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

February 26, 2014
Quarterly Meeting

Arsenal Island Golf Club
Rock Island, Illinois

Mark Moore of the U.S. Army Corps of Engineers called the meeting to order at 8:02 a.m. on February 26, 2014. Other UMRR-EMP CC representatives present were Tim Yager (USFWS), Mike Jawson (USGS), Dan Stephenson (IL DNR), Walt Popp (MN DNR) on behalf of Kevin Stauffer, Janet Sternburg (MO DoC), Jim Fischer (WI DNR), Ken Westlake (USEPA), and Jon Hubbert (NRCS). A complete list of attendees follows these minutes.

Minutes of the November 20, 2013 Meeting

Dan Stephenson moved and Jim Fischer seconded a motion to approve the minutes of the November 20, 2013 meeting as prepared. The motion carried unanimously.

Program Management

FY 2014 Fiscal Update

Marv Hubbell reported that, on January 17, 2014, Congress passed the FY 2014 Omnibus Act that appropriated $31.968 million for UMRR-EMP. Prior to the Act's passage, UMRR had been planning at $30.368 million under a continuing resolution authority. Allocations within the program have been adjusted and 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 explained that USACE anticipates awarding a contract to UMRBA late spring/early summer to write the 2016 Report to Congress (RTC). He also noted that about $1.1 million of regional support funds will be used for science-related work and about $1.06 million will be allocated to fund science

efforts that are directly related to informing habitat restoration. Thus, in total, approximately $7.4 million of UMRR's FY 2014 appropriation will be invested in the program's science efforts.

Janet Sternburg asked what is anticipated for work on the 2016 RTC in FY 2014, particularly for partner involvement. Hubbell said partners will be asked to provide input on the report development approach and schedule, but said he does not anticipate any significant review or writing commitment during this fiscal year. Sternburg recalled that a follow-on report to the 2010 RTC (i.e., 2013 Implementation Issues Assessment) was developed to address program- and policy-related issues, asking if a similar approach will be used for the 2016 report. Hubbell said partners agreed to address the issues in a separate report because of time constraints in completing the 2010 RTC. However, he anticipates enough lead time to address issues in the 2016 RTC. Hubbell recognized the importance of discussing and identifying ways to resolve these issues in the program's reports to Congress.

Agency Leadership Event Update

Hubbell said the UMRR-EMP agency leadership event is postponed and will no longer be held on June 18, 2014 due to recent conflicts with Col. Mark Deschenes' schedule. Hubbell said he is now seeking input on a new date. The event will still occur at Eagle Point Park in Dubuque and will include a field trip component, which will require that the event be held in summer or fall. Olivia Dorothy recommended avoiding August, given the number of Corps meetings that could represent conflicts. In response to a question from Hubbell, Jim Fischer said this event is still important to the states. He said the issues addressed in the IIA regarding state participation in the face of diminishing resources remain and call for agency leadership engagement. Hubbell said he will work with the UMRR-EMP CC members to reschedule the event in September. [Note: Subsequent to the meeting, the date of the UMRR-EMP agency leadership event was set for September 18, 2014 at Eagle Point Park in Dubuque.]

Public Outreach

Tom Novak said Dave Potter participated in Stillwater, Minnesota's Da Vinci Fest, which is an annual science and art fair, where he showcased a hands-on island-building model.

Hubbell said USACE anticipates publishing the edition of *Our Mississippi* specifically devoted to UMRR-EMP on March 14, 2014. The edition will reflect the breadth of the program, including featuring the diverse array of program partners. Hubbell extended his appreciation to all partners who contributed their time and effort in writing articles and participating in interviews.

Mike Jawson said Brig. Gen. Duke DeLuca visited UMESC in early February. The visit included discussion about UMRR-EMP as well as the Center's work on Asian carp. Jawson expressed appreciation to Dave Potter for planning the tour.

Hubbell said USACE recently held a public meeting for Beaver Island. The project received very positive feedback. Hubbell gave thanks to Nate Richards, the project delivery team lead, and Tim Yager for their leadership on the project.

FY 2015-2019 Strategic Plan

Marv Hubbell said the FY 2015-2019 UMRR-EMP strategic planning team has made significant progress over the past few months. Hubbell provided an overview of the team's efforts thus far. The planning process is outlined on pages C-1 to C-4 in the agenda packet. The team has held three in-person meetings and one conference call. At the first meeting, held in April 2013, the team identified seven issue areas to explore further: defining success, ecosystem restoration, ecosystem monitoring, collaboration, communication, funding, and integration. Subgroups developed brief papers addressing

these issues and presented them at the second in-person meeting in June 2013. At that meeting, the team also developed a vision for the river and mission for the program as well as four goals to accomplish the mission. Subgroups have been refining the vision, mission, and goals ever since, with input from the full team at various times.

The strategic planning team held its third in-person meeting on January 6-8, 2014 to review draft goal write-ups and address remaining issues and questions. Hubbell presented a one-page outline of the draft strategic plan that is included on page C-5 of the agenda packet. He shared several of the strategic planning team's recommendations that will be included in the draft strategic plan, as follows:

- Dropping "Environmental Management Program (EMP)" from the program's name, so the program would be known as Upper Mississippi River Restoration (UMRR) going forward. The intent is to match its reference in the appropriations process and move forward as an integrated program.
- A vision for the river and mission for the program. The vision is for "a healthier and more resilient Upper Mississippi River Restoration ecosystem that sustains the river's multiple uses." The mission is "to work within a partnership among federal and state agencies and other organizations; to construct high-performing habitat restoration projects; to produce state-of-the-art knowledge through monitoring, research, and assessment; to engage other organizations to accomplish the Upper Mississippi River Restoration vision."
- Integrated approaches in each of the goals for enhancing synergies between the program's restoration and science efforts necessary to advance the vision for the river (see above).

Hubbell explained that the vision creates a stronger message about the need for UMRR's long term monitoring and research and analysis as well as restoration. The program's science is required to determine ecological health and resilience through key ecological indicators and provide critical knowledge about how the system operates and how restoration can best address ecological needs. Restoration must be based on sound science, and restoration can be used as a tool to answer science questions.

Hubbell said the team agreed to share these recommendations with the UMRR-EMP CC at this time to seek input as the plan continues to develop. The team anticipates distributing a draft strategic plan to partners in late spring for review and then providing a revised draft plan to the UMRR-EMP CC at its August 6, 2014 quarterly meeting for consideration of endorsement.

Olivia Dorothy said the vision seems short term and suggested changing it to "a healthy and resilient…" to create a longer term context. Karen Hagerty explained that the team had discussed the tenses and concluded that "a healthier and more resilient…" provided a long term context given that current and new stressors that will limit the river's ability to achieve a healthy and resilient state. Jawson concurred, and explained that the vision statement and assumptions and guiding principles speak to the Administration's questions about when will UMRR-EMP be done restoring the river. The current statement allows partners to explain that there will be an ongoing need for restoring and learning about the river. Walt Popp asked if the HREP element and LTRMP element terminology will remain. Hubbell said the functions of each will certainly remain but partners will need to consider the terminology use, given that the terms can be constraining.

Jim Fischer acknowledged that he was initially apprehensive with integrating the two program elements, but through the strategic planning process, he now agrees and embraces the concepts of integrating the program's restoration and science efforts. Fischer concluded that, in the program's early years, scientists had to focus on how to best monitor and asses the river and engineers and biologists had to focus on how to best select and design habitat projects. The program has now evolved to a point where it is necessary to enhance the use of science in habitat projects and gain scientific knowledge through

habitat projects. Fischer cautioned that the base monitoring is not further diminished through integration. Chuck Theiling suggested highlighting UMRR-EMP as a stewardship program.

Janet Sternburg expressed reservation with dropping EMP from the program's name since it drops the reference to environment and does not identify the Illinois River. If the name change needs to occur, Sternburg suggested creating a tag line such as "Program that restores the Upper Mississippi and Illinois Rivers." Fischer observed that there is a long, rich history with EMP. He emphasized the need to link a new name and work completed under the name EMP to ensure program continuity.

Hubbell said the strategic planning team will hold its next meeting in April to finalize a draft plan for initial partner review. Hubbell reiterated that he anticipates presenting a draft strategic plan to the UMRR-EMP CC at its August 6 quarterly meeting for consideration of endorsement. At its April meeting, the strategic planning team will also consider a follow-on operational plan, including content and composition of an operational planning team. In addition, the April meeting will focus on how best to distribute and seek partner input on a draft strategic plan for a first round of review. This could include a webinar, or face-to-face meetings, regional meetings, and so forth.

Fischer recalled that an oversight in the roll-out of the LTRMP FY 2010-2014 Strategic Plan was not employing a more thoughtful, intentional, and rigorous roll out of the plan to explain the plan's concepts and intended direction. Fischer and Hagerty suggested having conversations about the draft UMRR-EMP FY 2015-2019 strategic plan with District river teams (e.g., FWIC, FWWG, etc.), the A-Team, and key program partners. Jawson suggested also coordinating with UMRBA Board members. Theiling suggested presenting the plan's concepts to UMRCC's technical meetings. Hubbell said he would follow-up on both suggestions. Sternburg suggested restructuring UMRR-EMP CC's quarterly meetings to reflect the plan's four goals. Hubbell said that, as an example, this could include presentations by project staff on when and how scientists can engage on a project and provide input or develop science questions to explore with that project.

In response to a question from Fischer, Mickelsen said a process and schedule have not yet been determined for an operation plan. There is a lot of substance that was considered in developing the draft goals and tabled for the operational plan. However, the planning team has acknowledged that there may be a lot of particulars to sort through when it comes to implementing integration.

LTRMP Element

Product Highlights

Mike Jawson presented LTRMP element's accomplishments in FY 2014's first quarter. Jawson reported that a manuscript was published that examines nutrient content and factors limiting free-floating plants to better understand how habitat projects might influence free-floating plant abundance. The results indicate that free-floating plants are associated with connectivity. Thus habitat projects that would alter connectivity should consider the possible effects on free-floating plant abundance. Jawson reported that another manuscript was published that analyzes the relationship among floodplain connectivity, nutrient cycling, and free-floating plant abundance. The results show that deliberately managing connectivity of off-channel areas can improve fish and waterfowl habitat and reduce nutrient transport to the Gulf of Mexico. In addition, Jawson listed the many individual contributions to outreach and assistance to internal and external stakeholders.

Chuck Theiling observed that these analyses demonstrate that ecological trend observations and responses to projects often require monitoring over several years. Theiling stressed the importance of managing expectations related to determining habitat project success. Jawson said the results are

published in manuscripts and suggested that partners consider how best these insights be communicated to habitat project planners and others.

Mike Jawson's Contributions to UMRR-EMP

In light of Jawson's upcoming retirement in mid-April, Hubbell recognized Jawson's substantial contributions to UMRR-EMP, including his support in working through tough issues and helping the program realize the success it is now experiencing. Jawson said being a part of UMRR-EMP has been a highlight of his career, given its incredible partnership, longevity, and dedication to improving the ecosystem. He acknowledged that, while there are sometimes differences of opinion among partners, all partners are striving to make the program the best that it can be. Jawson expressed much appreciation to all partners who contribute to UMRR-EMP.

UMRR-EMP Science Coordination Meeting

Barry Johnson reported that the first UMRR-EMP science coordination meeting of the program's scientists and habitat project planners was held on February 11-13, 2014. This meeting also served as a kick-off to a three-year research plan for the LTRMP element and is part of the UMRR-EMP Science Coordination Process. The process alternates every year between a science coordination meeting such as this one and a meeting focused on monitoring. About 70 people attended the meeting, including LTRMP element and HREP element staff and outside collaborators that are engaged in UMRS science. The meeting included several presentations of recent work and future research goals related to long term monitoring components, as well as the program's science needs for habitat project planning and evaluation and potential interactions between science and habitat projects. The primary focus of these presentations was on work completed in the last few years and planned work in the near term. In addition, the meeting included presentations from complementary, external efforts that may inform UMRR-EMP's science. On the third day, small groups were formed to discuss specific research ideas.

According to Johnson, the primary goals for communication and interaction among partners during this meeting were achieved. Johnson said there was good discussion throughout the meeting, particularly interactions between science and restoration to address questions and issues. This meeting highlighted the need for more and better communication to scientists regarding habitat projects in the pipeline and their progress. Johnson said the UMRR-EMP HREP database should be useful in facilitating some of this integration. He said an annual progress update on habitat projects may be valuable. Johnson said the next step is to develop a three-year research plan to consider program priorities and focus the program's science. This research plan will be updated at least every two years.

Marv Hubbell expressed appreciation to Johnson and UMESC staff for coordinating a successful and valuable meeting among partners. In response to a suggestion by Sternburg, Johnson said he will distribute a survey to attendees to obtain feedback on this first science coordination meeting. Sternburg suggested that the status of habitat projects and opportunities for science engagement be discussed at the A-Team meetings. Bob Clevenstine said the District planning teams can be a key forum for science and restoration integration. Johnson agreed and said the meeting participants discussed that idea. The questions raised were about how and when to engage on specific habitat projects, given that scientific research will not be applied to all habitat projects. Participants discussed more engagement of scientists on planning teams when projects are in early development stages. Clevenstine suggested that the System Ecological Team identify ecological and learning objectives when identifying and selecting possible habitat projects. Sternburg clarified that this integrated engagement has occurred over time and to varying degrees, but partners are now looking to enhance and formalize the interactions.

USACE's LTRMP Element Report

Karen Hagerty explained that $1.065 million of UMRR-EMP's FY 2014 appropriation is being allocated to science research that supports the program's restoration efforts. (This is additional funding above the program's base monitoring efforts.) Thus far, $436,142 has been funded for seamless elevation data, land cover/land use, the February 2014 science coordination meeting, standardized habitat project sampling protocols for non-forested wetland plants and floodplain forest, a predictive model for aquatic vegetation types, and Pool 12 Overwintering fish response modeling. Their associated costs and planned milestones are provided on pages D-14 to D-16 of the agenda packet.

Hagerty said the A-Team is currently considering proposals to fund with the remaining $629,604. She recalled that these proposals were selected by the A-Team, USACE staff, and UMESC staff, and then approved via email by the UMRR-EMP CC members in late November. Hagerty said the A-Team held a conference call on February 21, 2014, and agreed to vote via email to select the final proposals. Once the A-Team finalizes its recommendation in early March, Hagerty said she will consult with the UMRR-EMP CC members via email regarding which proposals to fund. USACE staff will then work quickly to distribute funds to project leads to get the projects started.

In response to a question from Jon Hubbert, Hagerty said the LiDAR dataset is a seamless data layer covering the entire UMRS from bluff-to-bluff.

LTRMP Element Highlight: Documenting the Use of LTRMP Element's Fish Monitoring Methodologies Throughout the Midwest

Levi Solomon presented on the results of a recent survey to estimate the extent that the program's fish monitoring protocols are used beyond the program. Solomon explained that UMRR-EMP serves as a leader in monitoring and science nationally and internationally, and that standardized methods are a pathway for that leadership. Solomon said several presentations at the 2012 American Fisheries Society conference cited the use of LTRMP element fish monitoring protocols, triggering the question about the extent that other programs and projects use LTRMP element's monitoring protocols. To estimate the spread of use, Solomon distributed a survey of seven multiple choice questions to the American Fisheries Society list serves (about 2,000 people) and Upper Mississippi River Conservation Committee (UMRCC) (about 525). However, with overlap between the two organizations, about 2,000 people received the survey. About 11 percent of individuals (227) surveyed responded.

Solomon overviewed the seven survey questions and respective results. The questions are as follows:

1. How would you describe yourself — i.e., administrator, other, student, fisheries researcher, fisheries/resource manager?
2. What type of organization do you work for — i.e., private agency, other, federal agency, university, state natural resource agency?
3. Do you use standardized methods?
4. If yes (to question 3), how were the methods developed — i.e., don't know, other, "in-house," adopted from projects, adopted from literature?
5. Are you familiar with LTRMP methods?
6. How often do you use LTRMP methods?
7. Do you modify methods to suit needs?

Solomon explained that, while the low sample size makes it hard to extrapolate the results, the results indicate that the protocols are well known outside of the program and have been used many times in other monitoring efforts. Forty eight percent of respondents are familiar with the LTRMP element's methods and 31 percent have used the methods in the past. Solomon noted that the results may be inflated if current and former LTRMP element staff were more likely to participate. He said expanding this research may include polling UMRR-EMP staff or surveying existing literature. This research could also be expanded to include other research components, such as vegetation, water quality, or macroinvertebrates. Solomon concluded that nearly all fisheries professionals use standardized methods and that many professionals in the Midwest are familiar with the LTRMP element's methods. The survey shows that UMRR-EMP's influence has grown beyond initial expectations.

In response to a question from Barry Johnson, Solomon said staff have conducted a preliminary literature search using Google Scholar and plan to do more formal research. Jim Fischer observed that this research highlights the importance of name recognition for UMRR-EMP and its LTRMP element. Fischer stressed the need to connect a new program name to the LTRMP name and ensure there is not a misconception that the LTRMP element has been disconnected.

Dan Stephenson said Illinois DNR is working with fisheries programs on the Wabash, Ohio, and Upper Mississippi Rivers, who are using the LTRMP element's fish monitoring protocols. In addition to monitoring protocols, Andy Casper noted that other programs and projects also use UMRR-EMP's policy and process methods. Olivia Dorothy suggested that this type of information be captured in the 2016 UMRR-EMP RTC. Barry Johnson concurred with Dorothy's suggestion and said partners should capture the extent and types of influence. Hubbell noted that UMRR-EMP can use the results to compare its analyses across the UMR watershed, nation, and world. Johnson said UMESC staff have been examining opportunities to do comparative analyses and will connect with Solomon regarding other users of the LTRMP element's fish monitoring protocols.

Emerging Trends and Issues

Role of UMRR-EMP as it Relates to Invasive Species

Marv Hubbell recalled that, at its February 28, 2013 quarterly meeting, the UMRR-EMP CC agreed to develop a white paper addressing the implications of Asian carp on the program's habitat projects and monitoring and research. This is an outcome of the 2013 Implementation Issues Assessment, where the Committee agreed to consider whether there is an emerging issue or trend that warrants further evaluation of any implications to the program. Hubbell said the white paper has been expanded to address invasive species in general. He explained that UMRR-EMP's base monitoring is designed to detect substantial changes in the fundamental ecosystem condition of the UMRS by continuing to develop and maintain information on long term status and trends for aquatic vegetation, water quality, fish, land cover/land use, and bathymetry, which are the river's key ecological components. Thus, the data provide a basis for evaluating changes from a range of stressors, such as invasive species, on one or more of these components and ultimately on the ecosystem's health and resilience. Hubbell said the paper will explore how the program's long term data can serve as a baseline for detecting the emergence and effects of various invasive species on the UMRS, including impacts to the ecosystem's health and resilience. Karen Hagerty added that the paper will outline UMRR-EMP's roles in understanding the impacts of invasive species and how the program should respond to these stressors — e.g., designing habitat project features to benefit native species.

In response to a question from Barry Johnson, Hubbell said he anticipates a draft white paper will be distributed to partners in about five to six months. In response to a question from Jim Fischer, Hubbell said the lead author(s) has not yet been assigned but that Karen Hagerty and Mark Cornish are drafting

an outline for the paper. Hubbell said an outline of the paper will be presented at the UMRR-EMP CC's May 14, 2014 quarterly meeting.

In response to a question from Hagerty, Dan Stephenson said about a dozen Black carp were captured just below St. Louis last week. Stephenson said the fish are especially destructive since they eat mussels. In response to a question from Ken Westlake, Stephenson said these are the only reports received that far north thus far. However, he said Black carp are difficult to differentiate from Grass carp.

Other Priority Emerging Trends and Issues to Evaluate

Hagerty noted that the draft UMRR-EMP FY 2015-2019 Strategic Plan is calling for the program to enhance the ecosystem's health and resilience and measure their current status and trends. She said the planning team is considering resilience to mean the ability for the system to recover given a disturbance. Given the extreme winter temperatures, Hagerty suggested that partners evaluate whether there is an impact to the system and how the system is able to recover.

Fischer suggested that partners be requested to develop brief summaries of potential emerging issues for possible consideration in the agenda packets for each February quarterly meeting. Hubbell agreed.

Message from Colonel Mark Deschenes

Colonel Mark Deschenes said he is frequently in contact with Marv Hubbell and made aware of UMRR-EMP and its many successes, which he attributed largely to the program's incredible partnership. Col. Deschenes recognized that UMRR-EMP is an extremely valuable program for the three UMR Districts as well as MVD. It currently represents the largest construction project for MVR. Col. Deschenes said MVD Commander Brig. Gen. Duke DeLuca has been briefed on UMRR-EMP and the importance of its work. He said UMRR-EMP is a good example of success and a model for others, and that OMB has shown its support for the program. Col. Deschenes said UMRR-EMP CC could serve as a model for a watershed-based interagency planning team.

Habitat Rehabilitation and Enhancement Projects Element

District Reports

St. Louis District

Brian Markert reported that USACE Headquarters recently issued a waiver for Rip Rap Landing allowing it to proceed to construction even though its land acquisition exceeds USACE's policy threshold limiting land acquisition to no more than 25 percent of the project's total cost. Markert said MVS staff will now reengage MVD staff and the project's sponsor to finalize project planning. MVS is also planning Clarence Cannon and Piasa and Eagles Nest Islands and designing Ted Shanks. The District's current construction priorities include Ted Shanks, Pools 25 and 26 Islands, and final minor items at Batchtown. Markert said the evaluation report for Stump Lake is completed and will be available on the UMRR-EMP's web site shortly.

St. Paul District

Tom Novak said MVP is scheduled to complete construction of Capoli Slough this summer. The District also anticipates submitting to MVD in FY 2014 definite project reports (DPRs) for all of its projects in planning: Harper's Slough, North and Sturgeon Lakes, Conway Lake, and McGregor Lake. Novak said MVP's leads working on UMRR-EMP, channel maintenance, and O&M are coordinating to

minimize states' resources in permitting and reviewing USACE's projects in the District's portion of the UMRS at a time of quickly accelerated funding — e.g., holding partner meetings in conjunction. Jim Fischer explained that there is a lot of work happening on the river (e.g., restoration, dredging, and channel realignment) that is all very important to Wisconsin, but acknowledged that it will also be important to be mindful of the state's limited staff time and resources.

Rock Island District

Marv Hubbell said MVR has five habitat projects currently in construction, including flood repairs on Fox Island, Rice Lake, and Lake Odessa. The District will also initiate planning on Stage II of Pool 12 Overwintering this summer.

Olivia Dorothy asked if there was a particular reason for holding the Beaver Island public meeting. Nate Richards said the District is simply interested in holding more public meetings as a way to enhance projects as well as relationships with stakeholders. Hubbell added that the project is located in a more populous area and the project is receiving greater interest. Col. Deschenes said USACE should increase its use of public meetings to engage interested stakeholders and enhance program recognition and solicit input. Novak said public meetings are often useful to project planners for technical reasons, since individuals living on the river can often contribute insights on how the river works in that particular area.

New Project Starts

Hubbell said that, following the FY 2015-2019 strategic planning process, UMRR-EMP will initiate a "data-driven" process for selecting new starts that will be informed by partners' expertise and experience, the strategic plan and other planning documents, and decision support tools. Hubbell said the planning process will build on the past while looking towards the future by applying systemic data layers, research and monitoring efforts, models, decision support tools, and refined ecosystem objectives. The process will be more data-driven with greater utilization of GIS tools and models, and will serve as a building block in addressing the question about what is the partners' vision of success for the program. Hubbell anticipates the planning process will be initiated early fall 2015 and completed by late winter/early spring 2017.

Tom Novak presented examples of potential opportunities to leverage resources to implement projects with other efforts that have similar goals or with those who could offer mutual benefits — e.g., USACE's dredging activities. Novak said partners should think creatively about how to best address ecological needs when planning new projects. He said this way of thinking applies beyond islands and triggers questions about how to best design features or timelines that would produce the best outcome in meeting an ecological need(s).

Olivia Dorothy said partners have also been discussing ways to design projects that include small-scale features over a larger geographic extent. Barry Johnson said the proposed planning approach is sound and said UMESC staff are willing to help in the planning process. Jim Fischer agreed with the approach and said coordinating with other programs and projects is important. However, he said partners will want to ensure that UMRR-EMP funds are not used to pay for channel maintenance. Janet Sternburg acknowledged that the river teams do talk about these types of opportunities to leverage resources in mutually beneficial ways. Fischer noted that Wisconsin DNR is renewing its memorandum of understanding (MOU) with USACE regarding dredging and said opportunities to complement restoration work should be included in the MOU. Chuck Theiling noted that MVP and MVR are doing this type of leveraging.

HREP Highlight: Pool 12 Overwintering

Ellen Milliron, Chuck Theiling, and Julie Millhollin presented on Pool 12 Overwintering's design to restore off-channel aquatic habitat and floodplain forest habitat, monitoring and adaptive management approaches, and construction progress to date. Milliron said Pool 12 Overwintering extends over 10 river miles by Dubuque and is located on USFWS's UMR National Wildlife and Fish Refuge in the Savanna District. Along with USFWS, Iowa DNR and Illinois DNR are involved in project planning. Currently, the project area's floodplain is mostly covered by permanent water and its off-channel, backwater areas have become shallower and are likely to transform from deep aquatic habitat to shallow aquatic habitat. The floodplain forest is homogenous. Milliron said the project goals and objectives are to 1) restore and protect off-channel aquatic habitat by increasing the amount of deep water habitat, depth diversity, and habitat suitability in the backwater lakes; and 2) restore floodplain forest habitat by increasing areal coverage in acres of forest stands with hard mast-producing trees. Project features will include channel dredging, containment areas, berms, mast tree establishment, and rock closure structures. Project planners selected four out of eight evaluated backwater lakes to restore, including Stone Lake, Sunfish Lake, Tippy Lake, and Kehough Slough. Milliron explained that the size and distance between the lakes made these selections the best alternative for maximizing restoration value.

Milliron said analysis of radio tracking and pool-wide population systemic benefits monitoring will answer the question of how much backwater overwintering habitat is required within a given area, as well as the spatial distribution of the backwater restoration sites necessary to achieve floodplain reach-level fishery response. She said site-specific monitoring will include water quality for desired velocity and dissolved oxygen, sedimentation transects (bathymetry), and tree survival rates. Systemic benefits monitoring for adaptive management analyses regarding pool-wide fish population impacts will also be employed. Iowa DNR has been doing robust pre-project monitoring since 2006, including fish condition and behavior within backwaters such as movement out of overwintering sites. The hypotheses that will be tested are as follow:

Pool-wide fish community response

- Management intervention in Pool 12 backwaters (dredging) will increase the pool-wide relative abundance of Centrarchids compared to the Pool 13 control
- Management intervention in Pool 12 backwaters (dredging) will increase the pool-wide biomass of Centrarchids compared to the Pool 13 control
- Management intervention in Pool 12 backwaters (dredging) will increase the pool-wide condition (relative weight) of Centrarchids compared to the Pool 13 control

Backwater lake effects

- Relative abundance of overwintering Centrarchids will be greater in restored lakes compared to control lakes
- Biomass of overwintering Centrarchids will be greater in restored lakes compared to control lakes
- Condition (relative weight) of overwintering Centrarchids will be greater in restored lakes compared to control lakes
- Fish community age structure will increase in restored lakes compared to control lakes
- Fish habitat area, measured as Utilization Distance, will increase in restored lakes compared to control lakes

Fish dispersal from backwater lakes

- Fish will disperse farther from restored lakes compared to control lakes
- More fish will disperse from restored lakes compared to control lakes

Chuck Theiling explained that, initially, the adaptive management design was to construct three of the four lakes and then use the results to design the fourth lake. However, for several reasons including funding implications, the plan is to now construct all project features and use the results to inform future projects. Theiling said the adaptive management analyses can be evaluated at the project, pool, and reach level. The LTRMP element protocols are being used to allow for comparisons to Pool 13 and beyond. For example, radio telemetry is being used to track fish movement into overwintering areas. Milliron added that staging the construction of each lake will help inform about interactions between the lakes.

Millhollin said the fully funded cost estimate for Pool 12 Overwintering is $23.1 million, which includes construction, site specific monitoring and adaptive management, systemic benefits monitoring, and contingency. She overviewed the ongoing construction process, features, and associated costs of the first backwater lake to be restored. Pool 12 Overwintering Stage I, which is Sunfish Lake, is estimated to cost $4.015 million and Dubuque Barge and Fleeting Service was granted the construction contract in August 2014. Millhollin reviewed progress on the project to-date including dredging and berm construction. She said MVR staff anticipate initiating planning on Stage II (Stone Lake) in FY 2014 and construction in FY 2015.

In response to a question from Tim Yager, Millhollin said seeding for hard mast trees will be done under a separate contract. Barry Johnson observed the benefits of the project's location to UMRR-EMP's long term trend reach, Pool 13, to allow for a control in hypothesis testing. He underscored the benefits of the program's long term monitoring for such capabilities. In response to a question from Johnson, Dave Bierman said Iowa DNR has not yet decided how long it will monitor the project area. Bierman said the agency will likely make that decision once construction is completed all four backwater lakes. Since there are seven years of pre-project monitoring, the agency would likely monitor for that duration or longer post-project construction. Milliron said USACE will likely do its monitoring on the project for 10 to 12 years post-construction. Hubbell emphasized that Pool 12 Overwintering is an important step in the program's adaptive management efforts to do more explicit hypothesis testing. He recognized the importance that such analyses are flexible given that the design and construction of habitat projects is a relatively fluid process.

Other Business

Jim Fischer asked when and how science will be injected into the habitat project planning process. Hubbell explained that there are various opportunities for projects to incorporate science, but said the most opportune time to incorporate science into projects is while the fact sheet and initial plans are being developed. That is when projects have identified goals and objectives but are still early in the planning process for partners to consider exploring specific science questions. In response to a question from Col. Deschenes, Hubbell said UMRR-EMP has an adopted framework for identifying and sequencing new habitat projects and has a science coordination process for identifying and priorities science questions. Hubbell said USACE can provide partners with its Gantt chart sequencing UMRR-EMP's habitat projects for the next six to eight years so that partners can see where there might be opportunities to integrate science. Sternburg said that would be helpful and asked Hubbell to share what information is available in the UMRR-EMP database. Fischer said the Gantt chart would also be helpful for partners to plan for future staffing needs.

Olivia Dorothy said River Action is teaming with Mississippi River Network to host an October 15-17, 2014 conference focusing on the entire Mississippi River. Dorothy said she is on the planning committee and to contact her with any questions.

Future Meetings

The upcoming quarterly meetings are as follows:

- **May 2014 — St. Louis**
  - UMRBA — May 13
  - **UMRR-EMP CC — May 14**
- **August 2014 — East Peoria**
  - UMRBA — August 5
  - **UMRR-EMP CC — August 6**
- **November 2014 — St. Paul**
  - UMRBA — November 18
  - **UMRR-EMP CC — November 19**

With no further business, the meeting adjourned at 12:15 p.m.

UMRR-EMP CC Attendance List
February 26, 2014

UMRR-EMP CC Members

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

Others In Attendance

Renee Turner	U.S. Army Corps of Engineers, MVD
Tom Novak	U.S. Army Corps of Engineers, MVP
Gary Meden	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
Andy Barnes	U.S. Army Corps of Engineers, MVR
Ken Barr	U.S. Army Corps of Engineers, MVR
Dave Bierl	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Dennis Hamilton	U.S. Army Corps of Engineers, MVR
Julie Millhollin	U.S. Army Corps of Engineers, MVR
Ellen Milliron	U.S. Army Corps of Engineers, MVR
Darron Niles	U.S. Army Corps of Engineers, MVR
Nathan Richards	U.S. Army Corps of Engineers, MVR
Chuck Theiling	U.S. Army Corps of Engineers, MVR
Heather Schroeder	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
Bob Clevenstine	U.S. Fish and Wildlife Service, UMR Refuges
Jon Duyvejonck	U.S. Fish and Wildlife Service, RIFO
Doug Yeskis	U.S. Geological Survey, Illinois Water Science Center
Barry Johnson	U.S. Geological Survey, UMESC
Andrew Casper	Illinois Natural History Survey
Levi Solomon	Illinois Natural History Survey
Dave Bierman	Iowa Department of Natural Resources
Robert Stout	Missouri Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Dan Baumann	Wisconsin Department of Natural Resources
Tom Boland	AMEC
Olivia Dorothy	Izaak Walton League
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association