

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

**November 29, 2012
Quarterly Meeting**

**Crowne Plaza Riverfront Hotel
St. Paul, Minnesota**

Bob Clevestine of the U.S. Fish and Wildlife Service called the meeting to order at 8:00 a.m. on November 29, 2012. Other UMRR-EMP CC representatives present were Renee Turner (USACE), Mike Jawson (USGS), Dan Stephenson (IL DNR), Diane Ford (IA DNR), Tim Schlagenhaft (MN DNR), Janet Sternburg (MO DoC), and Jim Fischer (WI DNR). A complete list of attendees follows these minutes.

Minutes of the August 30, 2012 Meeting

Janet Sternburg moved and Renee Turner seconded a motion to approve the draft minutes of the August 30, 2012 meeting as written. The motion was approved unanimously.

Program Management

FY 12 Recap

Marv Hubbell reviewed UMRR-EMP's FY 12 allocations under its \$17.787 million budget, as follows:

- Regional Management – \$721,000
- LTRMP – \$6,232,000
- HREPs – \$10,834,000
 - Program model certification and regional support – \$150,000
 - MVP – \$2,687,000
 - MVR – \$4,530,000
 - MVS – \$3,467,000

[Note: In FY 11, USACE shifted \$780,000 from LTRMP to MVP for Capoli Slough and \$93,000 from LTRMP to MVR for Rice Lake. The two Districts essentially “repaid” this funding in FY 12. Thus their HREP allocations are reduced from what they would have otherwise received under the customary allocation formula, and the LTRMP allocation is increased by a corresponding amount.]

Hubbell said UMRR-EMP's long standing, excellent fiscal performance, including its high level of transparency and accountability, has allowed the program to exercise more regional flexibility in transferring funds than is typical within USACE. According to Hubbell, this flexibility has been very important to the program's execution capabilities.

Hubbell highlighted UMRR-EMP's major efforts and activities in FY 12, including:

- February 15-17, 2012 LTRMP Team Meeting
- Tier 2 systemic LiDAR processing
- Refined estimates of annual LTRMP base monitoring costs
- LTRMP and HREP integrated scopes of work (SOWs)
- Twelve Implementation Issues Assessment (IIA) issue papers
- UMRR-EMP website redesign
- HREP Design Manual update
- Several national and international conferences
- Pool 8 Islands and Calhoun Point dedications
- HREP Database development
- Headquarters (HQ) approval of UMRR-EMP's Regional Review Plan
- Standardized template for habitat project evaluation reports
- Several new habitat project planning models certified
- Construction on 8 habitat projects and planning on 12 habitat projects
- Adaptive management plan for Pool 12 Overwintering

In response to a question from Jim Fischer, Hubbell said USACE staff anticipate that the HREP Database will be published online in late spring 2013. Hubbell said users will not be able to manipulate the Database, but can certainly request specific queries. UMRR-EMP CC members will be asked to review the Database before it goes live. USACE staff will present the HREP Database to the UMRR-EMP CC at its February 28, 2013 meeting. Screen shots of various applications will be included in the meeting packet. Hubbell said USACE will make the Database available on the Corps' intranet and will post summary information and reports on UMRR-EMP's website by March 2013. He explained that the Database will be updated frequently as new habitat project information and other monitoring data is collected. Thus, there will be an ongoing opportunity for partners to provide input.

In response to a question from Tim Schlagenhaft, Hubbell said the Assistant Secretary of the Army for Civil Works [ASA(CW)] Jo-Ellen Darcy has yet to act on the 2010 UMRR-EMP Report to Congress (RTC) or the UMRR-EMP/NESP Transition Plan, dated May 14, 2012. Schlagenhaft stressed the importance that partners have the 2010 RTC as a means to communicate about UMRR-EMP's tremendous achievements and value to the river. Colonel Michael Price said partners can work with Congressional members to formally request that USACE transmit the 2010 RTC to Congress.

Hubbell explained that LTRMP's FY 12 appropriation was only a small amount over the year's base monitoring expenses. Projected budgets indicate that UMRR-EMP will not likely be able to fully pay for base monitoring in future years.

Hubbell said UMRR-EMP needs an additional \$468.225 million to complete the projects currently on its books, bringing the total estimated program cost to \$938 million. This figure was recently updated to reflect new planning requirements and inflation.

FY 13 Appropriations Status

Hubbell said the federal government is currently operating under a continuing resolution authority (CRA) that is scheduled to expire on March 27, 2013. Under the CRA, UMRR-EMP could execute at its FY 12 appropriated level of \$17.78 million. However, the program is taking a conservative approach and executing at \$16.986 million in FY 13, until the final appropriation amount is determined. This is the funding level approved by the House and is the lowest scenario advanced thus far for the program in this fiscal year's appropriations process. The President's FY 13 budget request and the Senate Appropriations Committee's FY 13 energy and water appropriations measure both include \$17.88 million for UMRR-EMP.

Hubbell reviewed UMRR-EMP's FY 13 program allocations under both \$16.986 million and \$17.88 million planning scenarios, as follows:

<i>Total FY 13 Appropriation</i>	<i>\$16.986 million</i>	<i>\$17.88 million</i>
Regional Management	\$651,000	\$676,000
LTRMP	\$5,129,000	\$5,402,000
HREPs	\$11,206,000	\$11,802,000
Program model certification and regional support	\$150,000	\$150,000
MVP	\$3,917,000	\$4,096,000
MVR	\$4,422,000	\$4,660,000
MVS	\$2,717,000	\$2,896,000

Hubbell said MVP transferred \$600,000 to MVS in FY 12. The FY 13 allocations to MVS and MVP above reflect repayment.

Fischer asked how much USACE anticipates spending annually to update the HREP Database. Hubbell said \$45,000 is planned for the Database in FY 13. This funding level will likely be needed for the next few years to scan and upload old documents and incorporate the enormous amount of program data. Hubbell anticipates that, once the historic data is fully integrated, the ongoing maintenance activities will be relatively easy and low cost.

Janet Sternburg asked if the HREP Database will be georeferenced. Hubbell explained that UMRR-EMP's habitat projects and their features will be georeferenced, meaning that the data can be analyzed or displayed by river miles, USACE districts, states, etc. Individual documents will not be georeferenced. However, documents will be linked to specific projects so that users can still identify the relevant geographic area(s). Sternburg requested that the Database also be presented via webinar to all program partners. Hubbell agreed, and suggested that the UMRR-EMP CC consider such details following the February 28, 2013 presentation.

Hubbell posed the question of whether LTRMP's SOWs should include a component that indicates the specific geographic scales that each project/activity affects or applies to — e.g., project, pool, geomorphic or floodplain reach, or entire system. For example, base monitoring could be classified at a specific pool and at the system-level. Focused research could be classified at a project, pool, reach, and/or system scale, depending on the scope. In response to a question from Barb Naramore, Hubbell explained that each work item would be coded, allowing partners to evaluate where and what types of investments are being made along the UMRS. He explained that it would also allow project leads to identify and communicate how LTRMP's efforts apply to various geographic areas. Bob Clevensine expressed support for Hubbell's proposal, recognizing the need to evaluate and portray how the program's focused efforts relate to larger geographic scales, both individually and collectively.

Tim Schlagenhaft suggested that the UMRR-EMP strategic planning team consider this question. The UMRR-EMP CC agreed. Schlagenhaft cautioned against making the LTRMP SOWs too cumbersome. Ken Barr noted that this geographic component could be used to inform partners about UMRR-EMP's progress in achieving the UMRS ecosystem goals and objectives. Mike Jawson suggested that the HREP SOWs also include a geographic component. Colonel Price expressed support for considering this concept in the UMRR-EMP Strategic Plan. He emphasized the importance of prioritizing the program's efforts based on system needs.

USACE Meeting Policy — Implications for UMRR-EMP

Hubbell explained that, for over 20 years, UMRBA has provided support services for UMRR-EMP CC quarterly meetings, as well as a fixed number of other program-related meetings, through annual contracts with USACE. In an effort to streamline the annual contracting process for support services, USACE included four additional option years in the FY 10 support services contract. However, the Corps can no longer utilize the contract's additional option years because of new Department of Defense meeting requirements, commonly referred to as FRAGO (i.e., fragmentary order). USACE staff are currently developing a new contract for FY 13 with four additional option years. In the interim, USACE is using funds remaining under the current Option Year 2 to cover services related to today's quarterly meeting. Within the last week, UMRR-EMP received an exemption from the meeting approval portion of these requirements. This exemption was granted based on UMRR-EMP's 1986 authorization that requires USACE to consult directly with the Department of the Interior and the five UMR states in program implementation. Hubbell anticipates that the exemption will facilitate the scheduling and execution of future UMRR-EMP meetings.

Draft Joint Charter for UMRR-EMP Coordination Groups

Hubbell said USACE staff continue to revise the May 7, 2012 draft Joint Charter for the UMRR-EMP CC, A-Team, and HREP Planning and Sequencing Framework Teams. This includes 1) consulting with the USEPA, NRCS, and Maritime Administration regarding their participation on the UMRR-EMP CC and A-Team and 2) considering whether to more explicitly define the System Ecological Team's (SET's) roles and functions and adaptive management (AM) implementation details. [Note: The May 7 draft Charter indicates that the 2003 HREP Planning and Sequencing Framework will serve as the governing document until the Charter signatories elect to update the 2003 Framework or modify the Charter.]

In response to a question from Sternburg, Hubbell said he would like partners to consider expanding the SET's composition to reflect an appropriate representation of UMRR-EMP's agency affiliations and professional expertise, similar to the A-Team. He acknowledged that the SET membership may require a broad range of professional expertise when sequencing habitat and AM projects, among other things. Clevestine clarified that the SET's composition was originally based solely on professional expertise. He cautioned that adding members based on agency affiliations may unintentionally create redundancies with other existing groups — i.e., the individuals involved in the SET may be repetitive of another existing UMRR-EMP group. Hubbell said his suggestion is in response to the Adaptive Management Issue Paper's call for a systemic-level interagency group specifically devoted to the coordination, review, and implementation of habitat projects, including project response monitoring. In particular, this would include coordinating the scientific and technical aspects of UMRR-EMP's AM efforts. Fischer said Wisconsin DNR had proposed this group; however, he is hesitant to create a new group at this time, especially if it creates redundancies with other groups. However, the need exists for a group to evaluate HREPs, similar to the A-Team's responsibilities related to the technical aspects of LTRMP. Clevestine noted that the District interagency planning teams (e.g., Fish and Wildlife Work Group), which include participants of which-ranging professional expertise, could examine potential habitat and AM projects

and make recommendations to the SET. Recognizing that many details need to be resolved, Fischer recommended 1) maintaining the May 7 draft Charter text regarding the HREP-related groups and 2) having the UMRR-EMP strategic planning team consider the merits of forming an HREP-related technical team similar to the A-Team. The UMRR-EMP CC agreed. Hubbell said USACE staff will present a revised joint Charter at UMRR-EMP CC's February 28, 2013 meeting.

LTRMP Naming Convention

Hubbell recalled that, at its August 30, 2012 meeting, the UMRR-EMP CC agreed to maintain the name Long Term Resource Monitoring Program (LTRMP) over the next six months, with the understanding that there will be a more concerted effort to consistently and explicitly credit UMRR-EMP for LTRMP products and activities. Since August, Hubbell said the LTRMP Management Team has noted a few examples where UMRR-EMP was inadvertently not credited. Hubbell and Jawson said the problems are being corrected when possible and the LTRMP Management Team continues to work with staff to more effectively communicate that LTRMP is a function of UMRR-EMP.

New UMRR-EMP Website

Hubbell reported that, on October 25, 2012, USACE launched a new website for UMRR-EMP: <http://www.mvr.usace.army.mil/Missions/EnvironmentalProtectionandRestoration/UpperMississippiRiverRestoration.aspx>. The new website consolidates previously disparate program pages and updates the appearance and usability. Hubbell said the website is still being developed, and asked partners to send him any comments.

In response to a question from Olivia Dorothy, Hubbell said the website will contain links to project fact sheets, evaluation reports, and other relevant project information. In response to a question from Naramore, Colonel Price confirmed that UMRR-EMP's website will include clear links to MVP's and MVS's HREP web pages, as well as to LTRMP's web pages.

Fischer suggested that the website include links to project sponsors' data, or information about how to locate the data. Barry Johnson said the HREP Database may be a more appropriate central point for all HREP-related data. Hubbell agreed, and said USACE staff will present the HREP Database's applications at UMRR-EMP CC's February 28, 2013 meeting. In response to a question from Sternburg, Hubbell said District staff are currently uploading project information detailing the amount and types of habitat improved — e.g., acres of backwaters restored.

Public Involvement and Outreach

Dorothy said that, during recent Congressional visits, she was surprised to learn that many Senate Environment and Public Works Committee staff were unfamiliar with UMRR-EMP. Even more surprising was that several staff of the UMR Congressional delegation were also generally unfamiliar with the program. Dorothy stressed the importance of ongoing, dedicated outreach to Congressional members and staff.

Colonel Price and Renee Turner said their interactions with Congressional members and staff have been quite opposite. Congressional members and staff have attended several recent HREP dedications and other UMRS events — e.g., Pool 8 Islands Dedication and Mississippi Makeover's June 13, 2012 Pool 2 boat tour. In addition, during USACE's recent Congressional briefings, members have been well informed and very supportive of UMRR-EMP.

Gretchen Benjamin echoed Dorothy's observation. She said that, given the frequent turnover in staff, there needs to be a concerted effort to continually educate Congressional members and staff about UMRR-EMP. Hubbell encouraged partners to contact Corps staff with any requests for program information that would be useful to their outreach efforts. Benjamin said The Nature Conservancy (TNC) recently created a YouTube video (<http://www.youtube.com/watch?v=fGHq5V8Npms&hd=1>) that explains the history and ecological and economic importance of the UMRS and the tremendous benefits of UMRR-EMP's restoration and science efforts. The video focuses particularly on island restoration. Benjamin said TNC is using the video as an educational tool when communicating to Congressional members and staff, as well as other external program stakeholders.

UMRR-EMP Strategic Plan

Marv Hubbell recalled that partners had developed a rough draft strategic plan for UMRR-EMP in 2004. However, the plan was tabled due to uncertainties related to the Navigation and Ecosystem Sustainability Program's (NESP's) anticipated authorization and implementation and significant budget shortfalls in 2004 and 2005. With the current LTRMP Strategic Plan set to expire at the end of FY 14, Hubbell said partners had planned on initiating a strategic planning effort for the science component relatively soon. Additionally, in 2010, partners completed initial scoping for the development of an HREP strategic plan. However, the planning process was tabled in order to first consider foundational policy questions through the Implementation Issues Assessment (IIA). Instead of employing separate, but simultaneous, strategic planning efforts for UMRR-EMP's restoration and science efforts, partners recently agreed to develop an integrated, programmatic strategic plan. Hubbell said he hopes the unified planning process will facilitate the program's increased focus on HREP/LTRMP integration.

Hubbell proposed a timeframe and basic planning process for the FY 15-19 UMRR-EMP Strategic Plan. The planning effort would begin in March 2013 and would be completed in September 2014, allowing the plan to inform LTRMP's FY 15 scope of work (SOW). Hubbell anticipates holding seven to nine meetings, with about half of those meetings held in-person. The planning team would include 12 to 14 individuals, with representation from the various program partners and functions.

Colonel Michael Price suggested a more streamlined approach, noting that the science portion can build directly from the FY 10-14 LTRMP Strategic Plan. Mike Jawson expressed support for Hubbell's proposed timeframe. Jawson stressed the importance of having sufficient time to consider various issues, especially given that this will be the first strategic plan for the entire program and that the HREP component has not yet undergone strategic planning. He also articulated the need to reevaluate priorities for LTRMP given the current and foreseeable budget shortfalls. Barry Johnson underscored the importance of the UMRR-EMP Strategic Plan in shaping the program's future and thus the need to ensure it is done properly. Janet Sternburg echoed support for Hubbell's proposal.

Tim Schlagenhaft said the professional facilitators were instrumental to the FY 10-14 LTRMP Strategic Plan's success. He strongly encouraged using professional facilitators for the FY 15-19 UMRR-EMP Strategic Plan. In response to a request from Hubbell, Schlagenhaft and Kevin Stauffer said they will contact Brian Stenquist and Emmett Mullin regarding their potential facilitation of the strategic planning process.

Implementation Issues Assessment — Issue Paper Discussion

Construction Cost Sharing

Janet Sternburg summarized the November 14, 2012 draft Construction Cost Sharing Issue Paper. Sternburg explained that, while nonfederal partners are very committed to serving as project cost share

sponsors, expanding the criteria for 100 percent federal funding for HREPs would allow UMRR-EMP to advance important restoration opportunities that are not yet feasible through nonfederal cost share. She recalled that, when this issue was previously discussed at UMRR-EMP CC's February 24, 2010 meeting, MVD indicated its willingness to work with partners to seek necessary policy clarifications and sound changes.

Sternburg outlined the paper's two options, including:

1. Maintain the *status quo* — i.e., full federal funding is provided only for HREPs that are located on lands managed as a national wildlife refuge.
2. Explore UMRR-EMP's policy regarding full federal funding for HREPs through specific project proposals if, and when, it is determined that a priority habitat project cannot be cost shared and is not located on national wildlife refuge lands.

Hubbell clarified that, in addition to projects located on national wildlife refuge lands, UMRR-EMP's authorization allows for full federal funding for HREPs that are intended to benefit a federally-listed threatened and endangered (T&E) species or provide a national benefit. He said MVP staff are currently evaluating options for pursuing full federal funding for North and Sturgeon Lakes since the project is located on General Plan lands. Bob Clevenstine noted that Schinneman Chute could potentially be advanced with full federal funding either because the project involves T&E species or it contains navigation structures. Ken Barr also mentioned that the Pool 2 Wing Dam project includes navigation structures.

Tim Schlagenhaft suggested adding USACE-owned lands to the list of federal lands on which habitat projects could potentially receive full federal funding in the issue paper. Diane Ford expressed support for Option 2 and suggested that the issue paper be completed with Schlagenhaft's suggestion. The UMRR-EMP CC agreed. In response to a suggestion by Gretchen Benjamin, the UMRR-EMP CC agreed to also explicitly reference WRDA 2007's provisions regarding navigation servitude.

HREP O&M Involving Navigation Structures

Hubbell provided a brief overview of the November 14, 2012 draft HREP O&M Involving Navigation Structures Issue Paper. He said several implementation questions remain about O&M on HREPs involving navigation structures, including nonfederal sponsors' abilities to modify navigation structures to achieve O&M obligations and the potential for the Corps to assume O&M responsibilities for certain HREP elements.

Sternburg suggested removing this issue from the Implementation Issues Assessment (IIA) and instead exploring the implementation questions in the FY 15-19 UMRR-EMP Strategic Plan. Naramore agreed, noting that this issue is not developed well enough for partners to make any real decisions. The UMRR-EMP CC agreed to defer this issue to the UMRR-EMP Strategic Plan.

Emerging Trends and Issues

Mike Jawson presented the November 13, 2012 draft Emerging Trends and Issues Issue Paper. Jawson discussed the following options for identifying and considering emerging trends and issues:

1. Maintain the *status quo* — i.e., informally evaluate emerging trends and issues on an *ad hoc* basis, with no formal framework.

2. Remove this issue from the IIA and instead consider whether and how to explicitly and formally evaluate emerging trends and issues in the FY 15-19 UMRR-EMP Strategic Plan.
3. Adopt the framework outlined in the issue paper for formally identifying and evaluating emerging trends and issues.
4. Advance option 3 and identify priority emerging trends and issues in the FY 15-19 UMRR-EMP Strategic Plan.
5. Develop an alternative framework (other than the one offered in the issue paper) for formally identifying and evaluating emerging trends and issues.

Jawson described the framework as outlined in the issue paper. Jawson said that, if partners choose to develop a formal process, there will be several implementation details to consider — e.g., allocating resources for the analysis. Ultimately, the goal would be for the UMRR-EMP CC to make an explicit statement about whether and how to address an emerging trend or issue.

Hubbell expressed support for developing a framework for identifying and evaluating emerging trends and issues. Colonel Michael Price agreed, and suggested that the FY 15-19 UMRR-EMP Strategic Plan consider priority trends and issues.

Jim Fischer said the UMRR-EMP CC has been an effective forum in the past for discussing emerging trends and issues and deciding whether to pursue any further action. For example, at a previous UMRR-EMP CC meeting, Tim Schlagenhaft had presented on the implications of climate change on UMRR-EMP's restoration and science efforts, as well as the opportunities to incorporate climate change impacts into the program. Diane Ford agreed with Fischer's suggestion. She expressed support for Colonel Price's suggestion to address priority emerging trends and issues in the UMRR-EMP Strategic Plan. Schlagenhaft said he does not think a formal process is necessary, but that the opportunity exists for partners to raise issues and determine whether future action is needed.

Jawson explained that a formal process would prompt the UMRR-EMP CC to articulate its decisions regarding whether and how to act on particular issues. He said the UMRR-EMP CC has discussed the implications of Asian carp, frac sand mining, climate change, and other issues, but has not discussed whether any actions to address the issues are desired. A formal process would provide the trigger for an explicit decision.

In response to a question from Sternburg, Jawson said he anticipates that the UMRR-EMP CC would task an individual or group to develop a white paper detailing the current understanding of an emerging trend or issue and identifying options for UMRR-EMP to address the issue. Sternburg expressed support for adopting a formal process. She said the UMRR-EMP CC could also identify opportunities to coordinate with another program or agency, especially on issues that are outside of UMRR-EMP's scope. Jawson said issue evaluations should focus on the implications for UMRR-EMP, including deciding whether the program should do anything differently.

In response to a clarifying question from Colonel Price, Hubbell explained that the UMRR-EMP CC serves as an advisory body to USACE regarding program implementation. He emphasized that the Committee's recommendations have always been given great consideration.

Clevenstine observed that the UMRR-EMP CC seems supportive of advancing option 4. The UMRR-EMP CC agreed, and concluded that the issue paper is complete.

In response to a question from Fischer, Jawson clarified that the UMRR-EMP CC would initially determine the appropriate level of resources to allocate for the issue analysis only. Jawson said the analysis effort would either be captured in the LTRMP or HREP SOW, depending on the issue and individual staff knowledgeable about the issue. Barb Naramore recommended that the framework be flexible so that analyses can be tailored to each issue, noting that each issue will have a different level of urgency and certainty associated. She cautioned against making the analyses so extensive that they become cumbersome. Jawson concurred.

In response to a question from Diane Ford, Hubbell said partners have informally considered the implications of emerging trends and issues when developing habitat projects and in evaluating monitoring data and other research. For example, an Asian carp white paper is currently being developed to inform UMRR-EMP's future restoration and science efforts. Hubbell suggested that the white paper be presented to the UMRR-EMP CC at its February 28, 2013 meeting for input. Colonel Price urged partners to remain mindful of UMRR-EMP's authorization, which is to restore the UMR ecosystem following the construction and operation of the 9-foot navigation channel. Hubbell explained that it is important for partners to understand how the advancement of various emerging trends and issues will affect UMRR-EMP's ability to restore and accurately monitor the river.

Jawson suggested that, at its February 28, 2013 meeting, the UMRR-EMP CC begin exploring emerging trends and issues to evaluate in FY 13-14.

Draft IIA Report

Kirsten Mickelsen presented the draft IIA Executive Summary and Land Acquisition issue write-up. Mickelsen said the draft IIA will likely be distributed to partners in early 2013 for review. In response to a question from Mickelsen, the UMRR-EMP CC expressed support for the draft IIA format.

Adaptive Management Flow Charts

Marv Hubbell described the November 13, 2012 revised adaptive management (AM) organizational and HREP AM planning flow charts, which reflect the UMRR-EMP CC's suggestions at its August 30, 2012 meeting. Janet Sternburg stressed that the UMRR-EMP CC should not be reviewing all draft definite project reports (DPRs). Hubbell agreed and said District staff would only present major AM plans to the Committee for input. The UMRR-EMP CC expressed support for the revised flow charts.

Long Term Resource Monitoring Program

Product Highlights

Mike Jawson said LTRMP's base monitoring data collection in FY 13's first quarter included:

- 1,590 fisheries observations in Pools 4, 8, 13, and 26; the Open River; and the La Grange Pool.
- 1,250 aquatic vegetation observations in Pools 4, 8, and 13.
- More than 12,600 processed water quality samples of fixed sites and stratified random samples in Pools 4, 8, 13, and 26; the Open River; and the La Grange Pool.

Jawson said base monitoring now consumes most of LTRMP's budget. Given that LTRMP is likely to experience constrained budgets for the foreseeable future, he asked partners to reconsider the long standing question of whether to reduce base monitoring in order to allow for more focused research and analysis. Jim Fischer stressed the importance of sustaining the long term data collection stream in order to maintain the data's statistical power and have the data available for future analyses. Jawson expressed

concern with losing the program's analytical component in the near term and missing important insights about the river.

Jawson reported that the 2010-2011 land cover/land use (LC/LU) data for Pools 6 and 19 were published on LTRMP's website (http://www.umesc.usgs.gov/data_library/land_cover_use/2010_lcu_umesc.html) and 2010-2011 LC/LU data for Pools 15-17 have been groundtruthed.

Jawson reported that a manuscript regarding the effects of flood frequency and duration on the composition of floodplain forests was published. He explained that the study informs how water level management and alternative hydrologic regimes might affect tree size-density relationships. Janet Sternburg asked if the analysis examined water table elevations. Barry Johnson said the study focused on length of inundation over a range of water elevations. Marv Hubbell said the results have been used to inform Huron Island.

Jawson said two presentations were delivered in the first quarter of FY 13, including:

- Variation in nutrient distribution in the UMR depending on local geomorphic and hydraulic conditions, given at the 2012 Ecological Society of America annual meeting.
- Status and trends of Asian carp in the UMR basin, given at the 2012 American Fisheries Society meeting.

Jim Fischer recognized the tremendous value of these analyses. He questioned the program's ability to conduct such research in the future if data collection is reduced or modified. Jawson said maintaining the current data collection stream, without a budget increase, would limit the program's ability to support staff members' need to publish in order to advance professionally. It would also limit the capacity to make timely observations about an indicator's status or trend and/or conduct focused research to better understand a critical river issue. Bob Clevenstine asked if partners would support shifting data collection from a trend pool to an area where there is significant inconsistency — e.g., Pool 16. Fischer explained that LTRMP's existing dataset can be used to answer questions in other areas, including Pool 16. Jawson acknowledged that supplemental, focused research would likely be needed to make conclusive statements about happenings in non-trend pools, especially to confirm that there is not a unique occurrence. Fischer strongly advised against modifying LTRMP's data collection stream. Rather, partners should identify additional resources to implement focused research and analyses. Hubbell said this issue will be addressed in the FY 15-19 UMRR-EMP Strategic Plan. Walt Popp said portions of the field stations' infrastructure would be lost if the data collection stream is reduced, and would be difficult to reestablish. Karen Hagerty noted that external resources (including relevant data) may be leveraged to augment LTRMP's research and analysis.

Jawson described LTRMP's other FY 13 first quarter work efforts, including:

- Doctoral dissertation regarding nutrient controls on phytoplankton composition and ecological function.
- Comprehensive summary of federal agencies' approaches to monitoring water quality and quantity and assessing temporal trends in water quality components.
- Pool 8 submersed aquatic vegetation (SAV) model applied to the Starved Rock Pool on the Illinois River.
- Wind fetch and wave action model upgrades.
- LTRMP equipment refreshment plan revisions.
- Continued outreach and assistance to internal and external stakeholders.

Fischer said the phytoplankton analysis highlights the importance of having a sustained data collection stream. He explained that water quality samples are preserved for the purpose of doing long term, historical trend analyses. Discontinuing LTRMP's data collection stream would substantially limit future trend analyses and other focused research. Jawson agreed that the capability to do such analyses is extremely important, but said there may be important research opportunities that cannot be delayed. Gretchen Benjamin stressed that base monitoring is a key element of LTRMP's success and recognition nationally and internationally. Benjamin said LTRMP's database contributes substantially to TNC's Great Rivers Partnership. LTRMP data and monitoring protocols inform work in other large aquatic ecosystem programs.

USACE's LTRMP Update

LTRMP Implementation in Low Funding Years

Hagerty said, at its August 30, 2012 meeting, the UMRR-EMP CC endorsed the FY 13 LTRMP allocation plan, as provided by the *ad hoc* group addressing LTRMP implementation in low funding years. The *ad hoc* group members include Hubbell and Hagerty (USACE), Johnson and Jennie Sauer (USGS), Tim Yager and Bob Clevenstine (USFWS), John Chick (Illinois Natural History Survey/NGRREC), Diane Ford (IA DNR), Walt Popp (MN DNR), Janet Sternburg (MO DoC), Pat Short (WI DNR), and Kirsten Mickelsen (UMRBA). Since the August meeting, Hagerty reported that about \$140,000 in FY 12 LTRMP carry-over was identified. She said the FY 13 LTRMP allocation plan identified the 2010-2011 LC/LU accuracy assessment, LiDAR license, and critical equipment as priorities for any funds above LTRMP's anticipated budget of \$5.128 million. In a separate effort, UMESC and the field stations have identified about \$120,000 in priorities to fund with the carry-over. Hagerty said the LTRMP management team and *ad hoc* LTRMP low funding group will reconvene shortly to discuss FY 13 and 14 priorities and longer term strategies for LTRMP under continued constrained budget scenarios. The group will also discuss lessons learned from this first iteration and how to improve future low funding planning.

Annual FY 10-14 LTRMP Strategic Plan Review

Hagerty listed LTRMP's FY 12 accomplishments in advancing the FY 10-14 LTRMP Strategic Plan's outcomes and outputs. An FY 12 progress report is included in the agenda packet. Hagerty observed that there has been a tremendous amount of progress in advancing the Strategic Plan, even with limited funds.

Draft Report on Indicators of Ecosystem Health for the UMRS

Hagerty said the A-Team is currently reviewing the July 2012 draft report on Indicators of Ecosystem Health for the UMRS, and will discuss a revised version at its February 2013 meeting. The A-Team plans to present the final indicators report to the UMRR-EMP CC for consideration at the Committee's May 29, 2013 meeting.

Hagerty mentioned that there is significant overlap between the *ad hoc* groups addressing low funding and LTRMP's FY 10-14 Strategic Plan implementation, including composition and objectives. Hagerty said she will explore potential ways to eliminate duplication.

Fischer recognized the substantial volume of work being done by LTRMP staff. Fischer said there has been increased scrutiny regarding LTRMP's work efforts internally. He asked if summaries like the FY 12 LTRMP Progress Report could answer questions related to staff output. In response to a question from Hagerty, Fischer said the February 15-17, 2012 LTRMP Team Meeting was one example where staff were asked for detailed information regarding their time spent on specific efforts and associated output. Hagerty explained that many internal and external partners are unaware of the enormous amount of very valuable

work coming out of LTRMP. She emphasized that the breadth of work accomplished on an annual and daily basis is tremendous. There needs to be a common place to document the vast amount of outputs so that they can be accurately and clearly communicated. Hubbell clarified that the LTRMP milestone charts were not capturing a wide range of work being done. He said there were several instances where partners, including the UMRR-EMP CC and LTRMP management team, were unaware of important analyses and other information being published. Hubbell explained that the intention was not to scrutinize staff, but to capture staffs' major efforts so that they can be highlighted and promoted internally and externally. Hagerty added that, as UMRR-EMP receives increased national and international attention, more transparency and accountability in UMRR-EMP's budgets will be required. Fischer agreed with the need to be more transparent and accountable, but stressed that this intention needs to be more clearly articulated upfront and that the appreciation for staffs' work is also well expressed.

A-Team Report

Kevin Stauffer said the A-Team's October 23, 2012 conference call focused on USEPA's involvement on the A-Team, the floodplain connectivity framework, the LTRMP Science Coordination Plan status, LTRMP's FY 13 scope of work (SOW), and the draft report on Indicators of Ecosystem Health for the UMRS. Stauffer reported that Andrew Casper is the Illinois River Biological Station's Team Leader and Sarah Tripp recently joined the Big Rivers and Wetlands Field Station. The next A-Team conference call is scheduled for February 2013.

Stauffer said the Open River Field Station announced that it captured striped mullet this year. Kat McCain explained that striped mullet is an ocean fish that rarely comes this far upriver. Johnson said the LTRMP database has indicated the species' presence on the UMR in 2000 and 2006.

LTRMP Science Plan

Johnson said there is not sufficient funding to hold the first biennial Science Coordination Plan meeting in February 2013, as previously planned. Instead, Johnson explained that he will develop a comprehensive inventory of science questions partners have already proposed. He said the A-Team will review and prioritize the inventory in spring 2013. Sternburg suggested referencing the questions prioritized for Additional Program Elements (APEs).

LTRMP Highlight: Water Quality and Biota Trends in Pool 4

Walt Popp presented an analysis of LTRMP water quality, submersed aquatic vegetation (SAV), and fish data in Pool 4 that supports empirical evidence of an ecological shift occurring since 2005. Popp explained that Pool 4 has three distinct geomorphic reaches: upper Pool 4, Lake Pepin, and lower Pool 4. He said upper Pool 4 is characterized by high total suspended sediment (TSS) loads and turbidity from agricultural drainage from the Minnesota River, and thus relatively low aquatic vegetation. Since Lake Pepin serves as a sink for sediments, lower Pool 4 has relatively low suspended sediments and turbidity and abundant aquatic vegetation. Lower Pool 4 also has a high sand bedload from the Chippewa River.

Popp said LTRMP staff have been observing major changes in upper and lower Pool 4 recently. To better detect and demonstrate that an ecological shift is occurring, staff examined 19 years of LTRMP's water quality and biological data in upper and lower Pool 4. The analysis also explored relationships among biota, hydrology, and physical and chemical habitats. Popp discussed the study's major conclusions, including:

- Lake Pepin had a 78 percent sediment retention rate from 1993 to 2011, indicating that the lake is a very effective sediment trap.

- The mean summer total suspended solids (TSS) concentration is significantly higher in upper Pool 4 than in lower Pool 4.
- In upper Pool 4, there was a significant decline in median summer TSS concentrations in 2005-2011 compared to 1993-2004.
- The mean summer water surface elevation in the tallwaters of L&D 3 was substantially lower in 2005-2011 than 1993-2004. In addition, mean water elevation in 2005-2011 was below the long term mean (1940-2011) for much of the summer.
- The combined frequency of SAV in the backwaters, side channel borders, and main channel border increased in upper Pool 4 beginning in 2005, with a 36 percent increase between 2006 and 2011, and in lower Pool 4 beginning in 2007, with a 29 percent increase between 2004 and 2009.
- The frequency of SAV was 90 percent or higher in lower Pool 4's backwaters in 2008-2011. The SAV frequency in upper Pool 4's backwaters increased 53 percent from 2006 to 2011.
- There was a highly significant correlation between turbidity and vegetation. With SAV frequency at 90 percent in the backwaters, vegetation is likely controlling turbidity, whereas turbidity typically regulates vegetation under lower frequencies. The correlation is somewhat less significant in upper Pool 4.
- SAV species diversity remained relatively steady between 1994 and 2011; however, SAV species diversity increased substantially, especially since 2005 under low flow conditions.
- Catch per unit of fish species associated with higher levels of vegetation (e.g., yellow perch, largemouth bass, and bluegill) increased in both upper and lower Pool 4 from 2005 to 2011. On the other hand, species associated with open water (e.g., emerald shiner) have decreased since 2005.

In conclusion, Popp said the analysis clearly shows that an ecological shift has been occurring in both upper and lower Pool 4 since 2005. Popp observed that the shift may be short term, resulting from lower water levels. However, the results also show that long term management efforts to improve water quality and restore habitat can improve biota.

In response to a question from Jawson, Popp explained that reduced sediment loadings from agricultural lands on the Minnesota River have been offset by other sources, causing the sediment loading into Pool 4 to remain steady. Popp said discharge is much more attributable to increased SAV in upper Pool 4 than sediment loads. He said the trigger for the ecological changes in lower Pool 4 is undetermined. Jawson said sediment particle size could be a factor.

In response to a question from Bob Clevenstine, Popp said increases in SAV are likely caused by decreasing turbidity in lower Pool 4 and decreasing discharge in upper Pool 4. Tim Schlagenhaft acknowledged that discharge will not always have the same relationships. At any given of discharge, a low sediment source would not contribute as much as a higher sediment source, thus TSS may be controlling. Popp said that is possible.

Johnson suggested exploring fish responses based on their association with water quality. In response to a question from Jon Hendrickson, Popp said the restoration efforts (i.e., island building and water level drawdowns) in Pool 3 were very successful at improving water quality and biota. In response to a question from Dan Stephenson, Popp said SAV has become more diverse in upper Pool 4. There has been a low frequency of invasive SAV species in the pool. Eurasian milfoil was present, but never exceeded 2 percent frequency. In response to a question from Gretchen Benjamin, Popp said the analysis did not examine emergent aquatic vegetation.

Habitat Rehabilitation and Enhancement Projects

HREP Highlight: Wind/Wave Model

Dave Potter said LTRMP staff developed geospatial wind and wave action models in 2008, specifically to inform island building projects in MVP and MVS. Potter explained that the models visually portray wind fetch and the likelihood of suspended sediment resulting from wave action. Project delivery teams (PDTs) can use the models to compare project alternatives in terms of their potential to reduce wave action and turbidity. Potter said LTRMP staff are currently upgrading the models to be compatible with ArcGIS 10.0 and are making various other improvements, including automating analyses, delineating areas of potential effects, and incorporating water density data to simulate the dampening effects of submersed aquatic vegetation.

Potter illustrated how to use the wind fetch and wave action models for habitat project planning purposes. He said wind fetch, which is the unobstructed distance wind can travel over water in a constant direction, creates waves and thus leads to shoreline erosion and island loss. Wind fetch can inform the best placement and layout of project features. Potter showed how the wind fetch model is being used to inform Harpers Slough. Potter explained that the wave action model is used to predict how fine unconsolidated sediments will become suspended. He said wave action is important to consider in project planning because high wave action leads to high turbidities, low light penetration, and decreased aquatic vegetation. Potter said LTRMP staff plan to develop a users manual, apply the models to habitat projects currently in planning, and translate model outputs to measure biological response. He noted that using the models for project evaluation would likely trigger USACE certification requirements.

Gretchen Benjamin asked if these models can determine the geographic extent of project benefits, beyond the specific project boundary. Potter said the models should be able to help quantify the shadow effect of habitat projects. He said LTRMP staff are currently exploring how the models' outputs can accurately estimate biological responses. Hubbell said he also anticipates that these models could be used to determine cost per acre of habitat benefited. In response to a question from Ken Westlake, Hubbell said the models could certainly be used in identifying and prioritizing habitat projects.

In response to a question from Benjamin, Hubbell said the models will be available in ArcGIS 10.0 via internet once they are finalized, and will also be integrated into the HREP Database. Fischer added that the models in ArcGIS 9.2 are available on LTRMP's website:

http://www.umesc.usgs.gov/management/dss/wind_fetch_wave_models.html.

In response to a question from Barb Naramore, Potter explained that the wind model is an input to the wave model, so the results are typically very similar. Tim Schlagenhaft noted that ambient turbidity is limiting aquatic vegetation in many areas. He asked if the wave action model can separate wind and ambient turbidity. Potter said the model does not currently have that capability, but LTRMP staff could explore developing that tool in the future. Barry Johnson explained that integrating the wind fetch outputs into the hydrodynamic model could quantify ambient turbidity.

Mike Jawson observed that the wind fetch and wave action models could demonstrate the potential implications of climate change over a habitat project's 50-year life span. He said this is a prime example of how an emerging trend analysis can help maximize program investment.

District Reports

Brian Markert said MVS is finalizing revisions to Rip Rap Landing's definite project report (DPR) based on comments from MVD. Markert explained that USACE staff are currently exploring whether Rip Rap

Landing can proceed as designed, given that the project's land acquisition costs exceed the 25 percent cap on acquisition costs relative to total project costs. The District's other planning priorities include Clarence Cannon and Piasa and Eagles Nest Islands. Staff are currently designing the Ted Shanks' pump station. Markert said low water has allowed contractors to make excellent construction progress on Batchtown, Pools 25 and 26 Islands, and Ted Shanks. He said MVS received \$600,000 in FY 13 to advance construction on Ted Shanks and Pools 25 and 26 Islands. MVS recently completed an evaluation report for Stump Lake.

Tom Novak explained that MVP is currently revising the scope of Capoli Slough Stage 2, including removing an optional component that will increase construction efficiency, and will rebid the contract soon. Novak said construction on Capoli Slough Stage 1 is nearly complete. The District continues planning on North and Sturgeon Lakes, L&D 3 Fish Passage, and Harpers Slough. Novak said staff anticipate completing the Harpers Slough DPR this summer. Novak mentioned that the Rio Grande Environmental Management Program received the Chief of Engineers' 2012 Environmental Honor Award. He said this is an attribute to UMRR-EMP, since the Rio Grande program was largely modeled on the UMRR-EMP.

Hubbell said MVR's current planning priorities are Pool 12 Overwintering, Huron Island, and Beaver Island. The District is deferring planning on Rice Lake Stage 2 until more construction is completed on Rice Lake Stage 1. Contingent on MVD approval of Pool 12 Overwintering's DPR, Hubbell said MVR plans to initiate design on the project in January 2013. Hubbell said dry conditions have allowed construction on Fox Island to proceed smoothly. Construction on Rice Lake Stage 1 has been challenging due to an eagle's nest on the project site. MVR staff are working on three project performance evaluations.

Bob Clevenstine noted that USFWS Refuge Managers in Illinois have underscored the tremendous benefits of HREPs' water control structures for mitigating the impacts of this year's drought.

Other Business

On behalf of USACE and UMRR-EMP, Marv Hubbell expressed his sincere appreciation to Tim Schlagenhaft for his substantial contributions in representing Minnesota DNR on the UMRR-EMP CC. Hubbell said Schlagenhaft has been an incredible asset to the program, always providing tremendous insight and vision for the future. Hubbell said he looks forward to engaging with Schlagenhaft in his new role with Audubon. Mike Jawson applauded Schlagenhaft for his committed involvement to the program, especially for his ability to be forthright and constructive. Schlagenhaft announced that he will be starting a new position with Audubon early next year. He said it has been his pleasure to work with an extraordinary group of individuals to help advance a world-renowned science and restoration program. He has witnessed the program achieve many significant accomplishments over the years. Kevin Stauffer will serve as Minnesota DNR's representative to the UMRR-EMP CC going forward. Bob Clevenstine thanked Schlagenhaft for his dedicated service to the many UMRS interagency groups and efforts.

The upcoming quarterly meetings are as follows:

- **February 2013 — Quad Cities**
 - UMRBA Board meeting — February 26
 - UMRBA — February 27
 - UMRR-EMP CC — February 28

- **May 29, 2013 — Webinar (UMRR-EMP)**

- **June 2013 — St. Louis**
 - UMRBA Water Quality Meeting — June 4
 - Joint UMRBA/ORSANCO Meeting — June 5
 - UMRBA — June 6

- **August 2013 — La Crosse**
 - UMRBA — August 27
 - UMRR-EMP CC — August 28

With no further business, the meeting adjourned at 2:30 p.m.

**UMRR-EMP CC Attendance List
November 29, 2012**

UMRR-EMP CC Members

Renee Turner	U.S. Army Corps of Engineers, MVD
Bob Clevenstine	U.S. Fish and Wildlife Service, UMR Refuge [On behalf of Kevin Foerster]
Mike Jawson	U.S. Geological Survey, UMESC
Dan Stephenson	Illinois Department of Natural Resources
Diane Ford	Iowa Department of Natural Resources
Tim Schlagenhaft	Minnesota Department of Natural Resources
Janet Sternburg	Missouri Department of Conservation
Jim Fischer	Wisconsin Department of Natural Resources

Others In Attendance

COL Michael Price	U.S. Army Corps of Engineers, MVP
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
Gary Meden	U.S. Army Corps of Engineers, MVR
Marvin Hubbell	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Ken Barr	U.S. Army Corps of Engineers, MVR
Hal Graef	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Kat McCain	U.S. Army Corps of Engineers, MVS
Sean DeCataldo	U.S. Coast Guard, St. Paul
Ken Westlake	U.S. Environmental Protection Agency, Region 5
Jon Duyvejonck	U.S. Fish and Wildlife Service, RIFO
Stephen Winter	U.S. Fish and Wildlife Service, UMR Refuge
Scott Yess	U.S. Fish and Wildlife Service, UMRCC
Barry Johnson	U.S. Geological Survey, UMESC
Kevin Stauffer	Minnesota Department of Natural Resources
Walt Popp	Minnesota Department of Natural Resources
Robert Stout	Missouri Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Tom Boland	AMEC, St. Louis
Steve Sletten	Atkins
Greg Graske	EOR, Inc.
Olivia Dorothy	Izaak Walton League
Cecily Smith	Prairie Rivers Network
Don Powell	SEH Inc.
Gretchen Benjamin	The Nature Conservancy, Great Rivers Partnership
Barb Naramore	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association