadership.

Minutes of the August 6, 2014 Meeting

Diane Ford moved and Dan Stephenson seconded a motion to approve the draft minutes of the August 6, 2014 meeting as prepared. The motion carried unanimously.

Regional Management

FY 2014 Fiscal Update and Milestones

Marv Hubbell reported that UMRR obligated 99 percent of its FY 2014 appropriation of $31.968 million. Hubbell expressed sincere appreciation to all partners for their contributions to another successful fiscal year, filled with outstanding accomplishments. Hubbell said the program's ability to execute at 99 percent with appropriations nearly doubling over two years, at a 25 percent increase each year, exemplifies UMRR's exceptional partnership. All partner staff worked diligently and collaboratively to effectively and efficiently execute the funds on important habitat and science projects. The FY 2014 internal allocations are outlined below and more detailed information about obligations and expenditures is provided on pages B-1 to B-5 of the agenda packet. Hubbell noted that USACE staff are planning to incorporate into UMRR's Database the program's fiscal information from all available budget spreadsheets that have been included in quarterly meeting agenda packets over time.

- Regional Management — $1,000,000
- LTRMP element — $5,225,000

- HREPs element — $25,743,000
  - Regional science support — $1,065,700
  - MVP — $6,980,400
  - MVR — $10,466,500
  - MVS — $7,230,400

[Note: At the end of FY 2013, funds were transferred among UMR Districts to get critical work accomplished and to maximize the amount of funds obligated. The FY 2014 allocations to all three Districts reflect rebalancing of those internal transfers.]

Hubbell recalled that, in spring 2014, USACE received a question from Congress regarding the relative investment of science and monitoring compared to the increase in total program appropriations. He said that, in FY 2014, the program spent a total of $7.75 million on science. This included $314,000 on science-related regional management activities, $5.4 million on long term resource monitoring, and $2.04 million on science in support of restoration and management. In response to a question from Jim Fischer, Hubbell explained that USACE's science delivery team and science liaisons are funded under the regional management habitat/science integration allocation as well as the District habitat project allocation. This information is reflected directly and indirectly in the budget spreadsheets, which are included in the agenda packet. Karen Hagerty noted that the spreadsheets also include allocation and spending information on habitat project monitoring, long term resource monitoring (Corps staff time), habitat needs assessment, and more. Hagerty said habitat project management plans include schedules and costs for any science on that project, thus serving as a scope of work.

FY 2015 Fiscal Update and Scope of Work

Hubbell reported that the federal government is currently operating under a continuing resolution authority (CRA) that expires on December 11, 2014. The President's FY 2015 budget request, House's FY 2015 energy and water appropriations measure, and Senate Energy and Water Subcommittee's FY 2015 appropriations markup include $33.17 million for UMRR, the program's full annual authorized amount. Congressional action following the FY 2015 CRA's expiration is unknown. In the interim, Corps Headquarters has directed UMRR to execute based on last year's funding, which is $31.968 million. Under the $31.170 scenario, the program's FY 2015 internal allocations would be as follows:

- Regional Management — $1,000,000
- LTRMP element — $5,500,000
- HREPs element — $26,670,000
  - Regional science support — $1,800,000
  - MVP — $7,491,000
  - MVR — $9,888,000
  - MVS — $7,491,000

Hubbell said USACE is increasing resources to enhancing the program Database and inputting program information. This will include incorporating historical budget information, digitizing project features, and other information that will allow for more and better reporting opportunities. He said a presentation on the Database's content and outputs will be provided at the February 11, 2015 UMRR Coordinating Committee meeting. In response to a question from Fischer, Hubbell said the Database is still only accessible internally. However, Hubbell said staff can generate and disseminate reports upon request and encouraged partners to send him information requests. In response to a question from Janet Sternburg, Hubbell explained that digitized project features will allow partners to calculate the amount and type of work done among projects and across geographic ranges, including systemically. This

information will help make conclusions about the program's habitat restoration accomplishments relative to its ecological goals and objectives. Hubbell said staff will explain the Database's various uses and tools in more detail at the February 2015 UMRR Coordinating Committee quarterly meeting.

Hubbell said USACE is processing a contract with UMRBA to write the 2016 UMRR Report to Congress (RTC). In response to a question from Buntin, Hubbell said allocations for the RTC are increased from previous reports to account for USACE staff contributions to the report. Buntin said he is eager to get the contract in place given the aggressive schedule that includes engaging partners in the report development and review.

Hubbell said USACE issued FY 2015 service agreements with USGS, USFWS, and the UMRS states in mid-October. Karen Hagerty noted that the land cover/land use (LC/LU) funds are included in the habitat projects line item.

Hubbell explained how District staff estimate and schedule issuances of habitat project obligations, including staff labor and construction contracts. Barry Johnson asked how labor costs of project delivery teams are estimated, noting that Beaver Island has a substantial labor cost in FY 2015. Hubbell said team members scope the work they anticipate accomplishing in the upcoming fiscal year and the required associated costs. The labor costs are primarily USACE staff working on project planning and design. Partners' time is not supported by UMRR funds. However, Hubbell noted that UMRR pays USFWS for a portion of its support in habitat project evaluations.

Hagerty said the A-Team and UMRR science managers are in the process of evaluating FY 2015 projects for science analyses that support restoration and management. She explained that these proposals will be prioritized based on their relationship to the program's mission, ability to advance program goals, level of partner coordination, and transparency. Projects currently underway will be considered a high priority. Completing seamless elevation data and equipment refreshment will also be deemed high priority. Hagerty said the following proposals will be considered medium priority: analyses advancing research frameworks, developing plan formulation models, standardizing project monitoring protocols, and efforts stemming from the UMRR Science Plan. Additional administrative factors will also be considered in selecting proposals.

Hagerty said UMRR scientists submitted 29 proposals totaling $4,012,513 for FY 2015. There is between $1.5 million and $1.9 million available for this work. Hagerty reported that, in late September 2014, USACE obligated $540,536 in FY 2015 funds for completing seamless elevation data ($420,343), publishing NED-ready LiDAR products ($93,063), and for radio-telemetry fish tags as part of the Pool 12 Overwintering adaptive management analysis ($27,130). Based on the A-Team's input, USACE and USGS science managers and the A-Team Chair will select which science projects warrant development of full proposals for funding consideration. Hagerty said she will send the recommended list of those projects to the UMRR Coordinating Committee for review in early December. She anticipates that the selected science projects will be funded in February 2015. Hagerty requested partners' feedback on the process for selecting science projects, as it is intended to focus UMRR's science on the partnership's highest priorities.

Hubbell said that, given the FY 2015-2025 UMRR Strategic Plan's goal of increasing communication, transparency, and accountability within the program partnership, he offered more details on UMRR's budget in today's presentation, including obligation and expenditures and anticipated future work. In response to a question from Hubbell, UMRR Coordinating Committee members said the information was helpful and the appropriate amount of detail.

FY 2016 Progress Report

Hubbell said District staff are working with MVD in responding to Headquarters' questions about UMRR's FY 2016 budget. He said Headquarters only feedback thus far is that there will be increased competition for funds in FY 2016 among USACE's ecosystem restoration programs and projects. It is anticipated that USACE will issue guidance for developing the FY 2017 budget in December 2014, with a deadline for submitting initial budget requests in late spring 2015.

Dru Buntin offered that, given the increased competition for USACE's ecosystem funds, the states express support to the Administration for UMRR's FY 2015 appropriation and encourage continued funding at this level. Buntin asked whether such a communication might be helpful. Col. Mark Deschenes explained that UMRR remains in high standing with Headquarters. However, Everglades and other ecosystem restoration programs are beginning to offer projects that are construction-ready and therefore might compete with UMRR. Col. Deschenes said Headquarters places a high value on stakeholder engagement and input. The state UMRR Coordinating Committee members requested that UMRBA send a letter to OMB and Headquarters on their behalf expressing appreciation for the FY 2015 appropriation and communicating that that level of funding is necessary to efficiently execute the program.

Agency Leadership Summit Update

Hubbell reported that Col. Deschenes hosted the September 18, 2014 UMRR Agency Leadership Summit at Eagle Point Park in Dubuque. The summit gathered the program's implementing partners' leaders and staff to discuss the program's history, achievements, and implementation issues that require higher-level policy considerations. The implementation issues discussed include:

a) Maximizing opportunities for increased ecological and economic benefits at authorized funding levels while maintaining and enhancing states' ongoing, active participation;

b) Working within the context of a multi-use river system; and

c) Issues facing non-federal partners in executing project partnership agreements (PPAs).

A summary of the indoor session, including presentations on the program's history and successes as well as issue discussions, is included on pages B-7 to B-10 of the agenda packet. Col. Deschenes and Hubbell expressed appreciation to the presenters, as well as Iowa DNR and USFWS staff for organizing and hosting the tour of Sunfish Lake. Iowa DNR set a great tone. Col. Deschenes said the discussions resulted in great dialogue that led to action-oriented solutions. Diane Ford said the leadership summit was a great experience that energized partner agency leaders. Ford suggested that similar events be held periodically.

Tim Schlagenhaft presented an overview of the issues facing non-federal partners in executing PPAs and the September 18 leadership discussion. Schlagenhaft said the PPAs have become very restrictive legally. The agreements include provisions that indemnify USACE, making the non-federal sponsors fully liable for unanticipated costs, including costs for damages resulting from design flaws by USACE and its contractors. The agreements also now include provisions requiring project sponsors to maintain the projects in perpetuity, rather than the life of the project, without providing a definition or cost ceiling. Schlagenhaft emphasized that these issues are precluding important opportunities to improve the river's health in areas that are in serious need of restoration.

Schlagenhaft said that, at the summit, USACE leaders expressed willingness to work with the program's non-federal sponsors to resolve the issues and acknowledged that, unless the issues are resolved, UMRR habitat projects and other USACE projects will be affected. In response to Col. Deschenes' request at the Summit, UMRR state staff and candidate nonprofit groups (i.e., The Nature Conservancy and

Audubon) have since developed a summary of the challenges facing non-federal sponsors in executing PPAs and recommendations for resolving the issues. The recommendations are to:

- Modify the hold and save clause to a more equitable, shared approach to liability that does not extend beyond the liabilities that already exist under applicable constitutions and laws.
- Include language providing that unanticipated costs for project construction are subject to a) future appropriations for the project or b) the nonprofit's availability of funds for the project. In addition, construct projects in phases when appropriate to limit cost overruns.
- Provide greater specificity regarding operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) and requirements in PPAs, rather than providing those requirements post-construction. PPA provisions related to OMRR&R should include:
  - A defined end-term that is based on the expected useful life of the project's construction features.
  - Language providing that unanticipated costs are subject to a) the state's future appropriations for the project or b) the nonprofit's availability of funds for the project.
  - Adaptive management provisions to address risk and uncertainty regarding project outcomes and the need and ability to perform OMRR&R obligations depending on whether the project features perform as intended.

Gary Meden expressed appreciation to Schlagenhaft for his presentation and to the program's non-federal partners for their efforts to identify potential solutions. Meden said District staff are committed to working with partners to help resolve the issues. He explained that, upon request, states are now able to include language in the PPAs that additional costs are subject to appropriation. USACE staff are considering similar language for nonprofits. Chris Erickson echoed Meden's comments and said the issue is challenging for other USACE programs as well. Erickson suggested that partners engage with non-federal sponsors involved in other USACE programs and projects to create an even stronger message to the Administration and Congress about the needs to modify the PPA language. Kevin Stauffer said, as the UMRR Coordinating Committee, it makes sense for members to speak specifically to the issues related to UMRR and then invite others to join the message and add to it.

Hubbell noted that The Nature Conservancy recently withdrew the Emiquon East Habitat Project due to the several issues, including the responsibilities and obligations as stipulated in the PPA and the requirements of the existing NRCS Wetlands Reserve Program lands on the site. Hubbell added that USACE staff should reconsider which PPA model that UMRR uses, noting that UMRR currently uses the continuing authorities program model for aquatic ecosystem habitat projects. He said partners can also communicate these issues in the 2016 UMRR Report to Congress.

Buntin said that, on behalf of UMRR's non-federal sponsors, UMRBA will formally transmit the PPA issue summary to Col. Deschenes by the end of November and seek his preference for how to work together in addressing the issues. He also noted that Section 1013 of WRRDA 2014 directs the National Academy of Public Administration to review USACE's PPA templates and recommend improvements. UMRBA will seek opportunities to engage in that review process.

Mark Moore encouraged partners to site specific examples of projects that are not being advanced due to the PPA issues. Schlagenhaft said he is encouraged by the attention currently being placed on resolving the PPA issues.

Col. Deschenes encouraged partners to continue pressing on this issue while it is highly visible. Col Deschenes said he has informed MVD Commander Maj. Gen. Michael Wehr about the issues during his recent visit to Rock Island. As a next step, Col. Deschenes anticipates meeting with Steve Stockton at Headquarters to discuss potential statutory changes where he will share the UMRR issue

summary. He noted that these issues will also likely affect public-private partnerships (PPAS) and these discussions will need to be considered when developing WRRDA 2014 implementation guidance. Buntin said Congressional members have expressed willingness to offer legislative changes. He said a meeting with USACE leadership would be helpful. UMRBA is willing to work with partners to resolve the issues.

In response to a question from Dan Stephenson, Col. Deschenes said he would assume these issues are likely affecting USACE programs and projects in other regions. However, he has not yet heard of any specific examples. Col. Deschenes said UMRR is a great partnership that is well respected and that he anticipates that this partnership will likely generate solutions that can be applied elsewhere. Buntin said that, as the federal government continues to prioritize projects that leverage resources with non-federal entities, these issues will become more acute and the urgency to resolve them will only increase.

Hubbell noted that leaders at the Leadership Summit also agreed that the UMRR Coordinating Committee should consider implementing continuous improvement evaluations, such as the LEEN 6 Sigma techniques. Hubbell said USACE staff will give a presentation at the February 11, 2015 UMRR Coordinating Committee meeting on continuous process improvement techniques. Jim Fischer expressed appreciation to Col. Deschenes for supporting this initiative.

Public Outreach

Jim Fischer said the external review of the FY 2015-2025 UMRR Strategic Plan offered an opportunity to engage with the public.

Tim Yager said the volunteer organization, Swan Watch, which coordinates through USFWS held a bird watch event this fall. The event overlooked Pool 8 Islands and staff highlighted UMRR's restoration efforts. Yager said the 2014 annual meeting of the Regional Refuge Chiefs was held in La Crosse in October and included a tour of Brownsville. Sharonne Baylor presented an overview of UMRR.

Hubbell said District staff briefed MVD Commander Maj. Gen. Michael Wehr on UMRR during his recent visit to Rock Island.

In response to a question from Col. Deschenes, Hubbell said UMRR does not yet have a media relations strategy and has done outreach based on individual project accomplishments. However, the FY 2015-2025 UMRR Strategic Plan includes a goal to engage strategically with external stakeholders, including the public. Col. Deschenes encouraged partners to take advantage of various media opportunities, such as interviews with local public media. Jeff Houser echoed Col. Deschenes suggestion and said Wisconsin Public Radio almost always publishes stories of USGS's press releases. Houser said La Crosse has an enormous amount of public interest in the Mississippi River. That medium offers high benefit for relatively little investment. Dru Buntin noted that the FY 2015-2025 UMRR strategic planning team envisioned developing a communications plan to focus UMRR's public engagement and outreach.

Barry Johnson said UMESC will be co-hosting an international large rivers summit in August 23-28, 2015 in La Crosse. The summit will be an opportunity to share UMRR's restoration and science accomplishments. More information on the summit can be found at http://www.uwlax.edu/conted/isrs2015/. In response to a question from Mark Gaikowski, Buntin said he will talk with the UMRBA Board about the Association's potential sponsorship of the summit.

LTRMP Element

Product Highlights

Barry Johnson presented UMRR's long term resource monitoring accomplishments in FY 2014's fourth quarter. Johnson reported that two manuscripts were published regarding 1) how Asian carp might be increasing nutrient-rich food resources for benthic feeders and 2) characteristics of American eel populations. Because Asian carps' assimilation efficiency is low, they egest energy-rich fecal pellets that are showing to be a food source for benthic fishes or invertebrates. In addition, a completion report was published describing the recent ecological shift in Pool 4. Johnson explained that, between 2005 and 2011, Pool 4 has experienced low flow as well as increased frequency of submersed vegetation of 29 percent in upper Pool 4 and 36 percent in lower Pool 4, as well as increases in relative abundances of fish associated with vegetation. These results indicate that vegetation and fish can respond to changes in habitat conditions.

Johnson said USGS staff hosted an October 27, 2014 webinar to describe UMRR's long term resource monitoring database structure, applications, and visualization tools as well as how to access the information. The webinar was open to interested stakeholders, with announcements sent to UMRR partners and various river-related mailing lists. An estimated 50 to 60 people participated, including federal agency, state, and nonprofit, academic and other representatives, with about half of the participants not directly involved in UMRR's implementation. The webinar included an overview of the database by Jennie Sauer followed by presentations on each of the component areas by the respective component specialists. Johnson said USGS plans to hold similar webinars periodically. Improvements identified from the October 27 webinar include planting questions among participants to trigger discussion, preparing more pre-planned examples of ways to use the data, and only focusing on one or two components per webinar.

Johnson also listed the many individual contributions to outreach and assistance to internal and external stakeholders.

Draft Science Plan

Johnson explained that, as an outgrowth of the February 15-17, 2014 UMRR Science Meeting, staff from UMESC and the five states developed a three-year science plan that focuses UMRR's efforts related to aquatic vegetation, native mussels, landscape patterns, water quality, fish, statistics, and other program-wide science needs. The three-year plan is intended to serve as link between the FY 2015-2025 UMRR Strategic Plan and annual scopes of work. Johnson presented an initial draft FY 2015-2017 UMRR Science Plan, which outlines the program's science priorities as provided in the FY 2015-2025 UMRR Strategic Plan, research frameworks for various monitoring components, and other partnership planning documents. He shared an example from the science plan of a three-year implementation strategy to evaluate the effects of habitat projects on native mussel communities. Johnson said he will distribute the draft plan to the UMRR Coordinating Committee for input.

Marv Hubbell said a science plan has great potential as a tool for better organize the program's science activities by connecting concepts and ideas. Col. Mark Deschenes asked to what extent UMRR addresses nutrient levels in the Upper Mississippi and contributions to the lower Mississippi River and Gulf of Mexico. Jeff Houser explained that habitat projects directly improve nutrient levels in the immediate surrounding area, that in turn increase the success of project outcomes. Hubbell added that water quality monitoring includes nutrients. Col. Deschenes added that the UMRR monitoring information on nutrients can help inform the overall discussion of the Midwest's nutrient contributions to the Gulf of Mexico. Jim Fischer suggested that the science plan include a brief description on the relevance of the science activities to restoration and management.

USACE's LTRMP Element Report

Karen Hagerty said an updated FY 2014 scope of work milestone chart for science in support of restoration and management is included on pages C-9 to F-11 of the agenda packet. Hagerty said she will develop a similar scope of work for FY 2015 and make it available on USACE's UMRR website.

Draft UMRR Invasive Species Policy

Hagerty presented a draft UMRR Invasive Species Policy, dated October 31, 2014, that is included on page C-12 of the agenda packet. The policy explains UMRR's roles and responsibilities regarding invasive species, given its authorization, Corps policy, and other national invasive species policies. The roles and responsibilities include reporting/communicating findings, researching impacts on native species and the ecosystem, and designing habitat projects in ways that provide advantages to native species, as well as communicating UMRR's role in understanding historic and existing conditions of the UMRS ecosystem.

In response to a question from Ken Westlake, Hagerty requested that partners send her input on the draft plan by January 16, 2015. Based on that input, Hagerty will present a revised version to the UMRR Coordinating Committee at its February 11, 2015 meeting for consideration of endorsement.

In response to a question from Janet Sternburg, Hagerty said this policy paper replaces the invasive species white paper approach to outline and prioritize research questions, which had extended beyond UMRR's authorization. She explained that it appeared the most immediate need is to document and communicate UMRR's roles and responsibilities in addressing invasive species.

Kevin Stauffer suggested that a statement be added that the state laws and regulations related to invasive species will be followed, when applicable. Stauffer said he will send draft language to Hagerty.

A-Team Report

Sternburg reported that the A-Team met in person on November 6, 2014 in Rock Island. The team discussed the FY 2015-2025 UMRR Strategic Plan and FY 2015 proposals for long term resource monitoring research and analysis. The proposal leads were available via conference call to respond to questions and comments. Sternburg said the A-Team has submitted its ranking of proposals. She noted that Hagerty had already described the process for ranking and selecting the proposals earlier in the meeting. Sternburg observed that partners generally like this process for selecting science research and analysis projects. She reported that Mike McClelland from Illinois DNR will serve as the A-Team Chair starting in April 2015.

Science Highlight: Resilience of the Upper Mississippi River Ecosystem

Jeff Houser explained that, after considerable debate about its meaning and relevance, the UMRR strategic planning team agreed to use the term resilience in the statement about partners' vision for the river ecosystem. The vision is for "a healthier and more resilient Upper Mississippi River ecosystem that sustains the river's multiple uses." Houser explained that, although the concept of ecosystem resilience has been around for nearly 40 years, it has primarily been discussed only within the academic community. And, while there has been recent interest in using the term, there are only a few examples of it being applied in a natural resource management context. Houser articulated that applying the concepts to UMRR's implementation will be challenging.

Houser explained that the term resilience has multiple meanings. The two most prominent meanings are engineering resilience (or stability) and ecological resilience (or long-term persistence). Engineering resilience represents the ability or tendency of a system to return to its original stable state, or equilibrium, following a disturbance. Houser provided an example of a ball in a cup returning to the middle after being shaken. Where the cup is the ecosystem and the ball represents components that respond to disturbances in the ecosystem, such as water quality or vegetation abundance. The shape of the cup is determined by changing variables in the system, such as floodplain elevation, catchment land use, or diversity of biota. In a system where there is more than one equilibrium, or ecosystem, the ecological resilience is the ability or tendency to move between systems to a different equilibrium state following disturbance. A change in the system's characteristics would alter its resilience. For example, a taller cup would make the ball more resilient from moving to a different cup when shaken.

Houser explained that partners will need to consider several factors for applying ecological resilience to UMRR's implementation, including:

- What are ecological characteristics of greatest interest — e.g., water clarity, bluegill abundance?
- What ecological disturbances are of greatest concern — e.g., climate change, large flood events, species invasion, modifications for commercial navigation?
- What defines the current "state" of the UMRS ecosystem? Perhaps defined by bathymetry or distribution of floodplain elevation, hydrologic regime, fish and vegetation species and community composition, basin land use, and so on.
- Is the current "state" of the ecosystem acceptable? Is it acceptable in some areas and not others?
- What do we know about other states that are possible given the myriad of management constraints?
- What would the UMRS look like in 25, 50, 100 years with no additional management actions? Which of those changes would we most want to prevent?

Houser provided a few illustrations of how shifts in ecological components and drivers may have altered the ecosystem resilience over time and where the current state may be. He overviewed various characteristics of the UMRS's longitudinal orientation and connectivity and lateral diversity that define its ecological resilience, as well as examples of management options to influence its ecological resilience.

Houser said this information will provide a context to define restoration goals and objectives as well as metrics to monitor progress related to the river's ecological significance. Houser explained that resilience-based management:

- Views events in a regional, rather than local, context
- Emphasizes heterogeneity
- Recognizes ignorance rather than presuming sufficient knowledge
- Does not require a precise capacity to predict the future, but rather a qualitative capacity to devise systems that can absorb and accommodate future events
- Recognizes that ecosystems are moving targets with multiple potential futures that are uncertain and unpredictable
- Allows for addressing gradual changes that affect resilience rather than focus all effort trying to control disturbance and fluctuations

Jon Duyvejonck noted that partners will also need to identify any impediments to achieving a desired state. Tim Schlagenhaft suggested that floodplain connectivity could be a major factor in ecological resilience that partners spend relatively little resources addressing. Schlagenhaft said it would be helpful to better understand the importance of various drivers on ecosystem resilience in order to prioritize management goals. Houser said there will be differences in drivers and their relative influence among the river floodplain and geomorphic reaches.

Jim Fischer recognized that, while science and monitoring can define the current state and the influence of various drivers, defining a desired end state is a social question that will present a unique challenge. Houser agreed and acknowledged that the UMRS, as well as other ecosystems, are social-economic systems as well. Bob Clevenstine advised that, given the social and economic implications, an outreach component is a part of any effort to define ecological resilience. Johnson said ecological resilience is a term that is resonating among the public and public officials. He applauded Houser for his explanation of how the concept of ecological resilience can be applied to the UMRS. Johnson observed that the UMRR is well-suited to be the leader in applying and making useful the concept of ecological resilience in a management context. Marv Hubbell thanked Houser for his presentation. Hubbell said the partnership will need to be prepared to select the program's next generation of habitat projects based on the UMRS's ecological resilience.

Draft FY 2015-2025 UMRR Strategic Plan

Marv Hubbell recalled that, at the November 2012 quarterly meeting, the UMRR Coordinating Committee agreed to develop a strategic plan for the entire program that would 1) articulate a partnership vision to guide the program's implementation, 2) ensure continued delivery of products and services that are nationally significant and regionally relevant, 3) create a plan that would encompass the program's entire range of activities, and 4) reinforce the program's commitment to regional partnership and collaboration with others beyond the program. Hubbell said the plan outlines the program's key approaches to enhancing restoration and advancing knowledge necessary for a healthier and more resilient Upper Mississippi River ecosystem that sustains the river's multiple uses. The plan also fosters UMRR's longstanding commitment to internal and external communication and collaboration among the many organizations and individuals that are working for a better UMR ecosystem.

Hubbell said the strategic planning team included 21 UMRR partners that represented a broad range of program activities. The planning effort was initiated in April 2013 and included seven committee meetings. Hubbell said the planning team employed an internal targeted review of an April 11, 2014 draft UMRR Strategic Plan where each team member was responsible for obtaining feedback from the groups or individuals it represents on the team. At its August 2014 quarterly meeting, the UMRR Coordinating Committee approved a July 17, 2014 revised draft UMRR Strategic Plan, which reflected the internal review, for use in a broader targeted stakeholder review. Under this broader review, the team members were responsible for seeking input from interested organizations or individuals within their respective state or with whom they work closely. A revised draft, dated October 14, 2014, that reflects comments from the broad stakeholder review is included on pages D-3 to D-22 of the agenda packet. Hubbell said the strategic planning team is recommending that the UMRR Coordinating Committee endorse the plan as provide in the agenda packet.

Tim Yager asked the UMRR Coordinating Committee for any discussion on the plan and a potential endorsement by the Committee. Jim Fischer said defining operational actions to implement the Strategic Plan that are understood by all partners will be very important to its success. Public groups commenting through the broad stakeholder review also stressed this point. Fischer suggested that the Strategic Plan include an explicit intention to develop an implementation plan. Kevin Stauffer agreed. In response to a question by Hubbell, the UMRR Coordinating Committee said their preference is for a brief description of an operational plan, rather than a detailed description of the approach. Diane Ford

moved and Dan Stephenson seconded a motion to endorse the FY 2015-2025 UMRR Strategic Plan with the additional language explaining next steps to develop a follow-on implementation document and inclusion of Col. Mark Deschenes' introduction letter. The motion was approved by a voice vote. Kirsten Mickelsen said she will send an updated version to the UMRR Coordinating Committee for approval.

In response to a question from Mickelsen, the UMRR Coordinating Committee agreed to convene a call within the next month to set up an *ad hoc* group that would make recommendations to the Committee of actions for implementing the Strategic Plan. A progress update will be given at the February 11, 2015 UMRR Coordinating Committee meeting.

Habitat Rehabilitation and Enhancement Projects Element

District Reports

St. Louis District

Brian Markert reported that MVS has completed plans for Rip Rap Landing and said design work on the project is pending sponsor support letters. MVS's planning priorities are Piasa and Eagles Nest Islands and Harlow and Wilkinson Islands. Markert said Clarence Cannon is the District's primary design effort, while the District is also finalizing designs for Ted Shanks' pump station. Final construction on Batchtown and Pools 25 and 26 Islands is nearing completion. The District is still considering options for the next generation of habitat projects. Markert said District staff obtained LiDAR data on some specific projects for use in design work. That data are currently being processed. In response to a question from Jennie Sauer, Markert explained that planning for these habitat projects requires LiDAR at a finer resolution — i.e., 1 foot.

St. Paul District

Tom Novak reported that MVP awarded a $12.3 million construction contract for Harpers Slough, with a $6 million base contract awarded in the last weeks of FY 2014 and two options totaling $5.9 million awarded in October. Construction on Capoli Slough is wrapping up. Novak said the District's planning priorities include North and Sturgeon Lakes, Conway Lake, and McGregor Lake.

In response to question from Sauer, Novak said all three UMRS Districts are planning to input habitat project monitoring data into the UMRR Regional Database.

Rock Island District

Hubbell explained that MVR is accelerating its planning efforts on Keithsburg and Beaver Island, with Beaver Island being the highest priority. He said design work continues on Pool 12 Overwintering Stage II and Huron Island Stage II. USACE staff anticipate that construction of Huron will be initiated in FY 2016, Beaver Island in FY 2018, and Keithsburg in FY 2019. The District is also continuing construction work on several habitat projects. Given that Emiquon East has been withdrawn, MVR is able to accelerate work on other habitat projects. Performance evaluations are underway for the Bertom and McCartney, Pool 11 Overwintering, and Chautauqua habitat projects.

New Project Starts

Hubbell said UMRR will initiate a "data-driven" process in the second quarter of FY 2015 for selecting new habitat project starts. The planning effort will be informed by partners' expertise and experience, the FY 2015-2025 UMRR Strategic Plan and other planning documents, and decision support tools.

UMRR will not need new project starts as quickly as previously anticipated, which was assumed to be in 2017. Hubbell said partners should consider lessons learned from previous project selection efforts to make this effort more effective and efficient. He will provide a more detailed process scope and timeline at the UMRR Coordinating Committee's February 11, 2015 meeting.

Environmental Design Handbook

Jon Hendrickson presented on the content and lessons learned described in the 2012 UMRR Environmental Design Handbook. Hendrickson explained that the 2012 version is an update to the 2006 Handbook, which was created to document and communicate lessons learned about restoration techniques and habitat project planning. The Handbook, developed in collaboration with UMRR partners, documents the details the program's use of project features and design methodologies, as well as lessons learned in project planning and engineering. The Handbook is available online at http://www.mvr.usace.army.mil/Portals/48/docs/Environmental/EMP/HREP/EMP_Documents/2012%20UMRR%20EMP%20Environmental%20Design%20Handbook%20-%20FINAL.pdf. Hendrickson overviewed the Handbook's content and layout and described how partners can use the Handbook to inform future project planning. Hendrickson also explained how the document illustrates the connections between system, reach, and project ecological objectives, project criteria, and management actions.

Jim Fischer noted that Table 2-6, on pages E-1 to E-7 of the agenda packet, indicate that UMRR will promote the use of dredged material in its habitat projects. In response to a question from Fischer, Hendrickson said MVP considers the use of dredged material in constructing habitat projects and does so when it makes sense, depending on the material's content. Material from backwaters is typically best to use, rather than from the main channel. He said North and Sturgeon Lake is aiming to use material from the main channel.

Habitat Project Highlight: Harpers Slough

Tom Novak presented on the selected project features for Harpers Slough habitat project and explained how they will work towards advancing ecological goals and objectives for the site. Harpers Slough is approximately 3,500 acres located in Pool 9 on USFWS lands. Novak said project construction will be initiated spring 2015 and is anticipated to be completed in FY 2019. He illustrated historic conditions and the ecological issues occurring in the project site, particularly arising from a loss of islands. Through the construction of new islands, it is anticipated that the islands will protect the existing islands, restore habitat including for vertebrate species, reduce wave action, alter flows, and improve the extent and quality of aquatic vegetation. Specifically, the project goals are to maintain and/or enhance habitat in backwaters for migratory waterfowl birds, create habitat for migratory and resident vertebrates, enhance channel habitat for riverine fish and mussel species, and create and maintain protected lacustrine habitat for backwater fish species. Novak provided an overview the five alternative project designs and the selected plan. Novak said lessons learned from Capoli Slough were incorporated into Harpers Slough design and construction. He overviewed how two-dimensional flows of overwintering and flood stage impacts.

In response to a question from Jim Fischer, Novak expressed a need to improve habitat evaluation models. Hubbell agreed and said partners can request the use of a new model as part of a project feasibility study. He observed that developing a model that can accurately capture project benefits has been challenging. Kat McCain explained that the use of project design models has been challenging. USACE is currently transitioning from using community-based models, such as the aquatic habitat appraisal guide (AHAG), to habitat-based models. McCain said there will be overlapping issues with using the two model types. Hubbell mentioned that environmental benefits were not historically required. However, now with more sophisticated technology, there are more demands on estimating

and evaluating project outcomes. Dave Potter added that some models are not conducive to post-project monitoring and it should be an ability of any new model. Hubbell said partners may consider this as part of the science plan.

Navigation and Ecosystem Sustainability Program

Michael Tarpey reported that MVD reallocated $50,000 to the Navigation and Ecosystem Sustainability Program (NESP) in FY 2014. Today's presentation is meant to provide a brief historical overview of NESP and update partners on NESP's plans with current and any future funds. Tarpey overviewed NESP's feasibility study and authorization, including the navigation and ecological problems the program is designed to address. Tarpey recalled that USACE ASA(CW) has not yet advanced a Chief's Report for the program due to uncertainties in economic forecasts on the navigation component. The ASA(CW) has requested further economic analysis to support a positive Chief's Report.

Tarpey explained that the Inland Waterways Trust Fund's (IWTF's) revenue shortfalls have limited construction and major rehabilitation of the nation's inland waterways infrastructure. Given other national priorities, it is estimated that IWTF monies will not be available for UMRS infrastructure projects authorized in NESP until 2037. However, Tarpey explained that NESP's planned infrastructure improvements are still needed now to improve the system's reliability and efficiency and in the future to support traffic growth.

Tarpey reported that MVD reallocated $50,000 in FY 2014 funds for the purposes of developing a plan to update cost estimates and economics of constructing the navigation improvements. He asked partners to contact him with any questions and suggestions to consider in updating cost estimates.

Markert observed that industry is anticipating increasing traffic on the UMRS given the significant backlog in shipping the Midwest's agriculture products to export markets. Tarpey agreed and said the Panama Canal expansion is likely to expand the geographic area that uses the UMRS. Tim Schlagenhaft asked if the benefits received are estimated to make the investments now worthwhile, given the significant costs of building new locks, until estimated growth trends are proven. Tarpey said investment now will at least buy down the risk by having the infrastructure available to accommodate shipping demand when it does emerge and reduce the lag time associated with designing and building the new locks. Marv Hubbell noted that the current state of the infrastructure is such that investment to replace the locks will be required regardless. Dru Buntin agreed with Tarpey's comment and said the UMRS Governors wrote an August 20, 2014 letter to the President seeking funds for NESP to start planning on at least one lock so that the system is prepared to accommodate future growth. The letter also asked that small scale measures that are construct-ready are implemented. Buntin acknowledged that this summer's closure of L&D 26's main chamber proved the economic value of having a second chamber. Given the current constraints in rail and truck shipping, the states, Congress, and industry are joining in support for NESP.

Jon Duyvejonck expressed concern that the comparable progress provision in NESP's ecosystem component is not being considered. Kirsten Mickelsen said UMRBA has been emphasizing the need for comparable progress with the state DOTs and others when discussing the history of the river's dual purpose authority, NESP's authorization, and P3s. Buntin added that it is challenging to consider how the comparable progress will influence P3s, including how a private investor might advance an ecological restoration project. In response to a comment by Hubbell about the UMRR/NESP Transition Plan, Buntin suggested that partners are far from the point at which there will be a need for a transition. However, partners will need to keep the provisions in mind going forward.

Other Business

Future Meetings

The upcoming quarterly meetings are as follows:

- **February 2015 — Quad Cities**
  - UMRBA — February 10
  - **UMRR Coordinating Committee — February 11**
- **May 2015 — St. Louis**
  - UMRBA —May 10
  - **UMRR Coordinating Committee — May 11**
- **August 2015 — La Crosse**
  - UMRBA — August 4
  - **UMRR Coordinating Committee — August 5**

With no further business, the meeting adjourned at 2:20 p.m.

UMRR Coordinating Committee Attendance List
November 19, 2014

UMRR Coordinating Committee Members

Mark Moore	U.S. Army Corps of Engineers, MVD
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges
Mark Gaikowski	U.S. Geological Survey, UMESC
Dan Stephenson	Illinois Department of Natural Resources
Diane Ford	Iowa Department of Natural Resources
Kevin Stauffer	Minnesota Department of Natural Resources
Janet Sternburg	Missouri Department of Conservation [On the phone]
Jim Fischer	Wisconsin Department of Natural Resources
Ken Westlake	U.S. Environmental Protection Agency, Region 5[On the phone]
Jon Hubbert	U.S. Department of Agriculture, NRCS

Others In Attendance

Renee Turner	U.S. Army Corps of Engineers, MVD
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Jon Hendrickson	U.S. Army Corps of Engineers, MVP
Tom Novak	U.S. Army Corps of Engineers, MVP
David Potter	U.S. Army Corps of Engineers, MVP
Col. Mark Deschenes	U.S. Army Corps of Engineers, MVR
Gary Meden	U.S. Army Corps of Engineers, MVR
Marvin Hubbell	U.S. Army Corps of Engineers, MVR
Ken Barr	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Michael Tarpey	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
Kraig McPeek	U.S. Fish and Wildlife Service, RIFO
Bob Clevenstine	U.S. Fish and Wildlife Service, UMR Refuges
Jon Duyvejonck	U.S. Fish and Wildlife Service, RIFO
Scott Yess	U.S. Fish and Wildlife Service, UMR Refuges
Barry Johnson	U.S. Geological Survey, UMESC
Jeff Houser	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Robert Stout	Missouri Department of Natural Resources
Tim Schlagenhaft	Audubon Minnesota
Don Powell	SEH, Inc.
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association