

**Minutes of the 152nd Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**October 29, 2019
St. Paul, Minnesota**

Rick Pohlman called the meeting to order at 9:34 a.m. Participants were as follows:

UMRBA Representatives, Alternates, and State Members of the Water Quality Executive Committee:

Rick Pohlman	Illinois Department of Natural Resources
Gregg Good	Illinois Environmental Protection Agency
Tim Hall	Iowa Department of Natural Resources
Adam Schnieders	Iowa Department of Natural Resources
Jake Hansen	Iowa Department of Agriculture and Land Stewardship
Sam Hiscocks	Iowa Department of Transportation
Barb Naramore	Minnesota Department of Natural Resources
Katrina Kessler	Minnesota Pollution Control Agency
Joe Gillman	Missouri Department of Natural Resources
Jennifer Hoggatt	Missouri Department of Natural Resources (on behalf of Dru Buntin)
Chris Wieberg	Missouri Department of Natural Resources
Chris Klenklen	Missouri Department of Agriculture
Matt Vitello	Missouri Department of Conservation
Steve Galarneau	Wisconsin Department of Natural Resources
Jim Fischer	Wisconsin Department of Natural Resources
Greg Searle	Wisconsin Department of Natural Resources (via phone)

Federal UMRBA Liaisons:

Verlon Barnes	U.S. Department of Agriculture, NRCS (on behalf of Kevin Wickey)
Ken Westlake	U.S. Environmental Protection Agency, Region 5 (via phone)
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges
Scott Morlock	U.S. Geological Survey, Midwest Region

Others in Attendance:

Dave Glover	Illinois Department of Natural Resources (via phone)
Loren Wobig	Illinois Department of Natural Resources (via phone)
Megan Moore	Minnesota Department of Natural Resources
Patrick Phenow	Minnesota Department of Transportation (via phone)
Mike Halsted	Wisconsin Department of Transportation (via phone)
Steve Buan	National Oceanic and Atmospheric Administration, NWS
Corey Loveland	National Oceanic and Atmospheric Administration, NWS
Michael Davis	U.S. Army Corps of Engineers, MVP
Angela Deen	U.S. Army Corps of Engineers, MVP
Chris Erickson	U.S. Army Corps of Engineers, MVP
Col. Karl Jansen	U.S. Army Corps of Engineers, MVP
Tom Novak	U.S. Army Corps of Engineers, MVP
Dave Potter	U.S. Army Corps of Engineers, MVP

Steve Tapp	U.S. Army Corps of Engineers, MVP
Andy Barnes	U.S. Army Corps of Engineers, MVR
Andrew Goodall	U.S. Army Corps of Engineers, MVR (via phone)
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Dennis Hamilton	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Scott Whitney	U.S. Army Corps of Engineers, MVR (via phone)
Paul St. Louis	U.S. Army Corps of Engineers, MVR
Hal Graef	U.S. Army Corps of Engineers, MVS (via phone)
Brian Markert	U.S. Army Corps of Engineers, MVS
Jason Daniels	U.S. Environmental Protection Agency, Region 7 (via phone)
Matt Gluckman	U.S. Environmental Protection Agency, Region 5 (via phone)
Neal Jackson	U.S. Fish and Wildlife Service, UMRCC (via phone)
Tyler Porter	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office (via phone)
Sara Schmuecker	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office (via phone)
Sandra Morrison	U.S. Geological Survey, Midwest Region
Mark Gaikowski	U.S. Geological Survey, UMESC
Jeff Houser	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Dale Robertson	U.S. Geological Survey, UMESC
David Saad	U.S. Geological Survey, UMESC
Denise Bulat	Bi-State Regional Commission (via phone)
Jill Crafton	Nicollet Island Coalition
Gretchen Benjamin	The Nature Conservancy
Mike Klingner	Upper Mississippi, Illinois, and Missouri Rivers Association
Angela Love	Wood
Mark Ellis	Upper Mississippi River Basin Association
Lauren Salvato	Upper Mississippi River Basin Association
Andrew Stephenson	Upper Mississippi River Basin Association
Kirsten Wallace	Upper Mississippi River Basin Association

Minutes

Tim Hall moved and Barb Naramore seconded a motion to approve the draft minutes of the August 20, 2019 UMRBA quarterly meeting as written. The motion was approved unanimously.

Executive Director's Report

Kirsten Wallace reported that she and UMRBA Board members Tim Hall, Loren Wobig, and Dru Buntin met with ASA(CW) R.D. James and USACE Civil Works Director James Dalton on September 23, 2019. The purpose was to discuss UMRBA's proposal for a federal-state planning process to improve the management of extended drought, flooding, and sediment/channel maintenance. Board members raised the need for the remaining three of four phases to develop an HEC-RAS model spanning the entire UMRS floodplain. Following this meeting, on October 23, 2019, the Corps announced the allocation of \$575,000 in FY 2019 funding for HEC-RAS model development from L&D 19 to the Twin Cities.

Dennis Hamilton explained that HEC-RAS will integrate well with the modeling that the Corps has already completed on the UMRS. In response to a question from Hall, Hamilton said the Corps anticipates finalizing the model by the end of September 2020. More information can be found on MVR's "District Projects" web link or on the model's specific web page at <https://www.mvr.usace.army.mil/About/Offices/Programs-and-Project-Management/District-Projects/Projects/Article/1173139/upper-mississippi-river-system-hydraulic-model-update/>.

In response to a question from Steve Galarneau, Hamilton said the Corps will request the states' high-water mark data to calibrate the model. Hamilton said he does not anticipate needing additional input.

UMRBA hosted an in-person meeting of the UMRS WLM Regional Coordinating Committee meeting on October 21-22, 2019 in the Quad Cities. The Committee includes the nonfederal sponsors involved in UMRBA's PAS agreement with the Corps to explore opportunities for better managing water levels. They include the five UMR states, Audubon, WCI, TNC, and American Rivers. The Committee deliberated over how to evaluate the ecological merits and feasibility of WLM in different pools.

Wallace expressed appreciation towards USDA Secretary Sonny Perdue and ASA(CW) R.D. James for highlighting the value of the UMRS, and NESP in particular, in a report released on August 28, 2019 at a USDA town hall meeting at Mel Price L&D.

The states of Iowa, Illinois, and Missouri each secured the funding necessary to implement a one-year pilot of the UMRBA WQ Interstate Monitoring Plan in the states' designated CWA Reaches 8-9. Implementation is scheduled to begin in December 2019. Wallace said a lot of planning has gone into the pilot, and next year UMRBA will provide a report on results and feasibility.

Wallace requested that interested stakeholders provide feedback into Interstate Council on Water Policy's questionnaire regarding its priority issues for 2020.

Wallace pointed to UMRBA's financial statements on pages B-6 to B-10 of the agenda packet. Barb Naramore moved and Steve Galarneau seconded a motion to approve UMRBA's FY 2020 budget report and balance sheet. The motion was approved unanimously.

Report from the UMRBA WQ Executive Committee

Chris Wieberg reviewed the priorities for the UMRBA water quality committees in 2020, as follows:

- *UMR WQ Interstate Monitoring:* The states of Missouri, Illinois, and Iowa spent most of 2019 focused on planning for the pilot of the UMR Interstate WQ Monitoring Plan in CWA-defined Reaches 8-9. Monitoring will occur through 2020 and then analysis and report writing in spring 2021. The project is scheduled to be complete by May 2021. Missouri, Illinois, and Iowa are each contributing \$80,000 for the pilot. Wieberg noted that the Reaches 8-9 pilot has some significant differences in comparison to the monitoring approach used in the Reaches 0-3 pilot by Minnesota and Wisconsin. Wieberg expressed sincere appreciation to Lauren Salvato for her leadership in facilitating the states coordination and planning on the Reaches 8-9 pilot.
- *Chloride:* A UMRBA chloride resolution is being developed. Among other recommendations, the resolution calls for USEPA to refine the science for the Section 304(a) criterion for chloride. The resolution also contains information on best practices and the need to communicate across stakeholder groups to mitigate increasing chloride trends.
- *UMR WQ Improvement Act:* Wieberg pointed to pages C-3 to C-5 of the agenda packet for information on the UMRBA proposed UMR WQ Improvement Act. UMRBA is seeking a national program office that is focused on nutrient and sediment reduction on the UMR. The office would be jointly administered by USEPA and NRCS. UMRBA will ask Congress to include this measure in the potential WRDA 2020 or another legislative vehicle.

Adam Schnieders said that, at its May 15-16, 2019 meeting in Baton Rouge, the Hypoxia Task Force (HTF) convened a listening session with a variety of stakeholders. The HTF is focusing on enhancing

communications with states and stakeholders via a regular newsletter and other social media. The Trump Administration's water quality sub-cabinet also convened in conjunction with the HTF's meeting. The purpose of the sub-cabinet is to better coordinate federal agency activities and work with the states to reverse nutrient and sediment trends on a continental level.

Schnieders reported that USEPA awarded \$1.2 million (or \$200,000 per state) to the HTF states for technical assistance. As an example, Iowa DNR is using its technical assistance funding to build a water quality cover crop insurance incentive program. Schnieders noted that a USGS-led workgroup is developing metrics based on trends of water quality on the Mississippi River.

Schnieders said the HTF issued a second report in October 2019 describing its member states' point source-related progress since 2016, when the first report was issued. The report also includes a summary of nitrogen and phosphorus loads from all major sewage treatment plants in the 12 states that discharge to the Mississippi River basin.

The next HTF meeting series is scheduled for February 3-5, 2020 in Washington D.C. Schnieders said UMRBA will be extended an invitation in the coming months to serve as an HTF Coordinating Committee member. Weiberg observed that UMRBA is increasing its focus on nutrient and sediment issues. This was at the direction of the WQEC given that those two issues are the primary water quality focus for the UMR states. Weiberg said the membership of UMRBA to the HTF is positive for the region.

Weiberg said Missouri DNR is currently focused on developing its 2020 Section 303(d) list, revising water quality standards, and finalizing criteria for aluminum. No new TMDLs have been written.

Katrina Kessler said Minnesota PCA has drafted its 2020 impaired waters list, which includes a tiered aquatic life use standard. The agency's planned listing of hundreds of impaired ditches is anticipated to garner a lot of attention. With the HTF nutrient reduction strategy grant, Minnesota will update its nonpoint source and point source BMP calculators to more accurately estimate nutrient loading. The point source calculator optimizes the wastewater treatment plant tool that accounts for varying technologies. Minnesota PCA has issued a series of public notices related to the Minnesota River TMDL, which includes a 50 percent reduction in sediment loading to the Mississippi River.

Schnieders said Iowa DNR is collaborating with NRCS to evaluate incentives for market-based solutions. Schnieders explained that the parts of the UMR may exceed the recently finalized aluminum criteria. Iowa's Section 303(d) impaired waters list will be released in the next few months. Iowa DNR has been engaging with cities regarding source water protection measures. The state's water excise tax will set aside \$270 million dollars over the next 12 years for four different types of initiatives. Two of those initiatives will focus on nutrient reduction for disadvantaged cities, wastewater treatment plants, and landscape practices – e.g., saturated buffers and bioreactors. Jake Hansen added that Iowa is doubling its investment in water quality infrastructure. Iowa's new dedicated funding stream should allow for more strategic efforts to implement conservation practices. Hansen observed that agency staff are overwhelmed dealing with flooding. Staff are both responding to emergencies and repairing damages while also working on conservation programs. Overly saturated soils and various regulatory and other obstacles precluded conservation from being a top priority. Hansen said he anticipates that these issues will continue to be an ongoing challenge.

Gregg Good said Illinois EPA's 2020 integrated report is delayed due to transferring data to the new ATTAINS database. On December 3-4, 2019, the Illinois' Nutrient Loss Reduction Strategy policy working group is scheduled to host a broader constituent meeting and release its second biennial report. The report includes loading estimates, using Illinois' ambient water quality data and USGS supergauge data for phosphate, dissolved oxygen, temperature, and conductivity. There are nine supergauges that

capture 75 percent of the nutrient and sediment leaving the state. They are funded through agreements between USGS and the state of Illinois that are set to expire this year. Illinois is exploring funding options to continue the partnership.

Steve Galarneau said Wisconsin Governor Tony Evers declared 2019 as the “Year of Water.” This funneled money mostly to water quality issues, and particularly nitrates. Galarneau said the additional funds were able to promote innovative approaches. Greg Searle said the Wisconsin’s nutrient reduction strategy is currently being updated. Wisconsin’s integrated report on impaired waters is out for public comment. The Fox River TMDL is scheduled to be complete in November 2019. The Fox River is a tributary to the Illinois River. Wisconsin DNR is also developing the Grand Platte/Sugar Pecatonica basins TMDL. Phosphorus criteria has been approved for the Wisconsin River. Wisconsin’s FY 2020 budget includes unfunded positions for four watershed restoration project staff. Section 319 funding may be used to pay for those positions. One of the positions will focus on tributary influences to the UMR, and will work on collaborating with UW-Extension and supporting farmer-led groups.

Neal Jackson reported that the UMRCC water quality tech section met in early October 2019 and is developing a chloride resolution similar to UMRBA’s draft resolution. Jackson said the group either wants to create their own resolution or partner with UMRBA. Jim Fischer suggested that UMRBA and UMRCC discuss their mutual goals and objectives for the chloride resolution and find a way to coordinate.

USGS Water Quality Modeling

Point Source Load Estimation Tool

David Saad provided an overview of USGS’s Point Source Load Estimation tool (PSLoadEst), a regional water quality model to simulate nitrogen and phosphorus point source effluent loads in streams of the U.S. The tool is used to calculate nutrient loading at monthly and annual intervals using flow and measured concentration data where available. The data is acquired from USEPA Permit Compliance and Integrated Compliance Systems. Saad provided an overview of results for the Mississippi River Basin for densities of point source facilities as well as the relative size of the total phosphorus loading. Saad said the results indicate that the Upper Mississippi River states contribute 20 percent of the national total nitrogen load delivered from measured concentrations and 80 percent from typical pollutant concentrations. The five states also contribute 63 percent of the measured total phosphorus concentrations and 37 percent of the total pollutant concentrations. The PSLoadEst tool report, documentation, and software are all available online.

Adam Schnieders asked if the PSLoadEst tool is producing results similar to the HTF’s reports on point source runoff loading reports. Saad confirmed that it is and will be published in SPARROW. Schnieders suggested talking to the states to clarify different outputs. He said that Iowa’s methodology is different and the state is now reporting progress on point sources post 2012. Saad said USGS coordinated with states where national data did not exist. Katrina Kessler and Chris Wieberg added that each of their respective states have increased their monitoring capacity within the past five years. The quality of data has improved that may warrant a reanalysis.

Nutrient and Suspended Sediment Models in the UMR

Dale Robertson described the Spatially Reference Regression on Watershed Attributes (SPARROW) modeling in the Mississippi/Atchafalaya River Basin. SPARROW simulates catchment fluxes using a routed stream network. USGS recently released its online SPARROW mapper that can generate a model for either total phosphorus, total nitrogen, suspended sediment, or stream flow by state, major drainage area, or tributary. Catchment size and metric (e.g., yield, load and concentration) may be

further customized. Robertson provided an example of 2012 output of each of the HTF states' nitrogen delivery to the Gulf of Mexico.

In response to a question from Schnieders, Robertson explained that nitrogen fixation from alfalfa crops in pastures is included in the model.

Flood Assessment Viewer

Sandy Morrison provided an overview of the MRCTI Disaster Prediction and Assessment Portal that USGS created and is hosting on its website, located at <https://esm-usgs.opendata.arcgis.com/>. Morrison explained that MRCTI requested data and LANDSAT imagery of flooding in summer 2019 in order to have a comprehensive tool for disaster prediction. The portal includes stream gauge flood stage, forecast and warnings, drought monitor, inundation estimates, and the USGS topography map locator. Morrison said USGS will be adding links to UMR's website and other relevant resources in the watershed.

Eastern Iowa/Western Illinois Port Statistical Area

Denise Bulat presented on the Bi-State Regional Commission's application to create a federally-recognized port statistical area (PSA) called the Mississippi River Ports of Eastern Iowa and Western Illinois (MRPEIWI). The MRPEIWI would bring together 70 existing terminals across 15 counties, extending 225 river miles from Dubuque to Keokuk. The purpose being to better market the region's ports, ensure reliable access to them, and promote environmentally sustainable water infrastructure development. Secondly, the MRPEIWI PSA status might help advocate support for the river's other uses, including recreation, tourism, flood risk reduction, ecosystem, water supply and quality, and so forth.

MRPEIWI's would not involve a bonding or taxing authority. Its primary responsibilities would be planning, marketing, lobbying, and education in order to achieve the region's goals. Counties must formally agree to be recognized as part of MRPEIWI. Bulat emphasized that MRPEIWI's primary focus is on existing navigation-related infrastructure.

Bulat explained that there is a clear gap in tonnage moving on the river and the recognition that the Iowa and Illinois ports receive on a national level, and help the region compete for various federal grant funding. For example, Bulat said Iowa is the only state that ships enough tonnage on the waterways system to be ranked as a top 100 port. And that comes from only eight counties. Further, MVR is the only Corps District on an inland waterway system that is not co-located with a federally-recognized port. Bulat said models for the MRPEIWI include the Central Ohio River Business Association (CORBA) and the Ports of Cincinnati and Northern Kentucky.

Bulat said the Mid-America Port Commission is a separate, independent organization not to be confused with MRPEIWI. The Commission is established as a compact authority between Illinois, Iowa, and Missouri to establish effective areas for logistics of domestic and global freight. MRPEIWI would not be in conflict with the Commission.

Next steps are to garner support from counties, state DOTs, and governors for MRPEIWI's formation. Bulat anticipates that the proposal will be submitted to the Corps soon. The goal is to establish the MRPEIWI as a federal recognized statistical port by 2020.

Mike Klinger encouraged the submission of MRPEIWI's proposal, noting that the statistical data can document barge traffic and result in further recognition of the importance of the UMR.

USACE Navigation Report

2019 NESP Economic Update

Andrew Goodall reported that the MVR is finalizing an economic update of NESP per direction from ASA(CW) R.D. James to do so in one year with \$1 million. Goodall anticipates that the economic report will be transmitted to ASA(CW) James in the near future. Corps experts from around the nation were involved in the report's development. Goodall noted that the economic update does not impact the 2007 NESP authorization or potential pre-construction, engineering, and design activities if funded. It is unclear whether and how the report will be shared externally.

In response to a question from Ken Westlake regarding additional environmental review work, Scott Whitney said no reformulation is needed and the authorization still stands. On behalf of the Nicolette Island Coalition, Jill Crafton advocated that the Corps reassess the need for lock modernization following an economic evaluation that would include the impacts of small scale navigation improvements. In response to a question from Crafton, Goodall said the District was not asked to provide a response to comments from the Nicollet Island Coalition. In response to a question from Crafton, Whitney said small scale navigation projects can be implemented as they are part of the original implementation plan. Goodall expressed appreciation to the states for their continued support of NESP.

Illinois Waterway Major Rehabilitation/Maintenance

Andy Barnes reiterated the Corps commitment to addressing cumulative O&M needs of the Illinois Waterway with minimal disruptions to the navigation system. The work will occur at six locks concurrently; four of which will require dewatering. Onsite work is scheduled from July 2020 to October 2020 to avoid historical spring flooding and the harvest season in fall. Barnes said prep work was completed in 2019 to facilitate the dewatering and closures. Barnes said Brandon Road and Dresden L&Ds will likely be closed in the third quarter of FY 2023 for maintenance.

Barnes described the planned 2020 and 2023 maintenance for the Illinois Waterway L&Ds as follows:

- LaGrange L&D will be closed for construction from July 1, 2020 to September 30, 2020. The lock will be dewatered and significant repairs will be made to crumbling concrete and steel structures within the lock chamber and lock machinery will be replaced. Construction work planned for 2019 was impacted by summer and fall flooding.
- Peoria L&D will be dewatered from July 6, 2020 to September 30, 2020 for maintenance, repair, and inspection.
- Starved Rock L&D is scheduled for full closure from July 1, 2020 to October 29, 2020 for dewatering to allow maintenance and inspections. The miter gate sills and anchorages will be replaced or modified to accommodate new vertically framed miter gates.
- Marseilles L&D will be dewatered from July 1, 2020 to October 29, 2020 for maintenance, inspection, and to replace or modify the miter gate sills and anchorages to accommodate new vertically framed miter gates. Bulkhead recess installation scheduled for 2019 was delayed due to flooding.
- Dresden Island L&D is scheduled for a 90 day or greater restriction period with 21 days of full closure to prepare for a potential closure in 2023 to replace or modify the miter gate sill and anchorages to accommodate new vertically framed miter gates.

- Brandon Road L&D is scheduled for a restriction period lasting at least 90 days, with 21 days of full closure to replace emergency miter gates that are needed for dewatering the chamber in 2023. Work in 2023 would include replacing or modifying the miter gate sill and anchorages to accommodate new vertically framed miter gates. The Corps may also leverage the closure to complete work under GLMRIS.

Barnes said current information and future updates can be found at <https://www.mvr.usace.army.mil/Missions/Navigation/Navigation-Status/>. In response to a question from Westlake, Barnes said the GLMRIS Chief's Report was approved in May 2019. The Corps is currently coordinating with Illinois DNR regarding the project design. Dennis Hamilton said Congress may look to authorize construction of GLMRIS's recommendations in the next WRDA.

Long Term Ecological Trends on the UMRS

Megan Moore said Minnesota DNR's Lake City Field Station, which operates the Pool 4 UMRR long term resource monitoring (LTRM), is using its 30-year dataset to detect how climate change might be impacting the Mississippi River. To provide context, an observation of the region's shifting climate is that the average ice out dates in Lake Pepin are earlier to spring by 17 days since the early 1840s. Additionally, water temperature in Pool 4 has increased about 3.7 degrees Fahrenheit over the UMRR LTRM's existence. Temperatures have also increased in the other five reaches where LTRM occurs; however, the greatest increase in water temperature occurred in Pool 4. This relates to general understandings that changes in climate tend to be detected in areas farther north.

Moore said Pool 4 is at the edge of some native species' ranges, so it is anticipated that changes in climate will have significant implications for those species operating at already sub-optimal or near maximum temperatures. Moore explained that climate change's most significant influence to Pool 4 is the increase in annual precipitation that manifests into an increase in discharge and current velocity. Decadal averages of discharge by month at L&D 3 show a transition from the historical "spring pulse" with a period of low water in the summer and a small pulse in the fall to a relatively steady state of high water with high peaks in summer. Should these trends continue, the discharge conditions of the 1960s will double by 2060. Moore noted that this data is from L&D 3. Further down river, the amount of water in the system is amplified.

The sustained periods of high discharge and high velocity can alter important relationships in the food chain. For example, zooplankton flourishes in slow discharge conditions and is essentially washed away in high discharge conditions. Zooplankton provide the foundation of the riverine food chain. Nearly all larval fish species and adults of some fish species depend on zooplankton as a food source. Lake Pepin in Pool 4 greatly slows river discharge and, therefore, allows zooplankton to thrive. Zooplankton are particularly abundant in June on Lake Pepin when paddlefish, which depend on zooplankton, also migrate to Lake Pepin. Paddlefish are a species of concern in Minnesota, and so it is particularly problematic that the new peak river flows are occurring in June and are causing the reduction in zooplankton.

Moore explained that high discharge in the 1990s caused a 67 percent decline in submersed aquatic vegetation in Pool 4's backwaters. The significant decline in water discharge in the 2000s facilitated an ecological shift, triggering a growth in vegetation that then facilitated clean water and native fish to rebound. This "healthy state" proved to be resilient in this decade's high discharge conditions, but the question remains as to how long the vegetation and fish communities can be resilient or when there may be a reduction in habitat quantity and quality. Moore put forward that water level management could serve as an important restoration tool to sustain healthy and resilient ecological conditions in the river, particularly under the projected conditions of sustained high water discharge and velocity.

Moore also shared observations of the impact of high water conditions to the river's floodplain forests, noting that the forests' resilience is starting to fail.

In response to a question from Barb Naramore, Moore said the research does not distinguish between the effects of precipitation and tile drainage on discharge. Data on tile drainage is not readily available. In response to a question from Neal Jackson, Moore explained that the rebound in vegetation followed the increase in water clarity by two to three years, showing that the vegetation affected water clarity and not vice versa. Ken Westlake asked if high discharge conditions are impeding the capability to implement water level drawdowns. Moore said water level management will not always be feasible but stressed the importance of being prepared for years when conditions are ripe.

Jim Fischer expressed appreciation to Moore for the work to uncover these trends with statistically significant monitoring data. Fischer observed that the fundamental master variables affecting ecological health as well as the navigation system and other river uses are water discharge and sediment. These challenges triggered the states to propose a partnership with the Corps to create systemic approaches to managing floods, sediment, and drought under a Section 729 planning authority. Fischer referenced a recent TNC publication that concluded there remains about a decade for climate change trends to reverse until the impacts become detrimental. Fischer called on UMRBA, as a five-state entity, to collectively address the challenges of climate change on the Mississippi River. As the connecting point of five Governors, UMRBA has the power to make a difference. Adam Schnieders and Katrina Kessler pointed to the states' work in the watershed to reduce nutrient and sediment runoff into the Mississippi River. Those efforts would also reduce and slow water discharge into the system.

Barb Naramore asked if a relationship between zooplankton and aquatic invasive species is understood. Moore said the relationships need to be better understood and explained that the Lake City Field Station began monitoring zooplankton to do so. Other UMRR LTRM field stations do not monitor for zooplankton. Jeff Houser said some monitoring on the Illinois River has detected changes in zooplankton over time. Mark Gaikowski added that zooplankton have increased in areas where there is commercial fishing for Asian carp.

UMRS Flood, Sediment, Drought Planning Effort

Recap of 2019 Summer Open Sessions

Kirsten Wallace reported that UMRBA and USACE co-hosted the remaining two of six open sessions that focus on how local action can be integrated with a system plan for managing floods, sediment, and drought. These open sessions serve as a means of both seeking input into a longer term UMRS floodplain resilience plan and building trust, transparency, and ultimately buy-in into the objectives. Wallace briefly explained that participants are asked to bring forward the conversation ideas of interest to them and to facilitate them. The participant then writes up the notes, which are available on UMRBA's website.

The two sessions were located in Godfrey on August 24, 2019 and Cape Girardeau on September 7, 2019. The conversational dynamics unique to these two sessions were as follows:

- A large focus was dominated around local community-based challenges, information-needs, and actions, particularly related to emergency response
- Rather than within the river, the focus was primarily on the impacts of flooding and sedimentation to the floodplain
- Solutions were intertwined with questions and understandings about the costs of managing the system and responding to emergencies, including who pays and should pay for what and how
- Differences in language around flood fighting and what controlling the impacts of floods means

Wallace also noted that understandings of how the river is managed were not viewed in a multi-purpose context. Among all the six sessions, participants commonly held the notion that the river is behaving differently than they are familiar, that status quo of river management is not acceptable, the most impactful solutions will likely reside in the watershed, and that new systemic management approaches (or a plan) are needed for managing the river corridor given changing watershed influences. Questions were raised at all six meetings about who manages the river and who should do so in the future. Wallace said there were also some important misunderstandings about how the river is managed that should be addressed in some way in the future.

Wallace said participation was much higher at the Godfrey and Cape Girardeau sessions, with about 70 and 60 individuals attending respectively. Again, the session formats received very positive feedback. However, we noticed that fewer people talked with larger group sized conversations whereas most everybody would participate in smaller sized conversations.

Mike Klingner said he appreciates the effort to expand the involvement of additional people and asked whether another series of meetings is being considered. Wallace said the feedback received about these sessions has been positive and strong, and many participants asked us to host similar sessions in the future. Currently, there are no plans to do so but we will consider holding them again as it becomes appropriate.

September 30, 2019 — October 1, 2019 Summit Overview

Wallace reported that USACE Civil Works Director James Dalton invited UMRBA to meet with him and ASA(CW) R.D. James on September 23, 2019 in Washington, D.C. She and Board members Dru Buntin, Tim Hall, and Loren Wobig represented UMRBA at the meeting. The discussion was productive, with ASA(CW) James, the Corps, and UMRBA aligning on the need and strategy for utilizing the Section 729 planning authority to develop systemic approaches to managing for floods, sediment, and drought. UMRBA then met with OMB staff to advocate for the Administration's inclusion of funding for the Section 729 effort in the Corps' FY 2020 work plan and the President's FY 2021 budget.

UMRBA then invited Director Dalton to provide a joint briefing to the UMRS stakeholder community in Bloomington, Minnesota on September 30, 2019. A panel including Buntin, Hall, and Naramore along with Director Dalton discussed the regional needs to prepare for long term droughts and improve management of sediment and floods in an integrated, systemic context. About 80 participants joined the meeting in-person and more connected remotely.

PAS Report Development

Wallace explained that the second phase of the UMRBA PAS agreement with the Corps is to develop a report of "known opportunities" and a general vision and planning framework for the Section 729 authority. It is being referred to as the "Keys to the River 2020" report. The known opportunities include things that we know will have a high impact in improving river management and that have sufficient regional consent to be advanced without objection to hinder implementation. The major questions about what the desired state is for the river-floodplain and how we will define and manage its resilience will be addressed in the Section 729 process. The report will outline the major questions and issues. For example, how a climate change analysis be structured on a large river system and be incorporated into concepts of resilience. The report will also outline how UMRBA and the states will engage with the UMRS stakeholder community, particularly including those who are directly affected by the planning outcomes.

As a first step, UMRBA and the Corps co-hosted a workshop on September 30, 2019 and October 1, 2019 in conjunction with Director Dalton’s visit. The workshop convened small group teams to brainstorm the “known opportunities” and discuss the objectives for the Section 729 planning authority. Groups were convened around report chapters related to sedimentation/channel management, flooding, drought, communications, and the Section 729 planning framework.

The group discussions were convened by co-leads for each report chapter. Jim Fischer, a co-lead of the sediment/channel management chapter, explained that the discussions centered primarily on bankline placement, beneficial use working groups, Corps real estate and planning policies, and tax and revenue sharing alternatives. Steve Tapp said the group had a relatively balanced array of stakeholder interests. Hal Graef, who is a flood chapter co-lead, said the flood discussion focused on roles and responsibilities, information needs, and various solutions. Information needs included HEC-RAS, predicted weather changes, and economic benefits.

Hall co-leads the drought chapter, and said the group discussed historical rainfall conditions in the 1930s and the resulting river flows, consistency in state planning, communication networks, and water supply storage in the watershed. The group also discussed user conflicts during shortages and regional governing needs.

Wallace said the communications team recommended developing a survey to reach out to the broader stakeholder community and to gauge relative support and opposition to the ideas raised from the workshop. UMRBA and the Corps are planning to host conference calls in late January 2020 and an in-person workshop in conjunction with the February 25, 2020 UMRBA quarterly meeting. These purpose for these meetings is to continue developing the report chapters.

Barb Naramore asked how conversations around governance models would be convened. Wallace said the “Keys to the River 2020” report would describe the call for a governance model and some of the issues that would need to be considered. The Section 729 planning process will include dialogue about what that governance model involves that will reflect the management needs.

Klingner said UMIMRA is advocating for language in WRDA 2020 that would be complementary to UMRBA’s ongoing efforts.

Administrative Issues

Sabrina Chandler announced that the DOI restructure divided the previously structured Region 3. Iowa and Missouri now report to the Southeast Region located in Atlanta. Leo Miranda is the current point-of-contact and serves as the Southeast Regional Director. Chandler is unsure how this will impact her staff. She noted that Charley Wooley, USFWS Region 3 Director (Great Lakes), is committed to maintaining cooperation with UMRBA.

Dennis Hamilton announced his retirement in early February 2020. Hamilton said he hopes that his successor will join at the next February 2020 quarterly meeting. Pohlman thanked Hamilton for his services with the Corps and wished him success for the future. Hamilton expressed his sincere appreciation to the partnership and UMRBA.

Future Meeting Schedule

February 2020 — Moline

- UMRBA quarterly meeting — February 25
- UMRR Coordinating Committee quarterly meeting — February 26

May 2020 — St. Louis

- UMRBA quarterly meeting — May 19
- UMRR Coordinating Committee quarterly meeting — May 20

August 2020 — La Crosse

- UMRBA quarterly meeting — August 11
- UMRR Coordinating Committee quarterly meeting — August 12

With no further business, the meeting adjourned at 3:03 p.m.