

**Minutes of the
Upper Mississippi River Restoration
Environmental Management Program
Coordinating Committee
(UMRR-EMP CC)**

**August 6, 2014
Quarterly Meeting**

**Holiday Inn & Suites
East Peoria, Illinois**

Mark Moore of the U.S. Army Corps of Engineers called the meeting to order at 8:03 a.m. on August 6, 2014. Other UMRR-EMP CC representatives present were Tim Yager (USFWS), Kevin Richards (USGS), Dan Stephenson (IL DNR), Diane Ford (IA DNR), Kevin Stauffer (MN DNR), Janet Sternburg (MO DoC), Jim Fischer (WI DNR), Liz Pelloso (USEPA) on behalf of Ken Westlake, and Jon Hubbert (NRCS). A complete list of attendees follows these minutes.

Minutes of the May 14, 2014 Meeting

Olivia Dorothy noted that Claudia Emken is with the Mississippi River Network, not the Sierra Club as is indicated on page A-2. Kevin Stauffer moved and Diane Ford seconded a motion to approve the draft minutes of the May 14, 2014 meeting with the correction. The motion carried unanimously.

Regional Management

FY 2014 Fiscal Update

Marv Hubbell reported that UMRR-EMP is on schedule to fully execute its FY 2014 appropriation of \$31.968 million. Allocations within the program for FY 2014 are as follows:

- 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 said questions have been raised about UMRR-EMP's spending on science relative to the recent increase in appropriations. He explained that the program's overall spending on science in FY 2014 is \$7.754 million, which includes \$314,000 for regional management, \$5.4 million for base monitoring (includes FY 2013 carry-over funds), \$1.065 million for research and analysis to inform restoration, and \$325,000 for standardizing the program's habitat project monitoring protocols. In response to a question

from Olivia Dorothy, Hubbell said Section (e)(6) of UMRR-EMP's authorization allows for transferring up to 20 percent of the amounts authorized for the HREP and LTRMP elements.

FY 2015 President's Request

Hubbell reported that the FY 2015 President's budget request for UMRR-EMP is \$33.17 million, which is its full annual authorized amount. This funding level is substantially more than its average annual appropriations. Hubbell attributed this increase in funding to the collective contributions of program partners as well as the success in executing the additional funds. Together, all partners increase the program's capabilities and diffuse risk. The partnership also provides a great diversity of ways to accomplish the program's mission.

Agency Leadership Summit Update

Hubbell said Col. Mark Deschenes will host the UMRR-EMP agency leadership summit on September 18, 2014 at Eagle Point Park in Dubuque. The event will include an indoor discussion session in the morning and a field trip to Sunfish Lake in the afternoon. The Bellevue Field Station will provide an electrofishing demonstration during the field trip. Hubbell recalled that the 2013 Implementation Issues Assessment included a recommendation to occasionally engage implementing partners' leaders to inform them of the program's activities and address important issues for the program, including funding and staff resources. Other discussion topics identified by partners include developing messages about UMRR-EMP's compatibility to navigation and the river's other human uses, the draft 2015-2025 UMRR Strategic Plan, and emerging issues affecting the river's ecosystem. Hubbell asked partners to send him suggestions on the discussion topics by August 31. He said a team of volunteers will develop an agenda and consider how to best frame the indoor discussions. Volunteers include Dru Buntin, Jim Fischer, Diane Ford, Marv Hubbell, Kirsten Mickelsen, Tim Schlagenhaft, and Janet Sternburg.

Schlagenhaft suggested that the indoor session include a discussion on the indemnification issues in non-federal cost share agreements that limit some partners from becoming project sponsors. Even though the issue is broader than UMRR-EMP, it affects the program's ability to implement projects in some opportune areas. Kevin Stauffer said the issue is problematic for Minnesota and precludes the state from serving as a cost share sponsor.

Diane Ford suggested including a briefing on UMRR-EMP's history, partnership, and accomplishments, similar to Hubbell's March 5, 2014 presentation to the Iowa General Assembly House Natural Resource Committee. Fischer agreed and said it will be important to tell a story of UMRR-EMP's growth throughout its history and demonstrate the value of the partnership and the value of the program to each state. Fischer suggested inviting the agency leaders to speak about their respective agencies' perspectives on the river and the program. Jon Hubbert suggested including displays of other watershed programs and efforts that relate to the program.

In response to a question from Mark Moore, Hubbell said save-the-date invitations were sent to agency leaders on behalf of Col. Deschenes. Jim Fischer asked whether invites should include local conservation organizations, Mississippi River Cities and Towns Initiative (MRCTI), and other groups working on the river. Buntin said MRCTI's fall meeting conflicts with the leadership summit. Previously, the hope was to invite Mayor Roy Buol, MRCTI's co-chair and summit's host city mayor, to speak about the program from a local perspective, as well as from an MRCTI perspective. Col. Deschenes supported the notion to engage stakeholders more broadly; however, the summit's goal and discussion topics may not be suitable or productive with a larger audience. He also recognized the value of having the agency leaders together in-person and providing a forum for them to engage directly in the program. The leadership summit includes strategic issues that require more focused attention. This event is an opportunity for strategic

alignment among the partner agencies. Col. Deschenes reiterated the need for UMRR-EMP to do outreach to stakeholders along the river, though perhaps in a separate effort.

Ford suggested providing information on the economic benefits of the program to the states. In response to a question from Ford, Mickelsen recalled that, prior to the event's postponement in June, the summit planning team agreed to table agenda development for the indoor discussion until closer to the event to see which issues are more timely and relevant, especially given the passage of the 2014 Water Resources Reform and Development Act in June 2014. Mickelsen noted that the UMRR-EMP CC had considered the invitees and agreed to invite the program's participating agency leaders only to keep the discussion focused and allow for more time and attention for partners to seek the leaders' input on issues.

Olivia Dorothy asked Hubbell to elaborate on what might be addressed in the discussion about UMRR-EMP's relationship to navigation. Hubbell explained that Congress UMRR-EMP's 1986 authorization included construction of L&D 26's 1,200-foot chamber, with the declaration that the UMRS is a dual purpose river. Hubbell said the program needs to demonstrate that it works in conjunction with the river's navigation system. Mickelsen added that the idea was to seek input from leaders about messaging and how to ensure that the importance of ecosystem restoration is understood and not viewed as competing with navigation dollars. It is critical that partners continually communicate the importance of managing the river in an integrated, balanced fashion so that it does not appear to be a zero-sum game. Ford suggested that a context is provided about how NESP was developed and formed to be a dual-purpose program.

Barry Johnson suggested highlighting the program's development of its science component and the program's science goals as outlined in the 2012-2025 UMRR Strategic Plan, particularly for its use in evaluating river health and resilience. Hubbell agreed and said he anticipates that will be part of the overall program briefing.

Stauffer acknowledged the need to educate senior leaders on UMRR-EMP and agreed that broader stakeholder engagement should occur in a separate effort. Fischer agreed.

In response to a question from Hubbell, Col. Deschenes recommended including some time for discussion at Sunfish Lake to capture leaders' reflections after being in the field.

Public Outreach

Hubbell said Col. Mark Deschenes will host a ground breaking ceremony for the Pool 12 Overwintering HREP on August 20, 2014. Hubbell said a public meeting was convened during the project's formulation stage that proved effective.

Tim Yager said the annual meeting of the Regional Refuge Chiefs will be held in La Crosse and will include a tour of Brownsville.

Jim Fischer said that, by happenstance, three Wisconsin groups coordinated on a boat tour of the river. The groups included orientation training for new DNR employees from across the state, Department of Transportation staff, and DNR Environmental Assessment staff. Fischer said Wisconsin Public Radio aired an interview with Jeff Janvrin on Capoli Slough.

Kevin Richards said Barry Johnson is scheduled to take Anne Castle, USDOJ's Assistant Secretary for Water and Science, on a boat tour on the Upper Mississippi River and will discuss UMRR-EMP's restoration and science efforts.

Draft UMRR Strategic Plan

Marv Hubbell said the UMRR-EMP strategic planning team held a web-based conference call on July 14, 2014 to revise the draft 2015-2025 UMRR Strategic Plan based on an internal targeted review of the April 19 version. Under this approach, each team member sought input from groups and/or individuals that he/she represented on the team. The planning team would like to recommend the revised draft 2015-2025 UMRR Strategic Plan, dated July 17, 2014, to the UMRR-EMP CC for approval to use in a broader targeted stakeholder review process. This draft is provided on pages C-1 to C-20 of the agenda packet.

The team also held a conference call on July 16, 2014 to discuss that review process as well as implementation planning for achieving the plan's goals and objectives. Hubbell said the team agreed to create a list of new or improved actions that partners will need to do to achieve the Plan's vision, mission, and goals. This list will be used to describe and communicate the plan's implementation, rather than through an extensive operational plan or through budgeting, which proved to be too complex and potentially problematic. The team agreed to only describe new or improved actions based on the strategic plan in order to focus communication on the things that would change, rather than providing an extensive list of the program's continued functions. Hubbell and Barry Johnson are developing the list of actions and will present it at the November 19, 2014 UMRR-EMP CC quarterly meeting.

Diane Ford moved and Jim Fischer seconded a motion to approve the July 17, 2014 draft 2015-2025 UMRR Strategic Plan for a broader stakeholder review. The motion passed unanimously. Ford applauded the planning team's efforts in developing the plan and overcoming long standing program challenges. Hubbell echoed Ford's sentiment, and expressed appreciation to the team members for their time and resources invested in the planning effort.

Karen Hagerty offered USACE's website as a venue to share the draft Strategic Plan and receive comments. Tim Yager asked for clarification on the review process and how input will be solicited — e.g., a press release. Kirsten Mickelsen explained that the planning team agreed to recommend a targeted review process to obtain input from stakeholders who have an interest in UMRR-EMP's implementation. This process would be similar to the internal targeted review, where individual team members would be responsible for connecting with the interested organizations and individuals in their states or who they work closely with. This approach was chosen because outreach requirements are different within each state and members' affiliations. It also seemed to be the most appropriate process given the likely feedback received from various audiences and the resources involved in seeking and considering input. Hagerty said the UMRR-EMP's website has a placeholder for organizations and individuals to submit feedback. Col. Mark Deschenes observed that there appears to be little downside to a broader public announcement. Hubbell said USACE can draft a general public press release regarding the review for partners to use. USACE will use its website for submitting comments and will also offer a postal mail option. Mickelsen said she will follow up with the planning team regarding timing and logistics with using this approach.

Implementation Issues Assessment

Marv Hubbell reviewed the issue areas addressed in the 2013 Implementation Issues Assessment (IIA) and asked that partners consider which implementation issues merit exploration in the 2016 UMRR-EMP Report to Congress. Hubbell explained that partners agreed to develop the IIA as a follow-on report to the 2010 RTC to address a variety of outstanding policy and programmatic issues and challenges that were not thought to require Congressional action. He said there is sufficient lead time to address these issues in the 2016 RTC. The 2013 IIA issue areas included the following:

- 1) Land Acquisition
- 2) Delegated Authority

- 3) Habitat Project Types
- 4) Habitat Project Planning and Prioritization
- 5) Construction Cost Sharing
- 6) Nonprofits as Cost Share Sponsors
- 7) Habitat Project Evaluations
- 8) Capacity for Operation and Maintenance
- 9) Long Term Resource Monitoring Program Implementation
- 10) Adaptive Management
- 11) Emerging Trends and Issues
- 12) State Participation and Leadership Support

Bob Clevestine suggested evaluating options to streamline project review that would allow partners to effectively engage. Hubbell said USACE is making improvements in minimizing planning documentation through its national 3x3x3 rule as well as at the programmatic level. However, even more improvement can be made. He suggested that partners continue to work together in exploring ways to accelerate project review. Janet Sternburg agreed that project planning is becoming more efficient. However, Sternburg suggested that partners consider efficiencies in the planning process itself. As an example, Hubbell said USACE is striving to keep team members together working on similar projects, creating substantial efficiencies and reducing planning time. For example, Beaver Island was deliberately scheduled to proceed immediately following Huron Island with the same HREP District staff involved. The projects are very similar and applications from Huron Island could be transferred to Beaver Island.

In response to a question by Col. Mark Deschenes, Hubbell said UMRR-EMP has not yet undergone a continuous process improvement evaluation. Hubbell explained that USACE approved the 2012 UMRR-EMP Regional Review Plan that guides and streamlines HREP reviews and enhances consistency among Districts. Col. Deschenes suggested that UMRR-EMP CC consider the merits of doing a process improvement evaluation for all or a specific aspect of the program to proactively seek further efficiencies. He said Rock Island District has staff who are trained in LEEN Six Sigma that can facilitate UMRR's effort. The UMRR-EMP CC agreed to explore this issue's potential for inclusion in the 2016 UMRR-EMP Report to Congress.

Hubbell said he would like for partners to continue exploring the issues related to cumulative O&M. This issue is particularly important for USFWS, which is responsible for O&M on about 70 percent of UMRR's completed habitat projects. Tim Yager said Sharron Baylor of USFWS can provide a summary of the agency's O&M costs. Hubbell suggested that this information is presented at a future UMRR-EMP CC quarterly meeting.

Observing the overlap among the 2013 IIA issues, Gretchen Benjamin suggested considering their relationships and integrating them in order to consolidate the number of issues. Jim Fischer agreed that the issues are interrelated, and said now that the FY 2015-2025 UMRR strategic planning process is nearing completion, it is time to consider advancing the IIA recommendations. Todd Strole suggested considering as an issue how to better coordinate with other federal agencies when developing projects. For example, Emiquon East habitat project includes NRCS lands that are subject to easements and other authorities.

Hubbell asked partners to consider what implementation issues merit inclusion in the 2016 UMRR-EMP Report to Congress. The UMRR-EMP CC will discuss potential issues at its November 19, 2014 quarterly meeting.

Habitat Rehabilitation and Enhancement Projects Element

District Reports

St. Louis District

Tim Eagan said MVS anticipates that Clarence Cannon's definite project report (DPR) will be approved by the end of this fiscal year and that design work on the project will begin in early FY 2015. MVS's other planning priorities are Rip Rap Landing and Piasa and Eagles Nest Island. The District recently held an open house for Rip Rap Landing. Planning will likely be initiated soon on the Harlow and Wilkinson Middle River project. Eagan said USFWS is assisting in identifying project opportunities for habitat restoration projects in the Open River reach. In addition, District staff and sponsors for Horseshoe Lake are considering the possibility of moving the project from Section 206 to UMRR-EMP. A meeting is forthcoming to discuss the project's future. Eagan said final construction details on Pools 25 and 26 Islands are nearing completion. He reported that USACE performed emergency modifications to Ted Shanks to repair flood damages; the damages were less than first estimated. In response to a question from Doug Blodgett, Eagan said Illinois DNR is the non-federal sponsor for Rip Rap Landing and that there is a compatible use agreement needed on the project site. USACE is working with the project sponsors and NRCS to develop the agreement.

St. Paul District

Marv Hubbell said Harpers Slough's DPR was approved in July and the District anticipates awarding a construction contract on Stages 1 and 2 of the project this fiscal year. Hubbell noted that high water has slowed construction work on Capoli Slough this summer. Kevin Stauffer said MVP staff have done a great job in keeping North and Sturgeon Lake project advancing. Tim Yager said the District recently held a July 31, 2014 public meeting on the Conway Lake project in Prairie du Chein, Wisconsin.

Jim Fischer noted that Harpers Slough would be a good example to explore how project planning could be better streamlined. Yager agreed, and said planning for Harpers Slough took much longer than typical. In response to a question from Col. Mark Deschenes, Hubbell said UMRR-EMP CC is the appropriate forum to explore process reforms. In addition, the Design Handbook for the HREP element shares insights gained from designing projects that are used to gain efficiencies in project planning. Fischer suggested that an *ad hoc* group be created to identify opportunities to streamline project planning. As a first step, USACE staff could coordinate the river teams' activities. Hubbell said the May 28, 2014 joint conference call with all four river teams' proved successful in sharing programmatic issues and updates in a coordinated fashion and minimizing redundancies of holding four separate meetings, especially for partners who participate on more than one river team. Fischer agreed.

Janet Sternburg asked if there is a consolidated list of potential habitat projects that were previously identified by the river teams. This could be used to determine opportunities for habitat restoration in comparison to what and where UMRR-EMP has already done restoration work. Hubbell said USACE has such a project list and, combined with the program's database and landscape ecology research, can be used to inform the next round of project planning and selection. Karen Hagerty said Chuck Theiling has done analyses to identify restoration gaps along the river.

Col. Deschenes observed that UMRR-EMP is the broadest, most effective interagency partnership in which he has been involved. However, the program should employ continuous process improvements in order to maintain and enhance the partnership. Since UMRR-EMP is a fairly unique partnership, there may not be much precedent for this.

Rock Island District

Hubbell announced that Ellen Milliron is MVR's new HREP Manager. He said MVR plans to initiate construction on Huron Island and Lake Odessa flood recovery this fall and continue its construction efforts on Pool 12 Overwintering Stage I, Fox Island, and Rice Lake Stage I. The District's current planning priorities include Keithsburg and Emiquon East. Hubbell anticipates awarding funds this week to USFWS for continued Pool 12 Overwintering monitoring for adaptive management analyses.

Janet Sternburg requested a presentation at a future quarterly meeting regarding project evaluation report (PER) findings, including the 2012 Environmental Design Handbook. This might help partners who are newer to the program. Sternburg said it would also be useful to understand results of the new biological response monitoring. Hubbell agreed and said he will follow up with USACE staff on a presentation.

New Project Starts

Hubbell said UMRR-EMP will initiate a "data-driven" process in early 2015 for selecting new starts that will be informed by partners' expertise and experience, the FY 2015-2025 UMRR Strategic Plan and other planning documents, and decision support tools. UMRR-EMP 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.

Jon Duyvejonck encouraged partners to consider new habitat projects that would bundle several small-scale features. These features that are relatively little cost can provide substantial benefit. Hubbell recalled that MVD has said it is willing to consider new, innovative approaches to UMRR-EMP's habitat restoration projects.

Emiquon Preserve Floodplain Restoration Project

Hubbell reported that, following controversy over the Emiquon East habitat project's design, partners have recently reached an agreement about the project's design and adaptive management. He explained that, per UMRR-EMP CC's approval at its November 20, 2013 meeting, Emiquon was moved to UMRR-EMP from the Section 206 program because its estimated cost as designed exceeds the Section 206's per project total cost cap. When the project was transferred to UMRR-EMP, its planning was essentially complete with about \$250,000 to \$350,000 needed to complete its DPR, project partnership agreement, and plans and specs. The UMRR-EMP CC agreed that the project could bypass the typical partnership project identification and sequencing process since it had undergone planning under Section 206 and two placeholders were left for Illinois River habitat projects in UMRR-EMP's last project selection process.

In addition, the project represented a good opportunity for UMRR-EMP as the project is the program's first habitat project cost-share sponsored by a nonprofit, The Nature Conservancy. Hubbell explained that implementation issues that will need to be considered as a result of this project include the process for transferring projects to UMRR-EMP, program involvement in project management following construction, documentation of annual O&M costs, and documentation of site management actions. In addition, a recent agreement for the project includes a commitment from USACE to fund \$1 million over a 10-year period for an adaptive management analysis on the project. Hubbell said the August 5, 2014 Upper Mississippi River Basin Association (UMRBA) meeting included a discussion on the Emiquon Preserve habitat project. Following the meeting, UMRBA and TNC hosted a tour of the project.

Doug Blodgett expressed appreciation to UMRBA for including a discussion on the Emiquon project at its meeting yesterday and hosting the tour. Blodgett explained that the Emiquon Preserve is owned by TNC a part of the Emiquon Complex, and is adjacent to USFWS's Chautauqua and Emiquon Refuges as well as Dixon Mounds State Museum. TNC purchased the 5,800 acre site in 2000, after decades of being in row crop production, and operates the property in cooperation with the Thompson Drainage and Levee District. TNC entered into a Wetland Reserve Program (WRP) contract in 2007 and began implementing "faith-based" water level management. This included holding water in the backwater area to restore fishery and wetland habitat. Blodgett explained that, while these efforts are receiving positive biological responses, reliable water management control is necessary to promote vegetation growth, control nuisance fish species, and restore the area's natural hydrology and floodplain connectivity.

Given the urgent need for water control capabilities, Blodgett said TNC was able to secure additional donor funding to construct a water control structure. According to Blodgett, this increases TNC's in-kind contributions to the program to about 60 percent cost share of the project, whereas UMRR-EMP habitat projects require a 35 percent cost share. The new compromised agreement eliminates eight of ten islands. If TNC builds those eight islands, its cost share will essentially grow to 80 percent. In addition, TNC will be responsible for O&M in perpetuity. TNC is now considering whether the new project design and associated costs are beneficial for TNC to remain as a cost-share sponsor, especially given the long term obligations associated. Blodgett acknowledged that TNC is a strong supporter of UMRR-EMP and would like to be the program's first nonfederal cost share sponsor. However, TNC will need to consider whether the benefits of doing so under the new agreement will outweigh the costs.

In response to a question from Col. Mark Deschenes, Blodgett said TNC would perform O&M on the project site, but would not be obligated to USACE's terms. He added that NRCS's WRP contract provides NRCS with the authority to control hydrology on the site. In addition, TNC views Emiquon as a part of the Illinois River and will consider systemic benefits to the river from improvements at Emiquon. Col. Deschenes said Blodgett's overview of the issues is helpful to understanding the TNC's frustrations. He said USACE is trying to be as flexible as possible and hopes that provisions in the 2014 Water Resources Reform and Development Act (WRRDA) will help to provide even more flexibility, include for making reimbursements for in-kind credits. Col. Deschenes observed that it may be worth exploring whether in-kind credits could be credited toward O&M. Blodgett explained that USACE's project partnership agreements (PPAs) require O&M in perpetuity and without a cost or other threshold to limit the obligations. The O&M responsibilities are even more burdensome with the larger, comprehensive adaptive management analyses included in the new project agreement.

In response to a question from Jon Duyvejonck, Blodgett explained that the Levee District would be responsible for O&M at water levels above 435 feet since that would benefit agriculture. TNC would be responsible for O&M below that level since that produce ecosystem benefits. Water levels below 430 feet would require pumping. In response to a question from Kraig McPeek, TNC will maintain responsibility for O&M of the water control structure.

Dru Buntin and Gary Meden said the 2014 WRRDA includes a provision requiring USACE to review its PPAs and it may offer an opportunity to resolve these issues. Meden said the 2014 WRRDA includes a provision allowing nonfederal sponsors to apply excess credits to future projects that they cost share sponsor.

McPeek noted that the new agreement includes an adaptive management analysis. Constructing two of the ten identified islands before the others will allow time for learning and evaluating benefits from the additional islands.

Hubbell recognized that the new agreement allows the project to continue moving forward. And while the agreement has reached consensus with all partners involved, it does require a level of trust on behalf of all involved parties. However, this trust builds on the partnership's longstanding reputation. Dan Stephenson expressed Illinois DNR's support for the project, particularly under the new agreement. Hubbell said the controversy highlights the value of working through the program's partnership coordination mechanisms to sort through difficult issues.

Hubbell said the project will require additional program involvement in project management after construction is completed, additional documentation of annual O&M costs and site management actions, and an explicit adaptive management component. In response to a question from Kirsten Mickelsen, Hubbell said details the adaptive management analysis have not yet been planned. But planning for, and implementation of, the Emiquon East's adaptive management analysis will involve TNC, USACE, Illinois DNR, NRCS, USEPA, and other project partner agencies. USGS could also participate in planning and/or serve as a resource. Hubbell said he anticipates that a USACE staff will need to sort through the ideas and determine the critical monitoring components and key issues to address in the analysis. Duyvejonck agreed that all the agencies need to be involved in the adaptive management analysis and said the analysis will need to be informed by technical experts as well as lessons learned from similar projects, including Lake Chautauqua.

In response to questions from Jim Fischer, Hubbell said \$1 million for the project's adaptive management analysis is a preliminary estimate and will follow-up with the relative cost estimated for Emiquon compared to other HREPs with explicit adaptive management analyses. Ellen Milliron said adaptive management is also part of Pool 12 Overwintering's total construction costs.

Kirsten Mickelsen observed that this seems to be a great opportunity to utilize the newly developed UMRR-EMP adaptive management framework and continue to integrate the program's HREP and LTRMP elements. Mickelsen noted that UMRR-EMP's scientists have given substantial thought to how best to implement adaptive management as well as identifying important questions to explore through explicit adaptive analyses. Blodgett said TNC is using the LTRMP element's monitoring protocols when available. Fischer agreed with Mickelsen's comment and said the project could be used to continue refining UMRR-EMP's adaptive management approaches. Gretchen Benjamin encouraged the project's adaptive management team to be established relatively quickly for pre-project monitoring and determine the best placement for the two islands. Hubbell agreed and said some aspects will be more systemic in nature and some will be site-specific given the unique substrate and other factors. Barry Johnson echoed Benjamin's suggestion that the adaptive management team begin formulating the adaptive management analysis as soon as possible. Johnson observed that this will be a high visibility project and will also be an experiment of how we implement adaptive management. Duyvejonck also expressed support for forming the team quickly given that each island will provide different ecological benefits.

LTRMP Element

Product Highlights

Kevin Richards presented UMRR-EMP's LTRMP element accomplishments in FY 2014's third quarter. Richards reported that the second edition of the program's fish monitoring protocols was published. It documents refinements to the methods since 1995. Richards said these refinements are typically discovered through field experience, data analysis, and technological advances. A report describing the fish component's monitoring rationale, strategy, issues, and methods is anticipated to be released in mid-August.

Richards said a scientific review of the Aquatic Habitat Appraisal Guide 2.0 (AHAG) concluded that the model's effectiveness is reduced by its outdated approach. The model is well suited for nine species only, representing two to three guilds. Those species should serve as the basis for the model. Richards said recommendations are to 1) incorporate empirical data from the UMRS into defining the empirical response curves and 2) conduct post-project biological evaluations to test pre-project benefits estimated by AHAG.

Richards reported that a manuscript was published on white-tailed deer winter browse selection and its implications for bottomland forest restoration. He also reported that larval Asian carp were observed in July 2014 in Pool 26 and there were an abundance of mayflies in La Crosse.

In response to a question from Col. Mark Deschenes regarding how UMRR-EMP interfaces with invasive species issues, Hubbell explained that UMRR-EMP is currently developing an invasive species strategy that will outline the program's role in addressing invasive species. UMRR-EMP maintains a base flow of critical monitoring data that provides a basis for understanding the UMRS ecosystem. With that information, managers and researchers can evaluate the implications of invasive species on habitat and native species. Karen Hagerty said she will present the strategy at UMRR-EMP CC's November 19, 2014 meeting. Hagerty explained that USACE's invasive species policy requires that UMRR-EMP promote native species, including by determining impacts of invasive species to the native species and create habitat projects that provide an advantage to native species. Hagerty said UMRR-EMP does not have the authority to provide a direct role in preventing the introduction and establishment of invasive species. In response to a question from Col. Deschenes, Hagerty said there are several cases where invasive species become naturalized and efforts to control them minimize — e.g., common carp, zebra mussels.

Kevin Richards recognized Heidi Langrehr's incredible career and contributions to our understanding of the UMRS ecosystem. Langrehr was a vegetation specialist at Wisconsin DNR and began her career with UMRR-EMP long term resource monitoring in 1989. She passed this summer following a long battle with cancer. Jim Fischer said her love and passion for the river extended into her work. Fischer said Langreher made great contributions to the river and extended his sincere appreciation to her for all of her effort. Langreher was successful in defining methods for monitoring aquatic vegetation on the river and was extremely helpful in providing useful information to managers. Fischer noted that Langreher, in collaboration with Minnesota DNR, created the first submersed aquatic vegetation index in North America.

USACE's LTRMP Element Report

Hagerty said an updated FY 2014 scope of work milestone chart for science in support of restoration and management is included on pages F-10 to F-12 of the agenda packet. She said proposals for FY 2015 UMRR funding for research and analysis in support of restoration and management are due on August 30, 2014.

A-Team Report

Hagerty reported that the A-Team is scheduled to convene a September 4, 2014 conference call to review proposals for research and analysis of UMRR-EMP's long term resource monitoring data. These proposals were due on June 30, 2014.

LTRMP Element Highlight: Asian Carp in the UMR

Rich Pendleton explained that UMRR-EMP's long term monitoring analyses are showing long term changes to fish community structure in the La Grange Reach of the Illinois River following the

establishment of Asian carp in 2000. This includes reduced abundance and condition (i.e., body size). Pendleton said abundance of native species either increased or decreased significantly between pre-establishment (1993-1999) and post-establishment (2000-2013) of Asian carp. Nonmetric multidimensional scaling analyses further support evidence of consistent differences in fish communities pre- and post-invasion, including abundance and condition. Pendleton said other biotic and abiotic factors, such as water levels, may be attributing to the changes in fish community structure. More research is being done to directly identify the greatest relationships between community differences and Asian carp. Pendleton said UMRR-EMP's long term data set is incredibly useful as it is able to show river conditions before and after an invasive species is introduced, by monitoring the river's major ecological attributes.

Jim Fischer asked if the findings can be used to inform future habitat restoration work, potentially by implementing measures that could improve abundance and body condition of native species. Pendleton said more research is needed to make comparisons across habitats. In response to a question from Doug Blodgett, Pendleton said there is no conclusive reason for how Asian carp are affecting certain species, but researchers are evaluating potential relationships. One hypothesis is that Asian carp are out-competing the larval fish that are food for sport fish. In response to a question from Blodgett, Levi Solomon said monitoring data is indicating that Asian carp are reaching their carrying capacity in the La Grange Reach. One indication is that body condition is declining among silver carp. In response to a question from Barry Johnson, Solomon said the monitoring data is also showing declines in growth rates of silver carp. Johnson said biohygenics modeling may provide more conclusive evidence. Solomon agreed and said comparing zooplankton data pre- and post-invasion will be a next step.

Other Business

Future Meetings

The upcoming quarterly meetings are as follows:

- **November 2014 — St. Paul**
 - UMRBA — November 18
 - **UMRR-EMP CC — November 19**

- **February 2015 — Quad Cities**
 - UMRBA — February 10
 - **UMRR-EMP CC — February 11**

- **May 2015 — St. Louis**
 - UMRBA — May 5
 - **UMRR-EMP CC — May 6**

With no further business, the meeting adjourned at 12:17 p.m.

**UMRR-EMP CC Attendance List
August 6, 2014**

UMRR-EMP CC Members

Mark Moore	U.S. Army Corps of Engineers, MVD
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges
Kevin Richards	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
Jim Fischer	Wisconsin Department of Natural Resources
Liz Pelloso	U.S. Environmental Protection Agency, Region 5 [On behalf of Ken Westlake]
Jon Hubbert	U.S. Department of Agriculture, NRCS

Others In Attendance

Renee Turner	U.S. Army Corps of Engineers, MVD
Gary Meden	U.S. Army Corps of Engineers, MVP
Col. Mark Deschenes	U.S. Army Corps of Engineers, MVR
Tom Hodgini	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
Ellen Milliron	U.S. Army Corps of Engineers, MVR
Tim Eagan	U.S. Army Corps of Engineers, MVS
Kraig McPeck	U.S. Fish and Wildlife Service, RIFO
Bob Clevestine	U.S. Fish and Wildlife Service, UMR Refuges
Jon Duyvejonck	U.S. Fish and Wildlife Service, RIFO
Barry Johnson	U.S. Geological Survey, UMESC
Rich Pendleton	Illinois Natural History Survey
Levi Solomon	Illinois Natural History Survey
Randy Shultz	Iowa Department of Natural Resources
Robert Stout	Missouri Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Tom Boland	AMEC
Olivia Dorothy	American Rivers
Tim Schlagenhaft	Audubon Minnesota
Brad Walker	Missouri Coalition for the Environment
Gretchen Benjamin	The Nature Conservancy
Doug Blodgett	The Nature Conservancy
Todd Strole	The Nature Conservancy
Natalie Porter	Prairie Engineers of Illinois
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association