

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

**August 9, 2016
Quarterly Meeting**

**Radisson Hotel
La Crosse, Wisconsin**

Thatch Shepard of the U.S. Army Corps of Engineers, on behalf of Don Balch, called the meeting to order at 3:35 p.m. on August 9, 2016. Other UMRR Coordinating Committee representatives present were Sabrina Chandler (USFWS), Jennie Sauer (USGS) on behalf of Mark Gaikowski, Dan Stephenson (IL DNR), Randy Schultz (IA DNR), Megan Moore (MN DNR) on behalf of Kevin Stauffer, Janet Sternburg (MO DoC) via phone, Jim Fischer (WI DNR), Ken Westlake (USEPA) via phone, and Marty Adkins (NRCS). A complete list of attendees follows these minutes.

Minutes of the May 25, 2016 Meeting

Dan Stephenson moved and Randy Schultz seconded a motion to approve the draft minutes of the May 25, 2016 UMRR Coordinating Committee meeting as written. The motion carried unanimously.

Thank You to Janet Sternburg

Brian Markert expressed appreciation to Janet Sternburg for her steadfast dedication to UMRR, particularly for her partnership and friendship. Markert said Sternburg has been instrumental in conceptualizing habitat projects and in making many key agreements allowing for projects to move forward. This sentiment was strongly echoed by the UMRR Coordinating Committee members and meeting participants.

UMRR's 30 Years of Service Commemoration

Marv Hubbell reflected on the successful series of events on August 8, 2016 in commemoration of UMRR's 30 years of service to the nation. Hubbell applauded the many individual partners involved in planning and staffing the event, which included a public outreach activities and a formal celebration. The public outreach events included many STEM-related activities such as a meet-and-greet with a live eagle and live fish as well as yoga for adults and question-and-answer with partner agencies. The formal ceremony featured a suite of speakers who collectively told UMRR's story from its inception to the present and what may be expected in the future. The event has already received much positive feedback, and has been publicized in many local news outlets.

Regional Management and Partnership Collaboration

FY 2018 Budget Guidelines and Anticipated Process

Marv Hubbell said the Corps is developing an FY 2018 budget proposal to submit to the Office of Management and Budget (OMB) per the typical process. However, OMB has indicated that it will wait for the new Administration to make any budget decisions.

Habitat Restoration

District Reports

St. Louis District

Brian Markert described how Rip Rap Landing's features address important resource issues in the area. While the draft feasibility study is complete, the Corps and NRCS are still considering legal issues under the existing wetland reserve easement requirements. Markert reported that MVS is closing out Batchtown and anticipates closing out Pools 25 and 26 Islands in FY 2017.

St. Paul District

Marv Hubbell explained that MVP's primary challenge is advancing North and Sturgeon Lakes given the issues to non-federal sponsors in signing project partnership agreements (PPAs).

Rock Island District

Hubbell reported that MVR has awarded a construction contract for Pool 12 Overwintering Stage II and has published a bid for Stage III of the project. The District's planning priority is Beaver Island and is anticipating completing the project's feasibility study in FY 2017. Construction of the pumps at Rice Lake Stage I is anticipated to be finalized soon.

In response to a question from Marty Adkins, Hubbell explained that one portion of the additional Lake Odessa spillway capacity was constructed north of the outlet structure on the Mississippi River and the other portion was located upstream of the existing spillway on the Iowa River. These project features should work better because they will accommodate the rate of rise characteristics of both rivers. In response to a question from Dru Buntin, Hubbell said Rice Lake has experienced a myriad of unforeseen complications including unusual flood events. The Corps is now raising the height of three electrical junction boxes above the 500-year flood elevation to avoid frequent flood damages. Lawrence Patterson asked if the project will include safe access to the Rice Lake pumps. Hubbell said he will consult the designs and following with Patterson following the meeting.

UMRR HREP Team Meeting

Hubbell said an HREP team meeting is scheduled for September 27-29, 2016 in Davenport. Meeting objectives include building relationships and facilitating dialogue, discussing insights gained from constructing previous projects and long term monitoring, and strengthening UMRR's restoration efforts. The meeting will cover a range of topics, including agency perspectives on UMRR's restoration, floodplain forest restoration, water level management, and long term monitoring and research findings. In addition, the team meeting will include a facilitated discussion regarding habitat project monitoring.

Habitat Needs Assessment

Hubbell reported that the steering committee for the Habitat Needs Assessment (HNA) II was held on July 19-20, 2016 in Rock Island. The November 16, 2016 UMRR Coordinating Committee meeting will include a recommended path forward for the effort.

Continuous Process Improvement

In response to a question from Hubbell, the UMRR Coordinating Committee agreed to hold an in-person meeting with implementing partners' leadership to discuss the scope for a continuous process improvement evaluation for the habitat project planning phase. Hubbell offered that the discussion also

include a review of the cumulative benefits of UMRR's habitat restoration and the future direction for restoration. The Committee agreed to hold a conference call to plan the details for this event.

Long Term Resource Monitoring and Science

LTRM Showcase: Improving Floodplain Research and Management by Integrating Inundation Models, Ecosystem Studies, and Ecosystem Service Assessments

Molly Van Appledorn presented information regarding the use of flood inundation models to predict flooding dynamics and various inundation patterns affecting ecological characteristics. Van Appledorn explained that actions to alter the physical and ecological attributes create recreational and social benefits to the public. The connections between actions and benefits are often very complicated, but teasing apart the physical and ecological relationships can allow restoration practitioners to better predict outcomes. Characterizing flooding dynamics for a particular watershed and relating them to ecology is important understanding how its river floodplains work. Local dynamics can be evaluated in broader context to understand how actions work within and influence a larger regional characterization. Gauge data is an important baseline for comparison. Temporal aspects of flooding inform predictions of how changes in land use and precipitation patterns will affect flooding dynamics and ecological functions. For example, flooding can affect forest regeneration by influencing the delivery of seeds to new patches as well as recruitment, establishment, growth, and competition rates. Temporal evaluations can be helpful for creating associations – e.g., silver maples are expected in areas that flood more often. Van Appledorn illustrated how maps of inundation duration can be used to assess the effects on tree species composition and diversity. In addition, hydrodynamic models capture spatial and temporal patterns in flooding dynamics. The models can be used to compare localized sites in a regional context using attributes such as flood frequency, event duration, velocity, shear stress, inundation depth, and stream power. They can also show how surface water moves throughout a watershed.

Defining the ecologically-relevant attributes allow for discerning the complex, scale-dependent biophysical relationships. Van Appledorn explained that linkages between actions and benefits of managing flood dynamics can be complex and disentangling the biophysical relationships relies on quality representations of physical attributes. To better understand these relationships on the UMRS, Van Appledorn offered the following steps:

- 1) Develop methods for characterizing UMRS flooding dynamics in ecologically-relevant ways.
- 2) Utilize tributary junctions as laboratories – i.e., examine how flood dynamics of the main stem and tributaries manifest at the junctions and understand regional variation in tributary flooding behavior. [It is expected that highly complex relationships exist between forest dynamics, sediment dynamics, and biogeochemical cycling that vary throughout the UMRS.]
- 3) Develop an ecological floodplain inundation mapping (Eco-FIM) initiative to connect hydraulic models to maps of floodplain forests and other habitat types. This could be served in an on-line, interactive interface.

Marty Adkins expressed appreciation to Van Appledorn for her presentation, acknowledging the importance of this work for improving floodplain management. Adkins said Van Appledorn's work would connect well with Iowa Flood Center's monitoring and predictive modeling work. He suggested that Van Appledorn contact Larry Weber from the Flood Center. Van Appledorn agreed and said she has worked with the Iowa Flood Center, using its geomorphic information and modeling outputs to guide tree planting.

Megan Moore said this research would fit well with our desire to learn more about the impacts of the changing water regimes. Van Appledorn agreed, explaining that it will be important to understand what an ecological shift would mean for the river floodplain and habitat needs. Given that forests are slow to

change, modeling could be used to illustrate expectations of future conditions – i.e., generate maps of the future that predict forest succession that reflect hydrologic regimes. In response to question from Shawn Giblin, Van Appledorn said research has not yet examined trends in late spring/early summer water level peaks. She said that would be a great suggestion for future research given its importance as an influencing variable.

Kirsten Mickelsen expressed appreciation to Van Appledorn for her presentation and work on this front. Mickelsen said she believes that this research and ability to utilize hydrologic models for explaining the effects of floodplain management on larger ecological conditions will be extremely important for multi-purpose management of the system. In particular, Mickelsen said she sees this type of research as being a valuable component of a potential UMRS watershed study.

FY 2016 3rd Quarter Highlights

Jennie Sauer gave a bit thank you to Wisconsin DNR for organizing the STEM-related activities at UMRR's August 9, 2016 30th anniversary commemoration. Several local school groups came to the event and the activities were major hits with the kids. Sauer also expressed appreciation to USFWS for publicizing the event via its social media sources, including as a Facebook event.

Sauer reported that accomplishments of the third quarter of FY 2016 include:

- Publication of four manuscripts:
 - Patchiness in a large floodplain river, associations among hydrology, nutrients, and fish communities;
 - Contrasts between channels and backwaters in a large, floodplain river: testing our understanding of nutrient cycling, phytoplankton abundance, and suspended solids dynamics;
 - Long-term changes in fish community structure in relation to the establishment of Asian carps in a large floodplain river; and
 - Long-term decreases in phosphorus and suspended solids, but not nitrogen, in six Upper Mississippi River tributaries.
- Online serving of topobathy – a merged dataset of bathymetry and LiDAR – for portions of the UMRS. USGS anticipates having all areas available on the web site by the end of December 2016. A major challenge in this effort is the fact that the two data sets were collected over different dates and with different vendors, equipment, and datum.

A-Team Report

Shawn Giblin reported that the August 1, 2016 A-Team meeting included a series of presentations focused on answering questions related to how water depth drives water quality and habitat outcomes. Giblin overviewed the key points of those presentations, which included:

- Depth considerations for restoration and enhancement on the UMRS
- Backwater restoration primarily for overwintering fish habitat
- Water depth issues on the lower UMRS
- Fish indicators and standardized fisheries monitoring of habitat projects
- Riparian vegetation simulation modeling and regional sediment management, particularly exploring beneficial use of Illinois River dredged material stockpiles
- Development of the Habitat Needs Assessment II
- Overviews of the UMRR resilience application effort

In response to a question from Megan Moore, Giblin said that the logistics of habitat project monitoring for fish have not yet been decided. It may include involvement of the field stations. It is all conceptual thinking right now.

Other Business

Jim Fischer suggested that joint meetings between the UMRBA Board and UMRR Coordinating Committee are held on a more regular basis.

Future Meetings

The upcoming quarterly meetings are as follows:

- **November 2016 — Twin Cities**
 - UMRBA quarterly meeting — November 15
 - **UMRR Coordinating Committee quarterly meeting — November 16**

- **February 2017 — Quad Cities**
 - UMRBA quarterly meeting — February 7
 - **UMRR Coordinating Committee quarterly meeting — February 8**

- **May 2017 — St. Louis**
 - UMRBA quarterly meeting — May 23
 - **UMRR Coordinating Committee quarterly meeting — May 24**

With no further business, the meeting adjourned at 4:45 p.m.

**UMRR Coordinating Committee Attendance List
August 9, 2016**

UMRR Coordinating Committee Members

Thatch Shepard	U.S. Army Corps of Engineers, MVD [On behalf of Don Balch]
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges
Jennie Sauer	U.S. Geological Survey, UMESC [On behalf of Mark Gaikowski]
Dan Stephenson	Illinois Department of Natural Resources
Randy Schultz	Iowa Department of Natural Resources
Kevin Stauffer	Minnesota Department of Natural Resources
Janet Sternburg	Missouri Department of Conservation
Jim Fischer	Wisconsin Department of Natural Resources
Marty Adkins	Natural Resources Conservation Service
Ken Westlake	U.S. Environmental Protection Agency, Region 5 [On the phone]

Others In Attendance

Ben Robinson	U.S. Army Corps of Engineers, MVD
Ken Barr	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
MAJ Rich Star	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Tim Eagan	U.S. Army Corps of Engineers, MVS
Kat McCain	U.S. Army Corps of Engineers, MVS
Shawn Sullivan	U.S. Army Corps of Engineers, MVS
Kristen Bouska	U.S. Geological Survey, UMESC
Molly Van Appledorn	U.S. Geological Survey, UMESC
Lawrence Patterson	Illinois Department of Natural Resources
Megan Moore	Minnesota Department of Natural Resources
Robert Stout	Missouri Department of Natural Resources
Shawn Giblin	Wisconsin Department of Natural Resources
Brad Walker	Missouri Coalition for the Environment
Gretchen Benjamin	The Nature Conservancy
Barry Johnson	Public Citizen (Retired, U.S. Geological Survey)
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association